August 2020 | Final Environmental Impact Report
State Clearinghouse No. 2019050018

ONTARIO RANCH BUSINESS PARK SPECIFIC PLAN

for City of Ontario

Prepared for:

City of Ontario
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Prepared by:

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PLACEWORKS

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1. Introduction

1.1 INTRODUCTION

This Final Environmental Impact Report (FEIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code §§ 21000 et seq.) and CEQA Guidelines (California Code of Regulations §§ 15000 et seq.).

According to the CEQA Guidelines, Section 15132, the FEIR shall consist of:

(a) The Draft Environmental Impact Report (DEIR) or a revision of the Draft;

(b) Comments and recommendations received on the DEIR either verbatim or in summary;

(c) A list of persons, organizations, and public agencies comments on the DEIR;

(d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and

(e) Any other information added by the Lead Agency.

This document contains responses to comments received on the DEIR for the Ontario Ranch Business Park Specific Plan during the public review period, which began February 13, 2020, and closed March 30, 2020. This document has been prepared in accordance with CEQA and the CEQA Guidelines and represents the independent judgment of the Lead Agency. This document and the circulated DEIR comprise the FEIR, in accordance with CEQA Guidelines, Section 15132.

1.2 FORMAT OF THE FEIR

This document is organized as follows:

Section 1, Introduction. This section describes CEQA requirements and content of this FEIR.

Section 2, Response to Comments. This section provides a list of agencies and interested persons commenting on the DEIR; copies of comment letters received during the public review period, and individual responses to written comments. To facilitate review of the responses, each comment letter has been reproduced and assigned a number (A-1 through A-8 for letters received from agencies). Individual comments have been numbered for each letter and the letter is followed by responses with references to the corresponding comment number.

Section 3. Revisions to the Draft EIR. This section contains revisions to the DEIR text and figures as a result of the comments received by agencies and interested persons as described in Section 2, and/or errors and omissions discovered subsequent to release of the DEIR for public review.

The responses to comments contain material and revisions that will be added to the text of the FEIR. City of Ontario staff has reviewed this material and determined that none of this material constitutes the type of significant new information that requires recirculation of the DEIR for further public comment under CEQA Guidelines Section 15088.5. None of this new material indicates that the project will result in a significant new environmental impact not previously disclosed or analyzed in the DEIR. Additionally, none of this material indicates that there would be a substantial increase in the severity of a previously identified environmental impact that will not be mitigated, or that there would be any of the other circumstances requiring recirculation described in Section 15088.5.

1.3 CEQA REQUIREMENTS REGARDING COMMENTS AND RESPONSES

CEQA Guidelines Section 15204 (a) outlines parameters for submitting comments, and reminds persons and public agencies that the focus of review and comment of DEIRs should be "on the sufficiency of the document in identifying and analyzing possible impacts on the environment and ways in which significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible. …CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR."

CEQA Guidelines Section 15204 (c) further advises, "Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence." Section 15204 (d) also states, "Each responsible agency and trustee agency shall focus its comments on environmental information germane to that agency's statutory responsibility." Section 15204 (e) states, "This section shall not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended by this section."

In accordance with CEQA, Public Resources Code Section 21092.5, copies of the written responses to public agencies will be forwarded to those agencies at least 10 days prior to certifying the environmental impact report. The responses will be forwarded with copies of this FEIR, as permitted by CEQA, and will conform to the legal standards established for response to comments on DEIRs.

2. Response to Comments

Section 15088 of the CEQA Guidelines requires the Lead Agency (City of Ontario) to evaluate comments on environmental issues received from public agencies and interested parties who reviewed the DEIR and prepare written responses.

This section provides all written responses received on the DEIR and the City of Ontario's responses to each comment.

Comment letters and specific comments are given letters and numbers for reference purposes. Where sections of the DEIR are excerpted in this document, the sections are shown indented. Changes to the DEIR text are shown in underlined text for additions and ~~strikeout~~ for deletions.

The following is a list of agencies and persons that submitted comments on the DEIR during the public review period.

Number Reference	Commenting Person/Agency	Date of Comment	Page No.
Agencies & Organizations			
A1	Airport Land Use Commission (ALUC), Paul Rull, ALUC Principal Planner	February 18, 2020	2-3
A2	South Coast Air Quality Management District (South Coast AQMD), Margaret Isied, Assistant Air Quality Specialist, CEQA IGR	February 21, 2020	2-9
A3	South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR	March 24, 2020	2-13
A4	San Bernardino County – Department of Public Works, Michael R. Perry, Supervising Planner	March 25, 2020	2-25
A5	California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch	March 27, 2020	2-29
A6	California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager	March 27, 2020	2-45
A7	Governor's Office of Planning and Research (OPR), Scott Morgan, Director, State Clearinghouse	March 30, 2020	2-71
A8	City of Chino, Warren Morelion, AICP, City Planner	March 30, 2020	2-75
A9	Department of Transportation	May 19, 2020	2-87

2. Response to Comments

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LETTER A1 – Airport Land Use Commission (ALUC), Paul Rull, ALUC Principal Planner (1 of 3 pages)

Nicole Morse

From: Richard Ayala <rayala@ontarioca.gov>
Sent: Tuesday, February 18, 2020 5:39 PM
To: Nicole Morse
Subject: FW: Ontario Ranch Business Park EIR
Attachments: NOA EIR Ontario Ranch Business Park.doc

FYI

Richard Ayala, Senior Planner

Ontario Planning Department
303 East B Street, Ontario, CA 91764
Direct: 909-395-2421 / Department: 909-395-2036
Fax: 909-395-2420 / E-Mail: rayala@ontarioca.gov
www.ontarioca.gov

From: Rull, Paul <PRull@RIVCO.ORG>
Sent: Tuesday, February 18, 2020 2:31 PM
To: Richard Ayala <rayala@ontarioca.gov>
Subject: Ontario Ranch Business Park EIR

Hi Richard,

Thank you for transmitting the above reference notice to ALUC for review. Please find attached my comments. While the project is located outside the jurisdictions of the Riverside County ALUC, it is important to note that the ALUC has prepared an airport land use compatibility plan for the Chino Airport, which includes properties on both sides of the Riverside County and San Bernardino County sides of the boundary line. This plan identifies the project site as being located within Zone E which does not restrict residential density or non-residential intensity. A1-1

If you have any questions, please feel free to contact me.

Paul Rull
ALUC Principal Planner

Riverside County Airport Land Use Commission
4080 Lemon Street, 14th Floor
Riverside, Ca 92501
(951) 955-6893
(951) 955-5177 (fax)
PRULL@RIVCO.ORG
www.rcaluc.org

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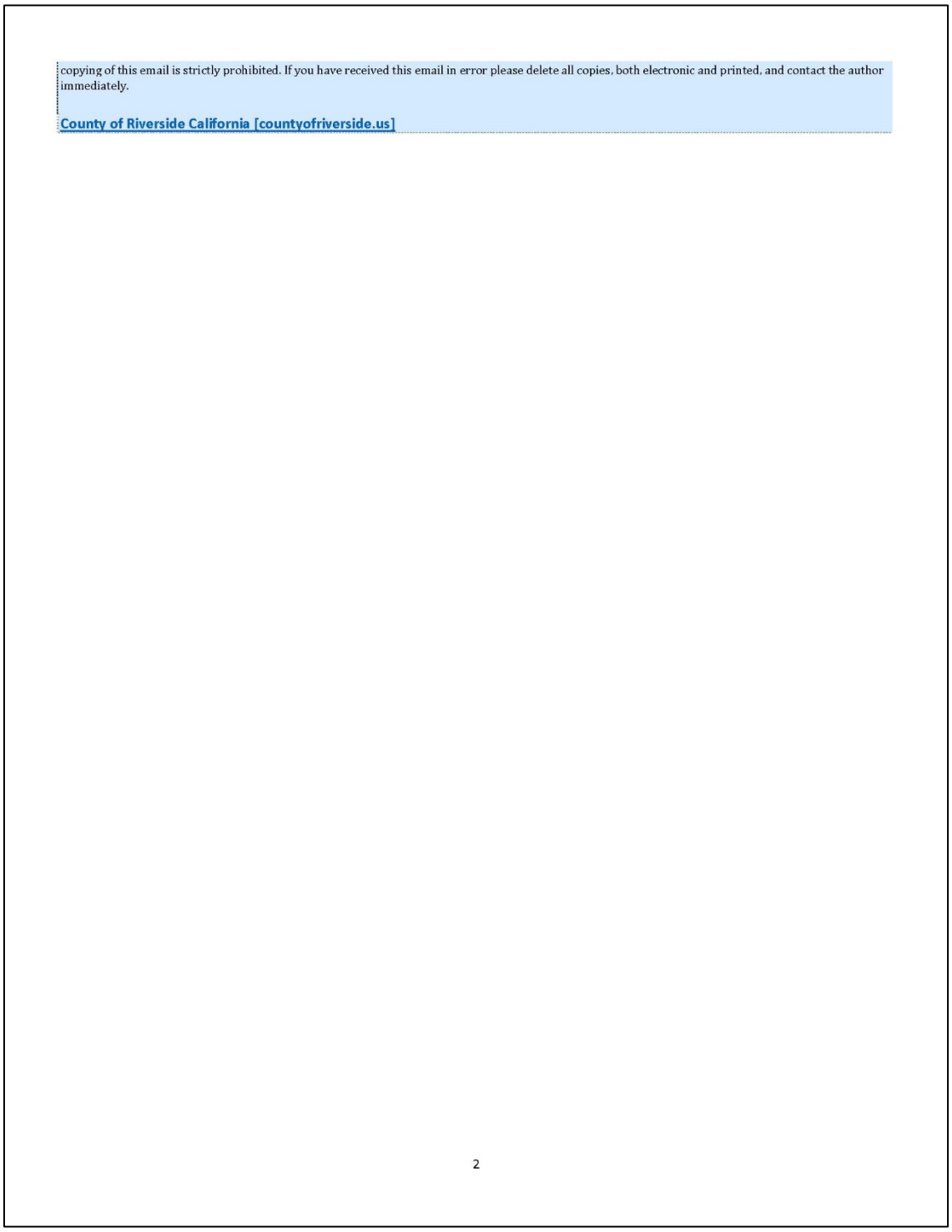
2. Response to Comments

LETTER A1 – Airport Land Use Commission (ALUC), Paul Rull, ALUC Principal Planner (2 of 3 pages)



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County of Riverside California [countyofriverside.us]

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LETTER A1 – Airport Land Use Commission (ALUC), Paul Rull, ALUC Principal Planner (3 of 3 pages)

AIRPORT LAND USE COMMISSION
RIVERSIDE COUNTY

February 18, 2020

Mr. Richard Ayala, Senior Planner
City of Ontario Planning Department
303 East "B" Street
Ontario CA 91764

County Administrative Center
4080 Lemon St., 14th Floor
Riverside, CA 92501
(951) 955-5132

www.rcaluc.org

RE: AIRPORT LAND USE COMMISSION (ALUC) DEVELOPMENT REVIEW REQUIRED

Jurisdiction Project Case: PSP18-002/PGPA18-008

Dear Mr. Ayala:

Thank you for providing the Riverside County Airport Land Use Commission (RCALUC) with a copy of the public hearing notice for this project. We believe that the impacts of the proposed project on Chino Airport and the potential safety hazards to potential occupants of this project due to its proximity to the airport are potential concerns that should be considered by the Planning Department and Planning Commission in making its determination regarding the proposed project.

The RCALUC has no jurisdiction over development within the City of Ontario. However, in the course of preparing an Airport Land Use Compatibility Plan for the portion of the Chino Airport Influence Area in Riverside County, RCALUC consultant Mead & Hunt prepared a compatibility zone map that covered properties on both the Riverside County and San Bernardino County sides of the boundary line. The Planning Commission may find this information helpful in analyzing the land uses proposed at this site. To find an electronic copy of the associate documents, please go to http://www.rcaluc.org/Plans/New-Compatibility-Plan.

The project is located within Compatibility Zone E of the Chino Municipal Airport Influence Area. Non-residential intensities and residential densities are not restricted in Zone E. A1-2

The inevitable corollary of continued encroachment of urbanization in the vicinity of an airport, unless open areas are planned in advance, is a continual reduction in the number and size of open areas where an aircraft may safely land without endangering the populace.

Thank you for the opportunity to provide comments. If you have any questions, please contact Paul Rull, ALUC Principal Planner, at (951) 955-6893.

Sincerely,

RIVERSIDE COUNTY AIRPORT LAND USE COMMISSION

Paul Rull, ALUC Principal Planner

2. Response to Comments

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A1. Response to Comments from Airport Land Use Commission (ALUC), Paul Rull, ALUC Principal Planner, dated February 18, 2020.

A1-1 The commenter is correct in stating that the project site is within Zone E, not Zone D. This change has been incorporated into the EIR, as identified in Section 3, *Revisions to the Draft EIR*, in this FEIR. The proposed project would develop office and warehouse uses onsite, which are allowed within Zone E.

A1-2 See response to A1-1.

2. Response to Comments

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LETTER A2 – South Coast Air Quality Management District (South Coast AQMD), Margaret Isied, Assistant Air Quality Specialist, CEQA IGR (1 of 2 pages)

Nicole Morse

From: Richard Ayala <rayala@ontarioca.gov>
Sent: Friday, February 21, 2020 3:48 PM
To: Nicole Morse
Subject: AQMD - FW: Technical Data Request: Ontario Ranch Business Park

FYI

Richard Ayala, Senior Planner

Ontario Planning Department
303 East B Street, Ontario, CA 91764
Direct: 909-395-2421 / Department: 909-395-2036
Fax: 909-395-2420 / E-Mail: rayala@ontarioca.gov
www.ontarioca.gov

From: Margaret Isied <MIsied@aqmd.gov>
Sent: Friday, February 21, 2020 2:42 PM
To: Richard Ayala <rayala@ontarioca.gov>
Cc: Lijin Sun <LSun@aqmd.gov>; Celia Diamond <cdiamond@aqmd.gov>
Subject: Technical Data Request: Ontario Ranch Business Park

Dear Mr. Ayala,

South Coast AQMD staff is in the process of reviewing the Draft Environmental Impact Report (Draft EIR) for the Proposed Ontario Ranch Business Park Project (South Coast AQMD Control Number: SBC200218-05). The public commenting period is from 2/13/20 – 3/30/20.

Upon review of the files sent to South Coast AQMD staff as a part of the public review period, I was able to access Appendix C1, and C2: Air Quality and GHG Modeling, and Health Risk Assessment which includes PDF versions of the CalEEMod, AERMOD, and HARP input and output files for the Proposed Project. Please provide an electronic copy of the live modeling files that were used to generate the CalEEMod, AERMOD, and HARP runs, and any additional emission calculation spreadsheets used to quantify the air quality impacts from construction and/or operation of the Proposed Project.

You may burn the data onto a CD and send it to South Coast AQMD Attn: CEQA-Intergovernmental Review, to the address in my signature below. Or, you may send the above-mentioned documents via a Dropbox link in which they may be accessed and downloaded by South Coast AQMD staff no later than February 28th, 2020. For downloading purposes, please add Ms. Celia Diamond, at cdiamond@aqmd.gov, as our contact to access the Dropbox link. A2-1

Without all files and supporting documentation, South Coast AQMD staff will be unable to complete a review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.

Thank you,

Margaret (Maggie) Isied, MPH
Assistant Air Quality Specialist, CEQA IGR
Planning, Rule Development & Area Sources

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2. Response to Comments

LETTER A2 – South Coast Air Quality Management District (South Coast AQMD), Margaret Isied, Assistant Air Quality Specialist, CEQA IGR (2 of 2 pages)

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765
P. (909) 396-2543
E. misied@aqmd.gov
**Please note that South Coast AQMD is closed on Mondays.*

A2. Response to Comments South Coast Air Quality Management District (South Coast AQMD), Margaret Isied, Assistant Air Quality Specialist, CEQA IGR, dated February 21, 2020.

A2-1 Upon the request of the commenter, the live modeling files that were used to generate the CalEEMod, AERMOD, and HARP runs were sent to South Coast AQMD. Additionally, the off-model emissions and risk calculations spreadsheets were sent to South Coast AQMD. The documents were sent electronically on February 25, 2020.

2. Response to Comments

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LETTER A3– South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR (1 of 8 pages)

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL:
Rayala@ontarioca.gov
Richard Ayala, Senior Planner
City of Ontario, Planning Department
303 East B Street
Ontario, CA 91764

March 24, 2020

Draft Environmental Impact Report (Draft EIR) for the Proposed Ontario Ranch Business Park Project (SCH No.: 2019050018)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final EIR.

South Coast AQMD Staff's Summary of Project Description

The Lead Agency proposes to develop 1,559,028 square feet of industrial, cold storage, and non-cold storage uses and 236,000 square feet of business park uses totaling 1,905,027 square feet on 85.6 acres (Proposed Project). The Proposed Project will be developed on an existing dairy farm and is located on the northeast corner of Merrill Avenue and Euclid Avenue in the City of Ontario. Construction of the Proposed Project is anticipated to begin in October 2020 and be completed in two phases by November 2022[1]. At full buildout, the Proposed Project will include 269 dock doors[2] and involve 796 daily truck trips[3]. Based on reviews of *Aerial View of Project Site*[4] in the Draft EIR and aerial photographs, South Coast AQMD staff found that the Proposed Project is located immediately east of existing residential uses[5]. INTRO

South Coast AQMD Staff's Summary of the Air Quality Analysis and Health Risk Assessment

The Lead Agency quantified the Proposed Project's regional and localized construction and operational emissions and compared those emissions to South Coast AQMD's recommended air quality CEQA significance thresholds. For informational purposes, the Lead Agency quantified and disclosed the Proposed Project's regional emissions from overlapping construction and operational activities in the Draft EIR.

Based on the regional air quality impacts analysis in the Draft EIR, the Lead Agency found that the Proposed Project's regional construction air quality impacts would be significant for volatile organic compounds (VOCs) and nitrogen oxides (NOx) at 305 pounds per day (lbs/day) and 125 lbs/day, respectively[6]. Additionally, the Lead Agency found that the Proposed Project's regional operational air quality impacts would also be significant for VOCs and NOx at 61 lbs/day and 129 lbs/day, respectively[7]. The Lead Agency is committed to implementing 12 air quality mitigation measures (MMs)[8], including, but not limited to, requiring the use of U.S. Environmental Protection Agency (EPA) Tier 4 Interim construction equipment, the use of electric powered off-road equipment during operation, and

[1] Draft EIR. Chapter 5: Environmental Analysis. Page 5.2-28 to 5.2-29.
[2] Draft EIR. Chapter 1: Executive Summary. Page 1-6.
[3] Draft EIR. Chapter 5: Environmental Analysis. Page 5.2-27.
[4] Draft EIR. Chapter 3: Project Description. Figure 3-3 – Aerial Photograph.
[5] *Ibid.*
[6] Draft EIR. Chapter 5: Environmental Analysis. Page 5.2-31.
[7] *Ibid.* Page 5.2-32.
[8] *Ibid.* Page 5.2-46 to 5.2-47.

2. Response to Comments

LETTER A3– South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR (2 of 8 pages)

electrification of truck/dock bays that serve cold storage facilities. After implementation of these mitigation measures, the Proposed Project's regional construction VOCs emissions and NOx emissions were reduced to less than significant at 66 lbs/day and 99 lbs/day, respectively[9]. However, regional operational VOCs and NOx emissions would remain significant and unavoidable after mitigation[10]. Based on the localized air quality impacts analysis in the Draft EIR, the Lead Agency found that the Proposed Project's localized construction and operational air quality impacts would be less than significant[11]. INTRO CONT'D

The Lead Agency also conducted a construction health risk assessment (HRA) and an operational HRA. The Lead Agency found that the Proposed Project's combined construction and operational incremental inhalation cancer risk would be 7.6 in one million[12], which would not exceed South Coast AQMD's CEQA significance threshold of 10 in one million for cancer risk.

Summary of South Coast AQMD Staff's Comments

Based on reviews of the Draft EIR and technical documents, South Coast AQMD staff found that the Lead Agency used a shorter exposure duration than is recommended to estimate the Proposed Project's operational health risk impacts, which may have been underestimated in the Draft EIR. Since the Proposed Project will be developed in close proximity to sensitive receptors, the Lead Agency should consider and discuss state and South Coast AQMD's guidance that recommends a buffer between warehouse uses and sensitive land uses such as residences in the Final EIR. A3-1

To further reduce construction emissions, South Coast AQMD staff recommends the existing air quality construction mitigation measures (MM-AQ-1 and MM-AQ-11) be strengthened to require the use of Tier 4 Final construction equipment and additional air quality construction mitigation measures be incorporated in the Final EIR to require the use of zero-emissions (ZE) or near-zero emissions (NZE) on-road vehicles. Lastly, since the Proposed Project is greater than 50 acres, the Lead Agency should include a discussion in the Final EIR on the specific requirements of South Coast AQMD Rule 403(e) – Additional Requirements for Large Operations[13] and information on other applicable South Coast AQMD Rules. Please see the attachment for more information. A3-2

Conclusion

Pursuant to California Public Resources Code Section 21092.5(a) and CEQA Guidelines Section 15088(b), South Coast AQMD staff requests that the Lead Agency provide South Coast AQMD staff with written responses to all comments contained herein prior to the certification of the Final EIR. In addition, issues raised in the comments should be addressed in detail giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice (CEQA Guidelines Section 15088(c)). Conclusory statements do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision makers and to the public who are interested in the Proposed Project. Further, if the Lead Agency makes the findings that the recommended revisions to the existing air quality mitigation measures and additional recommended mitigation measures are not feasible, the Lead Agency should describe the specific reasons supported by substantial evidence for rejecting them in the Final EIR (CEQA Guidelines Section 15091). A3-3

[9] *Ibid.* Page 5.2-20.
[10] *Ibid.*
[11] *Ibid.* Page 5.2-33 and 5.2-37.
[12] *Ibid.* Page 5.2-52.
[13] South Coast AQMD. Rule 403. Last amended June 3, 2005. Accessed at: http://www.aqmd.gov/docs/default-source/rulebook/rule-iv/rule-403.pdf.

LETTER A3– South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR (3 of 8 pages)

Richard Ayala March 24, 2020

South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Margaret Isied, Assistant Air Quality Specialist, at misied@aqmd.gov or (909) 396-2543, should you have any questions.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

Attachment
LS:MI
SBC200218-05
Control Number

3

2. Response to Comments

LETTER A3– South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR (4 of 8 pages)

Richard Ayala March 24, 2020

ATTACHMENT

1. **Health Risk Assessment (HRA)**
Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptors include schools, daycare centers, nursing homes, elderly care facilities, hospitals, and residential dwelling units. As stated above, the Proposed Project involves operation of warehouses, including cold storage uses, that will generate approximately 796 truck trips per day. Based on reviews of *Aerial View of Project Site*[14] in the Draft EIR and aerial photographs, South Coast AQMD staff found that existing residential uses are located immediately west of the Proposed Project. Surrounding sensitive receptors (e.g., residents) would be exposed to diesel particulate matter (DPM) from the transportation and idling of heavy-duty, diesel-fueled trucks visiting the Proposed Project. DPM has been identified by the California Air Resources Board (CARB) as a toxic air contaminant (TAC) based on its carcinogenic effects[15].

   In the Air Quality Analysis Section of the Draft EIR, the Lead Agency conducted a combined construction and operational HRA[16]. The Lead Agency found that the Proposed Project's combined construction and operational incremental cancer risk would be 7.6 in one million[17], which would not exceed South Coast AQMD's CEQA significance threshold of 10 in one million for cancer risk[18]. However, upon review of *Table 5: Cumulative Analysis Results – With Mitigation* in Appendix C2, South Coast AQMD staff found that the Lead Agency calculated the Proposed Project's cancer risk to residential receptors from operation based on a 28-year exposure duration[19]. A3-4

   The Proposed Project's operational health risk impacts may be underestimated because the Lead Agency used a shorter exposure duration for sensitive receptors (e.g., residential receptors). The South Coast AQMD's CEQA significance threshold of 10 in a million for cancer risk is based on a 30-year exposure duration for sensitive receptors. Since the Lead Agency compared the Proposed Project's cancer risk to the South Coast AQMD's CEQA significance threshold of 10 in a million to determine the level of significance for the Proposed Project's health risk impacts, the Lead Agency should use a 30-year exposure period for sensitive receptors (residents living west of the Proposed Project) to re-calculate the Proposed Project's health risks from operation in the Final EIR.

2. **Guidance Regarding Warehouses Sited Near Sensitive Receptors**
South Coast AQMD staff recognizes that there are many factors Lead Agencies must consider when making local planning and land use decisions. To facilitate stronger collaboration between Lead Agencies and South Coast AQMD to reduce community exposure to source-specific and cumulative air pollution impacts, South Coast AQMD adopted the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*[20] in 2005. Additional guidance is available in the CARB's *Air Quality and Land Use Handbook: A Community Health Perspective*, available at: https://www.arb.ca.gov/ch/handbook.pdf. For warehouses that accommodate more than 100 trucks per day, or more than 40 trucks with operating transport refrigeration units (TRUs) per day, a 1,000-foot A3-5

[14] Draft EIR. Chapter 3: Project Description. Figure 3-3 – Aerial Photograph.
[15] CARB. August 27, 1998. Resolution 98-35. Accessed at: http://www.arb.ca.gov/regact/diesltac/diesltac.htm.
[16] *Ibid.* Page 5.2-52.
[17] *Ibid.*
[18] South Coast AQMD has developed the CEQA significance threshold of 10 in one million for cancer risk. When South Coast AQMD acts as the Lead Agency, South Coast AQMD staff conducts a HRA, compares the maximum cancer risk to the threshold of 10 in one million to determine the level of significance for health risk impacts, and identifies measures if the risk is found to be significant.
[19] Appendix C2: Health Risk Assessment. Page 20.
[20] South Coast AQMD. May 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*. Accessed at: http://www.aqmd.gov/home/library/documents-support-material/planning-guidance/guidance-document.

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LETTER A3– South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR (5 of 8 pages)

separation between sensitive land uses (e.g., residential uses)[21] and the operating warehouse is recommended. Since operation of the Proposed Project includes cold storage facilities with TRUs and approximately 796 daily truck trips, South Coast AQMD staff recommends that the Lead Agency review and consider these guidance documents when making local planning and land use decisions. A3-5 CONT'D

3. **Recommended Revisions to Existing Air Quality Mitigation Measures (MM)-AQ-1 and MM AQ-11**

CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize or eliminate any significant adverse air quality impacts. The Proposed Project's regional construction NOx emissions were mitigated to 99 lbs/day, which were slightly below South Coast AQMD's regional air quality CEQA significance threshold of 100 lbs/day. To further reduce those emissions, South Coast AQMD staff recommends that the Lead Agency strengthen MM-AQ-1 and MM-AQ-11 for medium and large constructional equipment by making the following revisions shown in strikethrough and underline in the Final EIR.

MM AQ- 1

Construction contractors shall, at minimum, use equipment that meets the United States Environmental Protection Agency's (EPA) Tier 4 ~~Interim~~ Final emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower for all Phase 1 rough grading and rough grading soil hauling activities, unless it can be demonstrated to the City of Ontario Building Department that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 ~~Interim~~ Final emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. Prior to construction, the project engineer shall ensure that all construction (e.g., demolition and grading) plans clearly show the requirement for EPA Tier 4 ~~Interim~~ Final emissions standards for construction equipment over 50 horsepower for the specific activities stated above. A3-6

MM AQ-11

Construction contractors shall, at minimum, use equipment that meets the United States Environmental Protection Agency's (EPA) Tier 4 ~~Interim~~ Final emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower for all Phase 2 building construction activities, unless it can be demonstrated to the City of Ontario Building Department that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 ~~Interim~~ Final emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. Prior to construction, the project engineer shall ensure that all construction (e.g., demolition and grading) plans clearly show the requirement for EPA Tier 4 ~~Interim~~ Final emissions standards for construction equipment over 50 horsepower for the specific activity stated above. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Ontario. The construction equipment list shall state the makes, models, Equipment Identification Numbers, and number of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5 minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

[21] CARB. *Air Quality and Land Use Handbook: A Community Health Perspective*. Page 4. Accessed at: https://www.arb.ca.gov/ch/handbook.pdf.

2. Response to Comments

LETTER A3– South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR (6 of 8 pages)

Richard Ayala March 24, 2020

4. **Additional Recommended Air Quality Mitigation Measures**

CEQA requires that the Lead Agency considers mitigation measures to minimize significant adverse impacts (CEQA Guidelines Section 15126.4) and that all feasible mitigation measures that go beyond what is required by law be utilized to minimize or eliminate any significant adverse air quality impacts. The Proposed Project's regional operational air quality impacts, particularly from NOx, would remain significant and unavoidable after mitigation. To further reduce the Proposed Project's construction and operational NOx emissions, and to comply with CEQA requirements, South Coast AQMD staff commends that the Lead Agency include additional air quality mitigation measures for implementation at the Proposed Project in the Final EIR. For more information on potential mitigation measures as guidance to the Lead Agency, please visit South Coast AQMD's CEQA Air Quality Handbook website[22].

Construction-related Air Quality Mitigation Measures

a) Require construction equipment such as concrete/industrial saws, pumps, aerial lifts, material hoist, air compressors, forklifts, excavator, wheel loader, and soil compactors be electric or alternative-fueled (i.e., non-diesel). Information on companies and electric powered equipment that can and should be used during construction is available at: https://www.forconstructionpros.com/construction-technology/article/21107531/electrified-construction-equipment-gaining-momentum. A3-7

Operation-related Air Quality Mitigation Measures

Near-zero emissions (NZE) heavy-duty truck engines are commercially available. Examples of commercially available NZE heavy-duty truck engines that meet CARB's optional low NOx standards include, but are not limited to, Cummins Westport 8.9- and 6.7-liter natural gas engines and Roush Cleantech 6.8- liter compressed natural gas and liquefied petroleum gas engines[19]. Therefore, NZE heavy-duty trucks should be required for use during operation.

On March 3, 2017, the South Coast AQMD's Governing Board adopted the 2016 Air Quality Management Plan (2016 AQMP)[23], which was later approved by CARB on March 23, 2017. Built upon the progress in implementing the 2007 and 2012 AQMPs, the 2016 AQMP provides a regional perspective on air quality and the challenges facing the South Coast Air Basin (Basin). The most significant air quality challenge in the Basin is to achieve an additional 45 percent reduction in nitrogen oxide (NOx) emissions in 2023 and an additional 55 percent NOx reduction beyond 2031 levels for ozone attainment.

Implementation of the Proposed Project contributes to Basin-wide NOx emissions. Requiring the use of ZE heavy-duty trucks supports South Coast AQMD's efforts to attain state and federal air quality standards as outlined in the 2016 AQMP, specifically for NOx emissions reductions. Requiring the use of ZE heavy-duty trucks also fulfills the Lead Agency's legal obligation to mitigate the Proposed Project's significant air quality impacts and complies with CEQA's requirements for mitigation measures. Therefore, South Coast AQMD staff recommends that the Lead Agency make a stronger commitment to require the use of cleaner trucks during operation.

b) Require the use of zero-emissions (ZE) or near-zero emissions (NZE) on-road vehicles and off-road equipment during operation, such as trucks with natural gas engines that meet the CARB's

[22] South Coast AQMD. Accessed at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.
[23] South Coast AQMD. March 3, 2017. *2016 Air Quality Management Plan*. Accessed at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan.

6

LETTER A3– South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR (7 of 8 pages)

adopted optional NOx emission standard of 0.02 grams per brake horsepower-hour (g/bhp-hr). At a minimum, the City may require that operators commit to using 2010 model year or newer engines that meet CARB's 2010 engine emission standards of 0.01 g/bhp-hr for particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks and equipment. To monitor and ensure ZE, NZE, or 2010 model year or newer trucks are used at the Proposed Project, the Lead Agency should require that operators maintain records of all trucks and equipment associated with the Proposed Project's operation, and make these records available to the Lead Agency upon request. Alternatively, the Lead Agency should require periodic reporting and provision of written records by operators, and conduct regular inspections of the records to the maximum extent feasible and practicable. To facilitate implementation of this mitigation measure, the Lead Agency shall require operators of the proposed facilities to provide the vendor trucks information to incorporate energy efficiency improvement features through the Carl Moyer Program – including truck modernization, retrofits, and/or aerodynamic kits and low rolling resistance tires – to reduce fuel consumption.

If implementing ZE heavy-duty trucks are impractical or infeasible to include in the Final EIR, the Lead Agency should develop and include performance standards to achieve the use of ZE heavy-duty trucks (CEQA Guidelines Section 15126.4(a)). The Lead Agency can and should develop the following performance standards or any other comparable standards in the Final EIR.

- Develop a minimum amount of ZE heavy-duty trucks that the Proposed Project must use each year to ensure adequate progress. Include this requirement in the Proposed Project's Business or Management Plan.
- Establish a contractor(s)/truck operator(s) selection policy that prefers contractor(s)/truck operator(s) who can supply ZE heavy-duty trucks at the Proposed Project. Include this policy in the Request for Proposal for selecting contractor(s)/truck operator(s).
- Develop a target-focused and performance-based process and timeline to implement the use of ZE heavy-duty trucks during operation.
- Develop a project-specific process and criteria for periodically assessing progress in implementing the use of ZE heavy-duty trucks during operation.

A3-7 CONT'D

c) Limit the daily number of truck trips allowed at the Proposed Project to the level that was analyzed in the Final EIR (e.g., 796 daily truck trips). If it is reasonably foreseeable before the EIR is certified that the Proposed Project would generate more than 796 daily truck trips, the Lead Agency should take into account additional daily truck trips and re-evaluate the Proposed Project's air quality and HRA impacts (CEQA Guidelines Section 15088.5). If information becomes available, after the Proposed Project is approved, suggesting that the Proposed Project will generate more than 796 daily truck trips, the Lead Agency is required to determine if a Subsequent EIR is required under CEQA Guidelines Section 15162. This recommended mitigation measure is to ensure that the modeling assumption of 796 daily truck trips used to quantify the Proposed Project's operational emissions and health risks will serve as a condition of project approval.

d) Design the Proposed Project such that any check-in point for trucks is well inside the Proposed Project site to ensure that there are no trucks queuing outside of the facility.

5. **South Coast AQMD Rule 403(e), Permits, and Responsible Agency**
The Lead Agency included a discussion of general compliance with South Coast AQMD Rule 403 – Fugitive Dust in the Draft EIR[24]. Since the Proposed Project is a large operation of approximately 85.6

A3-8

[24] Draft EIR. Chapter 5: Environmental Analysis. Page 5.2-11.

2. Response to Comments

LETTER A3– South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR (8 of 8 pages)

acres[25] (50-acre sites or more of disturbed surface area; or daily earth-moving operations of 3,850 cubic yards or more on three days in any year) in the South Coast Air Basin, the Lead Agency is required to comply with Rule 403(e) – Additional Requirements for Large Operations[26]. Additional requirements may include, but are not limited to, Large Operation Notification (Form 403 N), appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control in the South Coast Air Basin training class[27]. Therefore, South Coast AQMD recommends that the Lead Agency include a discussion to demonstrate specific compliance with South Coast AQMD Rule 403(e) in the Final EIR. Compliance with South Coast Rule 403(e) will further reduce regional and localized emissions from particulate matters during construction.

The Proposed Project is located on an existing dairy farm. In the event that methane is encountered and requires the implementation of any remediation, control, or capture[28], South Coast AQMD should be consulted in advance to determine permit requirements and/or South Coast AQMD rules that the Proposed Project must comply. The Lead Agency should initiate consultation with South Coast AQMD as required under CEQA Guidelines Section 15096(b). After consultation, if it is determined that a permit from South Coast AQMD is required for remediating, controlling, or capturing methane emissions, South Coast AQMD should be identified as a Responsible Agency for the Proposed Project in the Final EIR. The Final EIR should also include discussions of all applicable South Coast AQMD rules that the Proposed Project must comply. Any assumptions used in the Air Quality Analysis in the Final EIR will be used as the basis for permit conditions and limits for the Proposed Project. Generally, operation of portable engines and portable equipment units of 50 horsepower (hp) or greater that emit particulate matter require a permit from South Coast AQMD or registration with the Portable Equipment Registration Program (PERP) through CARB[29]. The Lead Agency should consult with South Coast AQMD's Engineering and Permitting staff to determine if the Proposed Project will involve uses of equipment requiring a South Coast AQMD permit (e.g., prior to start of soil disturbing activities during construction) or if registration under the PERP through CARB[30]. Should there be any questions on permits, please contact the South Coast AQMD's Engineering and Permitting staff at (909) 396-3385. For more general information on permits, please visit South Coast AQMD's webpage at: http://www.aqmd.gov/home/permits. For more information on the PERP Program, please contact CARB at (916) 324-5869 or visit CARB's webpage at: https://ww2.arb.ca.gov/our-work/programs/portable-equipment-registration-program-perp.

A3-8 CONT'D

[25] Draft EIR. Chapter 1: Executive Summary. Page 1-5.
[26] South Coast AQMD. Rule 403. Last amended June 3, 2005. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf.
[27] South Coast AQMD Compliance and Enforcement Staff's contact information for Rule 403(e) Large Operations is (909) 396-2608 or by e-mail at dustcontrol@aqmd.gov.
[28] Draft EIR. Chapter 1: Executive Summary. Page 1-27.
[29] South Coast Air Quality Management District. *Portable Equipment Registration Program (PERP)*. Accessed at: http://www.aqmd.gov/home/permits/equipment-registration/perp.
[30] *Ibid.*

A3. Response to Comments from South Coast Air Quality Management District (South Coast AQMD), Program Supervisor, CEQA IGR, dated March 24, 2020.

Intro Responses to the South Coast Air Quality Management District's (South Coast AQMD) comments can be found in responses A3-2 through A3-8.

A3-1 The commenter asserts that the health risk assessment used a shorter exposure duration than is recommended for operational uses. The health risks for a 30-year exposure to operational emissions is provided on page 5.2-40 of the Draft EIR (Table 5.2-16 Operational HRA Results). As discussed in the DEIR, the health risk to the maximum exposed residential receptor would be 6.2 in a million over a 30-year exposure duration, which is below the South Coast AQMD threshold of 10 in a million.

The combined "Construction and Operational" health risks, provided on page 5.2-41 of the Draft EIR (Table 5.2-17), take into account that a nearby resident could be exposed to 2-years of construction emissions and 28-years of operational emissions over a total exposure period of 30 years. Therefore, the combined "Construction and Operation" scenario is calculated for a 30-year exposure duration which is in alignment with South Coast AQMD's recommended CEQA guidance for residential receptors.

A3-2 The commenter recommends revisions to the construction mitigation measures, including Tier 4 equipment, zero- or near zero-emission on-road vehicles, and a discussion of requirements of South Coast AQMD Rule 403(e).

Mitigation Measures AQ-1 and AQ-16 already require use of newer, lower emissions Tier 4 engines for equipment 50 horsepower. At the request of the commenter, Tier 4 Final equipment will be required and the applicable mitigation measure has been revised accordingly.

During construction, on-road trucks onsite would meet the CARB's current Truck and Bus Rule. However, construction contractors do not own their own truck fleets. Rather, they are served by third-party trucks operated by carriers contracted by beneficial cargo owners (BCO). Additionally, while penetration of ZE trucks into the commercial market is imminent, there are no commercially available ZE trucks today. Imposing extensive requirements on the proposed project related to emerging technology, when the various types of technological advancements and their timeframes for common availability are not known with any certainty, is not feasible. As a result, requiring that individual construction contractors utilize zero emission (ZE) trucks is not a feasible mitigation measure

A discussion of South Coast AQMD Rule 403 is included on page 5.2-11 of the Draft EIR. Additionally, Rule 403 is identified as a Plan, Policy, or Program (PPP) AIR-4. At the request of the commenter, additional information regarding requirements for large

grading operations has been incorporated into the EIR Section 5.2, *Air* Quality, at Page 5.2-11 and can be found in Chapter 3, Revisions to the DEIR, in this FEIR.

A3-3 The commenter requests written responses to all DEIR comments prior to certification of the FEIR and cites various CEQA Guidelines. Comment noted.

A3-4 The commenter describes sensitive receptors for purposes of the health risk assessment and asserts that the operational exposure duration is incorrect. The health risks for a 30-year exposure to operational emissions is provided on page 5.2-40 of the Draft EIR (Table 5.2-16 Operational HRA Results). As discussed in the DEIR, the health risk to the maximum exposed residential receptor would be 6.2 in a million over a 30-year exposure duration, which is below the South Coast AQMD threshold of 10 in a million.

The combined "Construction and Operational" health risks, provided on page 5.2-41 of the Draft EIR (Table 5.2-17), take into account that a nearby resident could be exposed to 2-years of construction emissions and 28-years of operational emissions over a total exposure period of 30 years. Therefore, the combined "Construction and Operation" scenario is calculated for a 30-year exposure duration which is in alignment with South Coast AQMD's recommended CEQA guidance for residential receptors.

A3-5 The commenter references guidance documents for siting warehouses near sensitive receptors and recommends a 1,000-foot separation between sensitive land uses and project. The project area is limited to the boundaries of the project site. Sensitive receptors proximate to the site are identified in, Figure 5.2-1, *Project Site and Off-Site Sensitive Receptors*. One home that is part of an existing dairy operation is within 82 feet of the project site and all other homes are at least 150 feet away and all homes are located away from the large buildings that will generate the most truck traffic. As previously stated, based on the nearest sensitive receptor, health risk impacts were determined to be less than significant. Therefore, a 1,000 foot-buffer zone is not required or feasible.

A3-6 The commenter suggests revisions to Mitigation Measures AQ-1 and AQ-16. These mitigation measures already require use of newer, lower emissions Tier 4 engines for equipment more than 50 horsepower. At the request of the Commenter, Tier 4 Final equipment will be required where available and the applicable mitigation measure has been revised accordingly. Revisions to these mitigation measures have been incorporated into the EIR and can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR.

A6-7 The commenter requests that the project implement further mitigation measures in Attachment A to decrease construction and operations emissions. Additional information requested by the commenter and incorporated into the EIR can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR. The following summarizes South Coast AQMD's recommended measures and provides a response to each proposed measure:

Construction-Related Air Quality Mitigation Measures

a) Require construction equipment such as concrete/industrial saws, pumps, aerial lifts, material hoist, air compressors, forklifts, excavator, wheel loader, and soil compactors be electric or alternative-fueled (i.e., non-diesel). Mitigation Measures AQ-1 and AQ-16 has been modified to require electric equipment for equipment 25 horsepower and lower.

Operational-Related Air Quality Mitigation Measures

b) Require the use of zero-emissions (ZE) or near-zero emissions (NZE) on-road vehicles and off-road equipment during operation. Trucks accessing the project site are required to comply with applicable regulations, including CARB's Truck and Bus Rule. By January 1, 2023, nearly all trucks and buses will be required to have 2010 or newer model year engines. While penetration of ZE trucks into the commercial market is imminent, there are no commercially available ZE trucks today. As a result, it is speculative to determine what the market penetration and availability of ZE trucks will be in year 2030. When ZE trucks enter the market, there is likely to be limited availability of these trucks while they are first phased into the commercial market over the next 10 years. Imposing extensive requirements on the proposed project related to emerging technology, when the various types of technological advancements and their timeframes for common availability are not known with any certainty, is not a feasible mitigation measure. Additionally, at this time the future tenant is unknown, therefore, it is not possible to determine whether or not individual warehouse operators would have their own truck fleets or be served by third-party trucks operated by carriers contracted by beneficial cargo owners (BCO) (i.e., the project applicant nor tenants own the trucks). As a result, a lease agreement that requires all electric trucks is not a feasible mitigation measure. However, Mitigation Measure AQ-13 has been added to require phase-in of ZE and NZE trucks. A performance standard is not applicable since one is not available; and it is speculative to determine if/when ZE trucks will be phased-into the market.

c) Limit the daily number of truck trips allowed at the Proposed Project to the level that was analyzed in the Final EIR (e.g., 796 daily truck trips). The traffic analysis included in DEIR Section 5.14, *Transportation*, provides a conservative estimate of the maximum number of truck trips generated by the project based on the maximum allowable building square footage. CEQA requires that an EIR evaluate the proposed project based on reasonable assumptions and foreseeable actions. The number of passenger vehicle and truck trips that the project is expected to generate is based on Institute of Transportation Engineers (ITE) in their Trip Generation Manual (10th Edition), recommendations, which rely on surveyed data from other operating industrial warehouse buildings, which is reasonable and reliable information. Information on ITE trip rates and vehicle type mixes is found in the DEIR, Traffic Study (DEIR Appendix L1). Instituting a cap on the number of trucks that can access the project's building is not required under CEQA, nor would it be reasonable or feasible for the City of Ontario to monitor and enforce such a requirement. The DEIR

has made reasonable assumptions based on substantial evidence by using ITE recommendations based on a reasonable type of building occupant that would be permitted by the site's zoning. Based on the foregoing discussion, the City concludes that it would be infeasible to impose and enforce a numerical cap on the number of trucks that access the site on a daily basis during the project's operation. Furthermore, subsequent projects within the Specific Plan would be required to evaluate whether or not the individual site-specific project is within the scope of the EIR. For these reasons, the City respectfully rejects the commenter's recommendation to impose and enforce a numerical cap on the number of trucks that the project attracts during its operation.

d) Design the Proposed Project such that any check-in point for trucks is well inside the Proposed Project site to ensure that there are no trucks queuing outside of the facility. Trucks are required to adhere to the City's truck routes and trucks prohibitions (e.g., prohibiting truck traffic and truck parking in residential areas), subject to enforcement penalties (fines). Truck routing information will be posted or provided by future tenants. The project has already been designed to provide internal roadway circulation to ensure that trucks will not queue on public streets. At the request of the commenter, a new Mitigation Measure AQ-15 has been added to prevent off-site queuing of trucks in the event a warehouse includes an on-site "check-in" point.

A3-8 The commenter requests a discussion of the project's compliance with South Coast AQMD Rule 403(e). The project will be required to adhere to all South Coast AQMD rules including Rule 403, Rule 1156. A discussion of South Coast AQMD Rule 403 is included on page 5.2-11 of the Draft EIR. Additionally, Rule 403 is identified as a Plan, Policy, or Program (PPP) AIR-4. At the request of the Commenter, additional information regarding requirements for large grading operations has been incorporated into the EIR and can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR.

The commenter also requests consultation in the event that methane is encountered and requires remediation, control, or capture A discussion of the potential to encounter methane hazards is included in Section 5.8, *Hazards and Hazardous Materials*, in the DEIR. Mitigation Measure HAZ-1 requires soil gas testing prior to grading activities in order to identify the presence or absence of methane. In accordance with Mitigation Measure HAZ-1 and the Department of Toxic Substances Control (DTSC), if methane exceeds the 5,000 ppmv the Applicant will be required to install a methane gas mitigation system. Installation of the soil gas mitigation system may require use of portable equipment that requires a permit from South Coast AQMD. If required, the Applicant will be required to obtain the applicable permit(s) from South Coast AQMD in accordance with existing regulations.

LETTER A4 – San Bernardino County – Department of Public Works, Michael R. Perry, Supervising Planner (1 page)

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SAN BERNARDINO COUNTY

Department of Public Works
- Flood Control
- Operations
- Solid Waste Management
- Surveyor
- Transportation

Brendon Biggs, M.S., P.E.
Interim Director

Transmitted Via Email

March 25, 2020

City of Ontario
Planning Department
Attn: Richard Ayala
303 East B Street
Ontario, Ca. 91761

File: 10(ENV)-4.01

RE: CEQA – NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ONTARIO RANCH BUSINESS PARK SPECIFIC PLAN

Dear Mr. Ayala:

Thank you for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on February 12, 2020** and pursuant to our review, the following comments are provided:

General Comments

1. We are aware there may be storm drains in and around the site that may be affected by the proposed Project. proposed Project. When planning for or altering existing or future storm drains, be advised that the Project is subject to the City of Ontario MPD, dated March 2012. It is to be used as a guideline for drainage in the area and is available in the City of Ontario offices. Any revision to the drainage should be reviewed and approved by the City of Ontario. In addition, a drainage study area impacted by the project is the Chino SOI Subarea 2 MPD, dated June 2005 and available at the City of Chino offices. Changes or impact to the drainage should be reviewed and approved by the City of Chino. Should construction of new, or alterations to existing storm drains be necessary as part of the Proposed Project, their impacts and any required mitigation should be discussed within the Supplemental EIR before the document is adopted by the Lead Agency. A4-1

We respectfully request to be included on the circulation list for all project notices, public reviews, or public hearings. In closing, I would like to thank you again for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. Should you have any questions or need additional clarification, please contact the individuals who provided the specific comment, as listed above.

Sincerely,

MICHAEL R. PERRY
Supervising Planner
Environmental Management
MRP:AJ:sr Email: rayala@ontarioca.gov

2. Response to Comments

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A4. Response to Comments from San Bernardino County – Department of Public Works, Michael R. Perry, Supervising Planner, dated March 25, 2020.

A4-1 The commenter states that existing and future storm drainage improvements are subject to the City of Ontario MPD, dated March 2012 and the impact area is the Chino SOI Subarea 2 MPD, dated June 2005. Improvements should be reviewed and approved by the cities of Ontario and Chino. Additionally, the commenter requests to be provided all public notices relating to the project.

As indicated in Section 5.16, *Utilities and Service Systems,* the project's storm drain improvements are consistent with the facilities in Drainage Area XIV of the City of Ontario Master Plan of Drainage. The project will be required to contribute funds to the construction (by others) of the master planned storm drain facilities south of Merrill Avenue according to a formula and timing to be determined in the Development Agreement. In addition, the project shall mitigate flooding of existing storm drain facilities downstream of the project site (south of Merrill Avenue), in the City of Chino, to the satisfaction of the City of Chino.

2. Response to Comments

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LETTER A5 – California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch (1 of 8 pages)

CALIFORNIA
AIR RESOURCES BOARD

Gavin Newsom, Governor
Jared Blumenfeld, CalEPA Secretary
Mary D. Nichols, Chair

March 27, 2020

Richard Ayala
Senior Planner
City of Ontario
303 East B Street
Ontario, California 91761

Dear Richard Ayala:

Thank you for providing the California Air Resources Board (CARB) with the opportunity to comment on the Ontario Ranch Business Park Specific Plan (Project) Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2019050018. The project includes the development of 8 industrial/warehouse buildings totaling 1,905,027 square feet, which includes 200,000 square feet of cold storage space. Once in operation, the Project would introduce up to 4,328 daily vehicle trips, including 796 daily heavy-duty truck trips, along local roadways. The Project is located within the City of Ontario (City), California, which is the lead agency for California Environmental Quality Act (CEQA) purposes. INTRO

The industrial uses proposed under the Project would permit warehousing and distribution facilities. Freight facilities, such as warehouse and distribution, can result in high daily volumes of heavy-duty diesel truck traffic and operation of on-site equipment (e.g., forklifts, yard tractors, etc.) which emit toxic diesel emissions and contribute to regional air pollution and global climate change.[1] CARB has reviewed the DEIR and is concerned about the air pollution impacts that would result should the City approve the Project and the land-use change from General Commercial, Office Commercial, Low-Medium Density Residential to Business Park, Industrial to build the proposed industrial/warehouse buildings.

I. The Project Would Increase Exposure to Air Pollution in Disadvantaged Communities

The Project, if approved, will expose nearby disadvantaged communities to elevated levels of air pollution. Residences are located north, east, northeast, and northwest of the Project with the closest residences located approximately 85 feet from the Project's northern boundary. In addition to residences, two elementary schools (Edwin Rhodes Elementary School and Howard Cattle Elementary School), and a high school A5-1

[1] With regard to greenhouse gas emissions from this project, CARB has been clear that local governments and project proponents have a responsibility to properly mitigate these impacts. CARB's guidance, set out in detail in the Scoping Plan issued in 2017, makes clear that in CARB's expert view local mitigation is critical to achieving climate goals and reducing greenhouse gases below levels of significance.

arb.ca.gov 1001 I Street • P.O. Box 2815 • Sacramento, California 95812 (800) 242-4450

2. Response to Comments

LETTER A5 – California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch (2 of 8 pages)

(Magnolia Junior High School) are located within 1 mile of the Project area. The community is surrounded by existing toxic diesel particulate matter (diesel PM) emission sources, which include existing industrial sources, the Chino Airport, and vehicular traffic along State Route 60 (SR-60) and State Route 71 (SR-71). Due to the Project's proximity to residences and schools already disproportionately burdened by multiple sources of air pollution, CARB is concerned with the potential cumulative health impacts associated with the construction and operation of the Project.

The State of California has placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill 617 (AB 617) (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high exposure burdens, like those in which the Project is located. Diesel PM emissions generated during the construction and operation of the Project would negatively impact the community, which is already disproportionally impacted by air pollution from existing industrial sources, the Chino Airport, and traffic on SR-60 and SR-71.

A5-1 CONT'D

II. The Health Risk Assessment Used Inappropriate Assumptions When Modeling the Project's Health Risk Impacts from On-Site Transport Refrigeration Units

CARB has reviewed the Project's health risk assessment (HRA) and has concerns regarding the assumptions used to estimate the Project's health impacts from on-site transport refrigeration units (TRU). Based on the Project's traffic analysis, 138 of the total 796 daily trucks serving the Project will be associated with the proposed 200,000 square feet of cold storage space. In the HRA, the City and applicant assumed half of the 138 heavy truck trips (i.e., 69 heavy truck trips) serving the proposed 200,000 square feet of cold storage space would be equipped with TRUs. Given the size of the Project, it is difficult to estimate the number of TRU-equipped trucks and trailers that may access the site. However, it is conceivable that it could be much higher than half of the total truck trips associated with the proposed cold storage space. CARB urges the applicant and City to revise the HRA assuming all of the Project's trucks serving the proposed cold storage space are equipped with TRUs.

A5-2

The HRA assumed all TRUs visiting the Project site would not idle longer than 30 minutes. Data obtained by CARB indicates that TRUs can operate for as long as 2 hours per visit, which is well above the 30-minute duration assumed in the HRA. Unless the applicant and City restrict TRU idling duration to less than 30 minutes, the Project's HRA should be revised. The revised HRA should assume a TRU idling duration supported by substantial evidence.

The HRA assumed the TRUs accessing the Project site would have an average power rating of 50 horsepower (hp). TRUs with a power rating of less than 25 hp have a particulate matter (PM) emission rate of 0.3 grams per brake horsepower-hour

LETTER A5 – California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch (3 of 8 pages)

(g/bhp-hr), whereas TRUs with a power rating greater than 25 hp have a PM emission rate of 0.02 g/bhp-hr. Unless the applicant and City prohibit TRUs with a power rating of less than 25 hp from accessing the Project site, the Project's HRA should be revised to assume a conservative percentage of the TRUs entering the Project site have a power rating of less than 25 hp, supported by substantial evidence. A5-2 CONT'D

III. Air Pollutant Emissions from On-Road Trucks Reported in the DEIR are not Consistent with the Project's Air Quality Modeling Results

CARB has reviewed the air pollutant emission rates presented in Chapter 5.2 (Air Quality) and Appendix C (Air Quality Modeling and Reports) of the DEIR. Based on this review, CARB has identified inconsistencies between the air pollutant emission rates shown in Table 5.2-11 and Appendix C. According to Table 5.2-11, on-road trucks would emit 105 pounds per day (ppd) of nitrogen oxides (NO_x). This NO_x emission rate was estimated using the California Emissions Estimator Model (CalEEMod). After reviewing the CalEEMod outputs presented in Appendix C (Air Quality) of the DEIR, the operation of Project-related on-road trucks would result in 188 ppd of NO_x, which is higher than the truck emission rate reported in the air quality section of the DEIR (i.e., Table 5.2-11). Although the DEIR does ultimately conclude the Project would result in a significant and unavoidable impact after mitigation, CARB urges the City and applicant to report accurate air pollutant emission estimates in the FEIR. A5-3

IV. Recommended Mitigation Measures

Chapter 5.2 (Air Quality) of the DEIR includes Mitigation Measure AQ-1 through AQ-12 to reduce the Project's impacts on air quality during its construction and operation. These mitigation measures include requiring the use of Tier 4 equipment, the use of paints with a volatile organic compound (VOC) of 25 grams per liter or less during project construction, and the use of electric-powered on-site equipment (e.g., yard trucks/hostlers) and electrified truck/dock bays during project operation. With the implementation of these mitigation measures, the DEIR concluded that the Project would result in a significant and unavoidable impact on air quality. Even where impacts will remain significant and unavoidable after mitigation, CEQA requires that all feasible mitigation measures be incorporated (see California Public Resources Code§ 21081; 14 CCR§ 15126.2(b)). To meet this requirement, CARB urges the City to implement the emission reduction measures found in Attachment A of this letter that are not already in the DEIR. A5-4

V. Conclusion

CARB is concerned about the Project's potential public health impacts. The DEIR does not incorporate conservative modeling assumptions when evaluating health risk impacts from on-site TRUs, has reporting inconsistencies, and does not include all feasible mitigation measures to reduce the Project's construction and operational air pollution A5-5

2. Response to Comments

LETTER A5 – California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch (4 of 8 pages)

emissions. CARB recommends that the City and applicant reanalyze the Project's health risk impacts using conservative assumptions and include the air pollution emission measures provided in Attachment A in the FEIR.

Given the breadth and scope of projects subject to CEQA review throughout California that have air quality and greenhouse gas impacts coupled with CARB's limited staff resources to substantively respond to all issues associated with a project, CARB must prioritize its substantive comments here based on staff time, resources, and its assessment of impacts. CARB's deliberate decision to substantively comment on some issues does not constitute an admission or concession that it substantively agrees with the lead agency's findings and conclusions on any issues on which CARB does not substantively submit comments.

A5-5
CONT'D

CARB appreciates the opportunity to comment on the DEIR for the Project and can provide assistance on zero-emission technologies and emission reduction strategies, as needed. If you have questions, please contact Stanley Armstrong, Air Pollution Specialist, at (916) 440-8242 or via email at stanley.armstrong@arb.ca.gov.

Sincerely,

Richard Boyd

Richard Boyd, Chief
Risk Reduction Branch
Transportation and Toxics Division

Attachment

cc: See next page.

LETTER A5 – California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch (5 of 8 pages)

Richard Ayala
March 27, 2020
Page 5

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2. Response to Comments

LETTER A5 – California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch (6 of 8 pages)

ATTACHMENT A

Recommended Air Pollution Emission Reduction Measures for Warehouses and Distribution Centers

The California Air Resources Board (CARB) recommends developers and government planners use all existing and emerging zero to near-zero emission technologies during project construction and operation to minimize public exposure to air pollution. Below are some measures, currently recommended by CARB, specific to warehouse and distribution center projects. These recommendations are subject to change as new zero-emission technologies become available.

Recommended Construction Measures

1. Ensure the cleanest possible construction practices and equipment are used. This includes eliminating the idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electrical hookups) to support zero and near-zero equipment and tools.

2. Implement, and plan accordingly for, the necessary infrastructure to support the zero and near-zero emission technology vehicles and equipment that will be operating on site. Necessary infrastructure may include the physical (e.g., needed footprint), energy, and fueling infrastructure for construction equipment, on-site vehicles and equipment, and medium-heavy and heavy-heavy duty trucks. A5-6

3. In construction contracts, include language that requires all off-road diesel-powered equipment used during construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits, such that, emission reductions achieved equal or exceed that of a Tier 4 engine.

4. In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction be battery powered.

5. In construction contracts, include language that requires all heavy-duty trucks entering the construction site, during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB's lowest optional low-oxides of nitrogen (NO_x) standard starting in the year 2022.[1]

[1] In 2013, CARB adopted optional low-NO_x emission standards for on-road heavy-duty engines. CARB encourages engine manufacturers to introduce new technologies to reduce NO_x emissions below the current mandatory on-road heavy-duty diesel engine emission standards for model year 2010 and later. CARB's optional low-NO_x emission standard is available at: https://www.arb.ca.gov/msprog/onroad/optionnox/optionnox.htm.

Attachment - 1

LETTER A5 – California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch (7 of 8 pages)

6. In construction contracts, include language that requires all construction equipment and fleets to be in compliance with all current air quality regulations. CARB is available to assist in implementing this recommendation.

A5-6 CONT'D

Recommended Operation Measures

1. Include contractual language in tenant lease agreements that requires tenants to use the cleanest technologies available, and to provide the necessary infrastructure to support zero-emission vehicles and equipment that will be operating on site.

2. Include contractual language in tenant lease agreements that requires all loading/unloading docks and trailer spaces be equipped with electrical hookups for trucks with transport refrigeration units (TRU) or auxiliary power units. This requirement will substantially decrease the amount of time that a TRU powered by a fossil-fueled internal combustion engine can operate at the project site. Use of zero-emission all-electric plug-in TRUs, hydrogen fuel cell transport refrigeration, and cryogenic transport refrigeration are encouraged and can also be included in lease agreements.[2]

3. Include contractual language in tenant lease agreements that requires all TRUs entering the project site be plug-in capable.

4. Include contractual language in tenant lease agreements that requires future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans.

A5-7

5. Include contractual language in tenant lease agreements requiring all TRUs, trucks, and cars entering the Project site be zero-emission.

6. Include contractual language in tenant lease agreements that requires all service equipment (e.g., yard hostlers, yard equipment, forklifts, and pallet jacks) used within the project site to be zero-emission. This equipment is widely available.

7. Include contractual language in tenant lease agreements that requires all heavy-duty trucks entering or on the project site to be model year 2014 or later, expedite a transition to zero-emission vehicles, and be fully zero-emission beginning in 2030.

[2] CARB's Technology Assessment for Transport Refrigerators provides information on the current and projected development of TRUs, including current and anticipated costs. The assessment is available at: https://www.arb.ca.gov/msprog/tech/techreport/tru_07292015.pdf.

Attachment - 2

2. Response to Comments

LETTER A5 – California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch (8 of 8 pages)

8. Include contractual language in tenant lease agreements that requires the tenant be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation,[3] Periodic Smoke Inspection Program (PSIP),[4] and the Statewide Truck and Bus Regulation.[5]

9. Include contractual language in tenant lease agreements restricting trucks and support equipment from idling longer than 5 minutes while on site.

10. Include contractual language in tenant lease agreements that limits on-site TRU diesel engine runtime to no longer than 15 minutes. If no cold storage operations are planned, include contractual language and permit conditions that prohibit cold storage operations unless a health risk assessment is conducted, and the health impacts fully mitigated.

11. Include rooftop solar panels for each proposed warehouse to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.

A5-7 CONT'D

[3] In December 2008, CARB adopted a regulation to reduce greenhouse gas emissions by improving the fuel efficiency of heavy-duty tractors that pull 53-foot or longer box-type trailers. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation is available at: https://www.arb.ca.gov/cc/hdghg/hdghg.htm.

[4] The PSIP program requires that diesel and bus fleet owners conduct annual smoke opacity inspections of their vehicles and repair those with excessive smoke emissions to ensure compliance. CARB's PSIP program is available at: https://www.arb.ca.gov/enf/hdvip/hdvip.htm.

[5] The regulation requires that newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. CARB's Statewide Truck and Bus Regulation is available at: https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

Attachment - 3

A5. Response to Comments from California Air Resources Board (CARB), Richard Boyd, Chief, Risk Reduction Branch, dated March 27, 2020.

Intro The comment provides introductory comments and describes the project description. Responses to the California Air Resources Board's (CARB) comments can be found in responses A5-1 through A5-7.

A5-1 The comment that the project is proximate to economically and socially vulnerable communities that are exposed to high levels of air pollution is noted, including the residential receptors and schools within a two-mile radius of the Specific Plan area. Sensitive receptors proximate to the site are identified in, Figure 5.2-1, *Project Site and Off-Site Sensitive Receptors*. Section 5.2, *Air Quality*, identifies that the proposed project would result in construction and operational phase emissions that would cumulatively contribute to the nonattainment designations in the SoCAB and health effects. As requested by the commenter, additional mitigation measures have been considered and incorporated into the EIR to reduce emissions. The project includes mitigation measures AQ-1 through AQ-15 and PDF AQ-1 through PDF AQ-3 to ensure that air pollution emissions are minimized, thus minimizing the impact on surrounding communities. Additional information requested by the commenter that have been incorporated into the EIR can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR.

A5-2 The commenter asserts that the health risk assessment used inappropriate assumptions to model the project's health risk impacts from on-site transportation refrigeration units (TRUs).

Cold Storage Space. The EIR conservatively estimates the amount of tenant space that would be utilized for cold storage as 10 percent of the total allowable square footage within the Specific Plan area (i.e., 200,000 square feet). Large warehouses are not typically associated with cold storage use. This is because the tenants that require cold storage operations typically lease smaller spaces to house refrigerated goods. As a result, the majority of warehouse square footage space utilized by tenants that require cold storage usage is a small percentage of the overall warehouse square footage. In the South Coast Air Quality Management District (South Coast AQMD) region, based on an analysis of warehouse space conducted for Proposed Rule 2305, *Warehouse Indirect Source Review (ISR)*, only one percent of the warehouse over 100,000 square feet have cold storage use. The commenter's assertion that over half the warehouse space could be cold storage space is not supported by substantial evidence. The EIR assumes that all 138 truck trips associated with cold storage uses have transport refrigeration units (TRUs) (100 percent of the cold storage truck trips), which equates to over 17 percent of the total project trucks. As a result, the EIR likely overestimates the number of trucks with TRUs and associated emissions generated by the Specific Plan. The assumptions used for the health risk assessment are very conservative.

TRU Idling. CARB identifies that TRUs can operate for up to two hours per visit; and this most conservative assumption on TRU idling (i.e., all trucks idle for two hours) should be used for the analysis. However, not all TRUs idle for the maximum duration of two hours. As a result, the EIR utilizes an average TRUs idling time of approximately 30 minutes per truck per day, resulting in 34.5 hours of TRU idling on the project site each day. This idling duration is based on Appendix VII: Risk Characterization Scenarios of CARB's Final Diesel Risk Reduction Plan prepared in October 2000.[1] Per this document, the risk characterization scenario discussion for a distribution center states it was assumed TRUs cycled 25 percent of the time for two hours (i.e., 15 minutes every hour for two hours) (see page VII-6). Additionally, Table 6, *Trailer TRU Activity Average*, of CARB's Draft 2019 Update to Emissions Inventory for Transportation Refrigeration Units, indicates an average TRU engine running time of 25.1 percent.[2] As identified above, the amount of TRUs and associated emissions generated by the project is likely overestimated as the EIR assumes that 17 percent of the trucks are equipped with TRUs.

TRU Emission Rate. CARB identifies that the EIR analyzed TRUs with a power rating of 50 horsepower (hp) and that TRUs with a power rating of less than 25 hp have a higher PM emission rate (0.3 g/bhp-hr) than for TRUs with a power rating between 25 and 50 hp (0.02 g/bhp-hr). However, based on calendar year 2022 data from OFFROAD2017, Version 1.0.1, 95.7 percent of non-railcar TRUs operating in California (statewide) and in San Bernardino County (South Coast portion) have a power rating of greater than 25 horsepower (i.e., 50 HP_Bin category). Additionally, Figure 15, *Composite TRU Population Forecast and Backcast*, of CARB's Draft 2019 Update to Emissions Inventory for Transportation Refrigeration Units indicates that in the year 2020 the majority of TRUs registered in California are over 25 hp.[3] It should be noted that emissions from TRUs are likely overestimated as the EIR assumes that 17 percent of the trucks are equipped with TRUs. However, at the request of the commenter, Mitigation Measure AQ-8 has been incorporated into the FEIR that trucks with TRUs must meet the USEPA Tier 4 standard of 0.02 grams per brake horsepower hour (g/bhp-hr) of particulate matter (PM).

Additionally, Mitigation Measure AQ-6 requires that all the truck docking bays that serve cold storage tenants be electrified. As a result, modeling conducted for TRU idling is overly conservative because modeling conducted for the EIR assumed that none of the trucks with TRUs would utilize/have the plug-in capabilities. However, most newer cold-storage trucks are equipped with an integral diesel engine in TRU housing (i.e., "hybrid TRUs"). When in transit, these hybrid TRUs are powered by the truck's diesel engine. However, when the truck is not in transit, the hybrid TRUs utilize electric power supplied

1 California Air Resources Board. 2000, October. Appendix VII: Risk Characterization Scenarios. https://ww3.arb.ca.gov/diesel/documents/rrpapp7.pdf.

2 California Air Resources Board. 2019, October. Draft 2019 Update to Emissions Inventory for Transport Refrigeration Units. https://ww3.arb.ca.gov/cc/cold-storage/documents/hra_emissioninventory2019.pdf.

3 California Air Resources Board. 2019, October. Draft 2019 Update to Emissions Inventory for Transport Refrigeration Units. https://ww3.arb.ca.gov/cc/cold-storage/documents/hra_emissioninventory2019.pdf.

at the docks. The primary issue with the new hybrid TRUs and battery TRUs is that there is not sufficient infrastructure in place to allow the TRU to be plugged in when stationary. Because the proposed project requires electrification of the docks, newer TRUs are able to utilize the infrastructure to be 'zero emissions' when plugged in at the docks (i.e., zero idling). Consequently, TRU idling at the docks is likely to decrease overtime as older diesel-only TRUs are replaced with battery TRUs and hybrid TRUs.

A5-3 The commenter states that there are inconsistencies between the air pollutant emission rates shown in DEIR Table 5.2-11 and Appendix C. As requested by the commenter, technical revisions to Tables 5.2-11, 5.2-12, 5.2-15, and 5.2-19 have been incorporated into the EIR can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR. These edits do not change the findings of the EIR.

A5-4 The commenter requests additional emission reduction measures provided in Attachment A in the comment letter. The project includes mitigation measures AQ-1 through AQ-15 and PDF AQ-1 through PDF AQ-3 to ensure that air pollution emissions are minimized, thus minimizing the impact on surrounding communities. Mitigation Measures identified by the commenter in Attachment A and are addressed individually in response to Comments A5-6 and A5-7 for construction and operational impacts, respectively. Additional mitigation measures identified by the commenter that have been incorporated into the EIR can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR.

A5-5 The commenter makes concluding statements reiterating previous comments. See response to Comments A5-1 through A6-4 above and responses to Attachment A in response to Comments A5-6 and A5-7. As requested by the Commenter, additional mitigation measures have been considered an incorporated into the EIR to reduce emissions. Additional information requested by the commenters and incorporated into the EIR can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR.

A5-6 The commenter requests that the project implement further mitigation measures in Attachment A to decrease construction emissions. Additional information requested by the commenters and incorporated into the EIR can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR. The following summarizes CARB's recommended measures and provides a response to each proposed measure in Attachment A:

Recommended Construction Measures

1. Ensure the cleanest possible construction practices and equipment are used. This includes eliminating the idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electrical hookups) to support zero and near-zero equipment and tools. Mitigation Measures AQ-1 and AQ-16 require use of newer, lower emissions Tier 4 engines for equipment 50 horsepower and higher, and electric equipment for equipment 25 horsepower and lower.

2. Implement, and plan accordingly for, the necessary infrastructure to support the zero and near-zero emission technology vehicles and equipment that will be operating on site. Necessary infrastructure may include the physical (e.g., needed footprint), energy, and fueling infrastructure for construction equipment, on-site vehicles and equipment, and medium-heavy and heavy-heavy duty trucks. As discussed in detail above, zero emission (ZE) and near-zero emission (NZE) construction equipment are not readily available. Mitigation Measure AQ-1 and AQ-16 require use of newer, lower emission equipment. However, this equipment is also diesel. Furthermore, permanent infrastructure is not needed for temporary construction equipment fueling. Consequently, this measure is not considered applicable for the project.

3. In construction contracts, include language that requires all off-road diesel-powered equipment used during construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits such that emission reductions achieved equal or exceed that of a Tier 4 engine. Mitigation Measures AQ-1 and AQ-16 (previously AQ-11) already require use of Tier 4 engines for equipment 50 horsepower or higher.

4. In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction be battery or alternative fuel powered. Mitigation Measures AQ-1 and AQ-16 (previously AQ-11) have been revised to require use of battery or alternative fuel powered equipment for off-road equipment rated 25 horsepower or less. Equipment with a power rating of 19 kilowatts is equal to 25 horsepower engine.

5. In construction contracts, include language that requires all heavy-duty trucks entering the construction site, during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB's lowest optional low-NOx standard starting in the year 2022. During construction, trucks onsite would meet the CARB's current Truck and Bus Rule. However, construction contractors do not own their own truck fleets. Rather, they are served by third-party trucks operated by carriers contracted by beneficial cargo owners (BCO). As a result, requiring that individual construction contractors utilize 2014 or newer trucks is not a feasible mitigation measure.

6. In construction contracts, include language that requires all construction equipment and fleets to be in compliance with all current air quality regulations. CARB staff is available to assist in implementing this recommendation. The project will be required by law to comply with applicable air quality regulations. Additionally, Mitigation Measures AQ-1 and AQ-16 require use of Tier 4 engines.

A5-7 The commenter requests that the project implement further mitigation measures in Attachment A to decrease operation air pollutant emissions. As requested by the commenter, additional mitigation measures have been considered and incorporated into the EIR to expedite integration of zero emission (ZE) and near-zero emission (NZE)

technologies for warehouses and distribution centers. Additional information requested by the commenters and incorporated into the EIR can be found in Chapter 3, *Revisions to the DEIR*, in this FEIR. The following summarizes CARB's recommended measures and provides a response to each proposed measure in Attachment A:

Recommended Operation Measures

1. Include contractual language in tenant lease agreements that requires tenants to use the cleanest technologies available, and to provide the necessary infrastructure to support zero-emission vehicles and equipment that will be operating on site. The DEIR includes project design features (PDFs) and mitigation measures for onsite equipment. PDF AQ-1 requires electric indoor material handling equipment and Mitigation Measure AQ-5 requires use of electric-powered yard trucks/hostlers. Mitigation Measure AQ-9 requires that landscape equipment be electric powered. The DEIR also includes PDFs and mitigation measures for electric vehicles (EV), such as passenger vehicles, trucks, and transport refrigeration units. PDF AQ-3 requires that 71 parking stalls be equipped with electric vehicle (EV) charging infrastructure. Mitigation Measure GHG-2 increases the number of EV charging stations for passenger vehicles to comply with the voluntary standards of the California Green Building Standards Code (CALGreen). Mitigation Measure AQ-6 requires that tenant improvements for warehouses that require cold storage provide electric charging at the docks to allow for electric TRUs. New mitigation measures have been added to support future truck electric charging to ensure that the project supports the transition to ZE trucks (Mitigation Measure AQ-11) and use of newer Tier 4 TRUs for facilities with cold storage (Mitigation Measure AQ-7).

2. Include contractual language in tenant lease agreements that requires all loading/unloading docks and trailer spaces be equipped with electrical hookups for trucks with transport refrigeration units (TRU) or auxiliary power units. Use of zero-emission all-electric plug-in TRUs, hydrogen fuel cell transport refrigeration, and cryogenic transport refrigeration are encouraged and can also be included in lease agreements. The DEIR includes Mitigation Measure AQ-6, which requires that tenant improvements for warehouses that require cold storage provide electric charging at the docks to allow for electric TRUs. Additionally, at this time the future tenant is unknown, therefore, it is not possible to determine whether or not individual warehouse operators would have their own truck fleets or be served by third-party trucks operated by carriers contracted by beneficial cargo owners (BCO) (i.e., the project applicant nor tenants own the trucks). As a result, a lease agreement that requires all electric TRUs or alternatively fueled TRUs is not a feasible mitigation measure.

3. Include contractual language in tenant lease agreements that requires all TRUs entering the project site be plug-in capable. See also response A5-2. The DEIR includes Mitigation Measure AQ-6, which requires that tenant improvements for warehouses that require cold storage provide electric charging at the docks to allow for electric TRUs. Additionally, at this time the future tenant is unknown; therefore, it is not possible to determine whether or not

individual warehouse operators would have their own truck fleets or be served by third-party trucks operated by carriers contracted by beneficial cargo owners (BCO) (i.e., the project applicant nor tenants own the trucks). As a result, a lease agreement that requires plug-in capable TRUs is not a feasible mitigation measure as a requirement, although it may present an option.

4. Include contractual language in tenant lease agreements that requires future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans. Tenants for warehouses generally utilize the most fuel-efficient fleets for their business activities. These fleets typically include zero-emissions or alternatively fueled light and medium-duty vehicles. At this time the future tenant is unknown, therefore, it is not possible to determine whether or not individual warehouse operators would have their own truck fleets or be served by third-party trucks operated by carriers contracted by beneficial cargo owners (BCO) (i.e., the project applicant nor tenants own the trucks). As a result, a lease agreement that requires light-duty and medium duty electric trucks is not a feasible mitigation measure.

5. Include contractual language in tenant lease agreements requiring all TRUs, trucks, and cars entering the Project site be zero-emission. The measure language recommended by CARB is not feasible. While penetration of ZE trucks into the commercial market is imminent, there are no commercially available ZE trucks today. Additionally, at this time the future tenant is unknown, therefore, it is not possible to determine whether or not individual warehouse operators would have their own truck fleets or be served by third-party trucks operated by carriers contracted by beneficial cargo owners (BCO) (i.e., the project applicant nor tenants own the trucks). As a result, a lease agreement that requires all electric trucks and all electric TRUs is not a feasible mitigation measure. Similarly, requiring passenger vehicles driven by the tenant's employees to be ZE vehicle is also not a feasible mitigation measure.

6. Include contractual language in tenant lease agreements that requires all service equipment (e.g., yard hostlers, yard equipment, forklifts, and pallet jacks) used within the project site to be zero-emission. The DEIR already incorporates project design feature (PDF) AQ-1 which requires electric fueled indoor cargo-handling equipment (e.g., forklifts) and Mitigation Measure AQ-5, which requires electric yard trucks/hostlers.

7. Include contractual language in tenant lease agreements that requires all heavy-duty trucks entering or on the project site to be model year 2014 or later, expedite a transition to zero-emission vehicles, and be fully zero-emission beginning in 2030. Trucks accessing the project site are required to comply with applicable regulations, including CARB's Truck and Bus Rule. By January 1, 2023, nearly all trucks and buses will be required to have 2010 or newer model year engines. While penetration of ZE trucks into the commercial market is imminent, there are no commercially available ZE trucks today. As a result, it is speculative to determine what the market penetration and availability of ZE trucks will be in year 2030. Additionally, at this time the future tenant is unknown, therefore, it is not possible to determine whether or not individual

warehouse operators would have their own truck fleets or be served by third-party trucks operated by carriers contracted by beneficial cargo owners (BCO) (i.e., the project applicant nor tenants own the trucks). As a result, a lease agreement that requires all electric trucks and/or use of 2014 or newer trucks is not a feasible mitigation measure. Mitigation Measure AQ-13 has been added to require phase-in of ZE and NZE trucks.

8. Include contractual language in tenant lease agreements that requires the tenant be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program (PSIP), and the Statewide Truck and Bus Regulation. The DEIR already incorporates PDF AQ-2, which requires use of 2010 or better model year engines. A new Mitigation Measure AQ-14 has been incorporated into the EIR at the request of the commenter to ensure that these regulations are part of the operator's employee training handbook.

9. Include contractual language in tenant lease agreements restricting trucks and support equipment from idling longer than five minutes while on site. The CARB's idling restrictions are already identified as a requirement under Plans, Policies, and Program (PPP) AIR-3.

10. Include contractual language in tenant lease agreements that limits on-site TRU diesel engine runtime to no longer than 15 minutes. If no cold storage operations are planned, include contractual language and permit conditions that prohibit cold storage operations unless a health risk assessment is conducted and the health impacts fully mitigated. See also response to Comment A5-2. The EIR includes a conservative assumption regarding the amount of total warehouse space that would be cold storage. The duration of TRU idling is necessitated based on the interior temperature of the unit. At this time, it is unknown what types of cold storage products would occur within the individual tenant spaces. Therefore, requiring restrictions on "essential" idling duration is not feasible.

11. Include rooftop solar panels for each proposed warehouse to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid. As shown on DEIR Table 5.7-6, only a small percentage of the project's air pollutant emissions are associated with energy use; as such, the installation of solar panels does not have a proportional nexus to a majority of the project's GHG emissions, which are attributed to mobile sources (vehicle exhaust). Installation of solar panels prior to tenant move-in is not feasible. Instead, the buildings will be designed to be solar-ready (PDF GHG -2), meaning they will be structurally designed to accommodate the future installation of solar panels should the occupant decide to rely on solar energy for a portion of the project's energy needs. Last, due to proximity of the project site to the Chino Airport, solar panels may be infeasible if the placement of the panels would create safety hazards associated with glare. For these reasons, this measure has been determined to not be feasible.

2. Response to Comments

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LETTER A6 – California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager (1 of 22 pages)

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

March 27, 2020
Sent via email

Richard Ayala
Senior Planner
City of Ontario
303 East B Street
Ontario, CA, 91761

Subject: Draft Environmental Impact Report (DEIR)
Ontario Ranch Business Park Specific Plan Project
State Clearinghouse No. 2019050018

Dear Mr. Ayala:

The California Department of Fish and Wildlife (CDFW) received a Notice of Availability of a Draft Environmental Impact Report (DEIR) from City of Ontario (City; Lead Agency) for the Ontario Ranch Business Park Specific Plan Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

INTRO

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public

1 CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Conserving California's Wildlife Since 1870

2. Response to Comments

LETTER A6 – California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager (2 of 22 pages)

agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

INTRO

PROJECT DESCRIPTION SUMMARY

The Project site is in the southwestern portion of the City of Ontario, San Bernardino County, California within the City's' Ontario Ranch area. The Project site is east of Euclid Avenue, north of Merrill Avenue, west of the right-of-way of Sultana Avenue, and south of Eucalyptus Avenue. The Project site encompasses 85.6 acres and consists of a dairy farm and agricultural fields. The Project proposes the development of an industrial and business park on eleven parcels. The Project will remove 46 acres of agriculture fields and 5.22 acres of stock/retention ponds. Project activities include the building of: eight warehouses ranging from 46,900 square feet (sf) to 618,353 sf, parking, access roads, off-site roadway and utility infrastructure improvements, landscaping, and utilities. Total development is 1,905,027 sf of warehouse and office use.

COMMENTS AND RECOMMENDATIONS

The DEIR recognizes the potential for several special status species, including threatened and endangered species, to occur within and surrounding the Project area. CDFW is concerned that the analysis completed may have been inadequate to form a complete inventory of special-status species within and surrounding the Project area and to identify the level of impacts on those species identified as potentially present.

A6-1

Absent these details, and supporting documentation, it is unclear whether the Project's impacts have been adequately identified, disclosed, and mitigated. CDFW offers the comments and recommendations below and in Attachment A to assist the City.

Special-status Wildlife

The DEIR identifies 27 special-status wildlife species having the potential to occur and the potential for habitat for species to be present; however; surveys, habitat assessment, or other analysis were not conducted to determine if species with the potential to occur onsite are present and at what level the species would be impacted by

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the Project. As such, CDFW will provide comments and recommendations on the impact analysis and proposed mitigation measures based on the information provided in the DEIR, aerial imagery, and best available scientific data.

Tricolored Blackbird (*Agelaius tricolor*)

Tricolored blackbird is a state-listed threatened species. The DEIR recognizes the potential for tricolored blackbird to occur on the Project site and states, "project implementation has the potential to impact these species, and impacts would be significant" (DEIR, p. 5.3-17). Based on this statement, it appears the DEIR assumes presence of the species, and assumes impacts would be significant absent mitigation, but the DEIR does not specify the level of occupancy or the level of impacts the Project may have on tricolored blackbird. Although the DEIR proposes to offset impacts to tricolored blackbird through Mitigation Measure (MM) BIO-1, which would limit construction during nesting season, the measure would not offset the loss of occupied breeding and foraging habitat. If the DEIR will assume the site is occupied, CDFW believes that the current mitigation measure would not reduce Project impacts to less than significant and suggests the City adopt the following mitigation measure to reduce the level of impacts to tricolored blackbirds. Tricolored blackbirds forage within 5 km of water (Orians 1961a). The Project site border is 0.72 km from ponds. Thus, this measure assumes the entirety of the Project site (85.6 acres) is utilized by the species for foraging based on a 1-kilometer foraging area surrounding the potentially suitable breeding areas (stock ponds) and incorporates permanent conservation of habitat at a 3:1 mitigation ratio:

A6-1 CONT'D

Tricolored blackbird-1: The Applicant shall mitigate impacts to tricolored blackbird by creating 256.8 acres of suitable, breeding, foraging habitat at a CDFW-approved location within southwest San Bernardino County. Habitat shall be conserved in perpetuity via conveyance of a conservation easement to a CDFW-approved conservation entity and a management fund (endowment) shall be established by the Applicant consisting of an interest-bearing account with the amount of capital necessary to generate sufficient interest and/or income to fund all monitoring, management, and protection of the conservation area(s), including but not limited to, reasonable administrative overhead, biological monitoring, invasive species and trash removal, fencing and signage replacement and repair, law enforcement measures, long-term management reporting (as described below), and other actions designed to maintain and improve the habitat of the conserved land(s), in perpetuity. A Property Analysis Record, or substantially equivalent analysis, shall be conducted to determine the management needs and costs described above, which then will be used to calculate the

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capital needed for the management of the fund. Except for uses appropriate to a habitat conservation area, the public shall not have access to the mitigation area(s), and no activities shall be permitted within the site, except maintenance of habitat, including the removal of nonnative plant species, trash, and debris, and the installation of native plant materials.

A6-1 CONT'D

Alternately, if the DEIR does not wish to assume presence on the Project site, the DEIR should provide the results of appropriate analysis (protocol-level surveys) in order to more accurately disclose the level of impacts that could occur to tricolored blackbird, and inform a more refined mitigation measure based on actual occupancy and use data. If the City choses this approach, CDFW strongly recommends the DEIR be recirculated to disclose the survey data, impact analysis, and proposed mitigation measures.

Western Pond Turtle

The DEIR recognizes the potential for western pond turtle to occur on the Project site and states, "project implementation has the potential to impact these species, and impacts would be significant" (DEIR, p. 5.3-17). Based on this statement, it appears the DEIR assumes presence of the species, and assumes impacts would be significant absent mitigation, but the DEIR does not specify the level of occupancy or the level of impacts the Project may have on western pond turtle. Although the DEIR proposes to offset impacts to western pond turtle through MM BIO-5, which would require relocation of any turtles found, this measure would not offset the losses of occupied breeding and foraging habitat. If the DEIR will assume the site is occupied, CDFW believes that the current mitigation measure would not reduce Project impacts to less than significant and suggests the City adopt the following mitigation measure to reduce the level of impacts to western pond turtle. According to Pilliod et al. (2013), western pond turtles may move up to 500 m from water, thus this measure assumes approximately 61 acres (500 m) of the Project site could be utilized by western pond turtle for breeding and foraging based on a 500-meter buffer surrounding the potentially suitable habitat (stock ponds) and incorporates permanent conservation of habitat at a 3:1 mitigation ratio:

A6-2

Western Pond Turtle-1: The Applicant shall mitigate impacts to western pond turtle by creating 183 acres of suitable, breeding, foraging habitat at a CDFW-approved location within southwest San Bernardino County. Habitat shall be conserved in perpetuity via conveyance of a conservation easement to a CDFW-approved conservation entity and a management fund (endowment) shall be established by the Applicant consisting of an interest-bearing account with the amount of capital necessary to generate sufficient interest and/or income to fund all monitoring, management, and protection of the conservation area(s), including but not limited to,

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reasonable administrative overhead, biological monitoring, invasive species and trash removal, fencing and signage replacement and repair, law enforcement measures, long-term management reporting (as described below), and other actions designed to maintain and improve the habitat of the conserved land(s), in perpetuity. A Property Analysis Record, or substantially equivalent analysis, shall be conducted to determine the management needs and costs described above, which then will be used to calculate the capital needed for the management of the fund. Except for uses appropriate to a habitat conservation area, the public shall not have access to the mitigation area(s), and no activities shall be permitted within the site, except maintenance of habitat, including the removal of nonnative plant species, trash, and debris, and the installation of native plant materials.

A6-2 CONT'D

BIO-5 - Within ~~14 days~~ **the breeding season (May-July)** prior to the onset **of** construction activities, a **CDFW-approved** qualified biologist shall conduct pre-construction **trapping** surveys**, following U.S. Geological Survey trapping protocol,** for western pond turtle within all areas ~~that fall within 100 feet~~ of any suitable aquatic ~~and upland nesting~~ habitat for this species (retention ponds). If Western pond turtles are observed **or trapped** during the pre-construction survey, the **Applicant shall prepare for** CDFW **review and approval, a translocation plan identifying proposed protocol for trapping and relocating turtles, including identifying potential, appropriate receiver sites** ~~shall be contacted~~ to relocate western pond turtles to ~~ensure that no western pond turtles are harmed~~. If no western pond turtles are observed during the pre-construction survey, then construction activities may begin. If construction is delayed or halted for more than 30 days, another pre-construction survey for western pond turtle shall be conducted. Within seven days of the pre-construction survey, a report of findings from the survey shall be submitted to the CDFW. During construction, a qualified biological monitor who has been approved by the CDFW to relocate western pond turtles shall be onsite to ensure that no western pond turtles are harmed. If western pond turtles are observed in the construction area at any time during construction, the onsite biological monitor shall be notified and construction in the vicinity of the sighting shall be halted until such a time as a turtle has been removed from the construction zone, and relocated by an

A6-3

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approved biologist. If a sighting occurs during construction, the biologist shall prepare a report of the event and submit it to CDFW.

Alternately, if the DEIR does not wish to assume presence on the Project site, the DEIR should provide the results of appropriate analysis (protocol-level surveys) in order to more accurately disclose the level of impacts that could occur to western pond turtle, and inform a more refined mitigation measure based on actual occupancy and use data. If the City choses this approach, CDFW strongly recommends the DEIR be recirculated to disclose the survey data, impact analysis, and proposed mitigation measures. A6-3 CONT'D

Burrowing Owl (*Athene cunicularia*)

The DEIR recognizes the occurrence of a single burrowing owl within the Project's offsite improvement areas, and that burrowing owl have the potential to be onsite. The DEIR also recognizes the Project has the potential to significantly impact the species absent mitigation. The DEIR states, "Impact to one individual or a pair of burrowing owls is judged to be a cumulatively considerable contribution to the regional decline of this species" (DEIR, p. 5.3-21). CDFW recognizes the known occurrence of burrowing owl in the vicinity of the Project and agrees that any impacts to burrowing owl could be significant without mitigation.

The DEIR offers two approaches to offset the potential impacts to burrowing owl dependent on the location of the owls as either within or outside of the Preserve, Chino Sphere of Influence- Subarea 2, Environmental Impact Area Resources Management Plan (RMP). CDFW finds the portion of MM BIO-3 for the Areas Outside of the Chino RMP Boundary generally acceptable with the inclusion of minor revisions. CDFW does not agree with the remaining portion of MM BIO-3 (for the Areas within the City of Chino RMP Boundary) and recommends it be removed. CDFW offers the following recommended revisions to MM BIO-3: A6-4

BIO-3 Prior to issuance of a demolition or grading permit for any ground disturbing activity, a qualified biologist shall conduct a pre-construction presence/absence survey for burrowing owls within 14 days prior to site disturbance. Surveys shall be conducted consistent with the procedures in outlined in the "California Department of Fish and Wildlife (CDFW) 2012 Staff Report on Burrowing Owl Mitigation." If the species is absent, no additional mitigation will be required.

~~**Areas Outside of the Chino RMP Boundary.**~~ If burrowing owl(s) are observed onsite during the pre-construction clearance survey;

- Prior to disturbance of the occupied burrows, suitable and unoccupied replacement burrows shall be provided at a ratio

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of 2:1 within designated off-site conserved lands to be identified through coordination with CDFW and the City in which the burrowing owl(s) is(are) detected (either the City of Ontario or the City of Chino). A qualified biologist shall confirm that the artificial burrows are currently unoccupied and suitable for use by owls.

- Until suitable replacement burrows have been provided/confirmed within the off-site conserved lands to be identified through coordination with CDFW and the City of Ontario or the City of Chino, no disturbance shall occur within ~~50~~ **a minimum of 200** meters (approximately 160 feet) of occupied burrows during the nonbreeding season (September 1 through January 31) or within ~~75~~ **500** meters (approximately 250 feet) during the breeding season (February 1 through August 31). **If reduced setbacks are implemented, a broad-scale, long-term, scientifically-rigorous monitoring program shall be implemented by the City to ensures that burrowing owls are not detrimentally affected by the project.**

- Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) **breeding behavior has not been observed and** the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

A6-4
CONT'D

- If burrowing owls are present at the time that the occupied burrows are to be disturbed, then the owls shall be excluded from the site following the 2012 CDFG Staff Report.

~~City of Chino, RMP Boundary. If burrowing owl(s) is(are) detected within the Project's disturbance footprint in the City of Chino RMP boundary, the owl(s) are required to be handled as indicated by the RMP:The RMP addresses mitigation requirements for impacts to burrowing owls. The RMP states that the 1995 CDFG Staff Report on Burrowing Owl Mitigation (as supplemented by the RMP) shall be followed when burrowing owls are detected on properties. If avoidance of occupied habitat is infeasible, provisions shall be made to passively relocate owls from sites in accordance with the current 2012 CDFG Staff Report (supersedes 1995~~

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~~CDFG Staff Report).According to the Preserve EIR and RMP, Burrowing Owls to be relocated from properties within the City's Subarea 2 are intended to be accommodated within a "300-acre conservation area" and/or additional Candidate Relocation Areas as described on Page 4-16 and 4-21 of the RMP. One such contingency conservation area is identified in the RMP as "Drainage Area B". Drainage Area B consists of a series of Natural Treatment System (NTS) facilities that were constructed south of Kimball Avenue and west of Mill Creek Road. When the NTS facilities were constructed, approximately 50 artificial owl burrows were installed within the basins to accommodate relocated owls and additional owls dispersing to the site. This location was given top priority as an owl relocation site by the RMP due to its proximity to areas that have been and will be converted to urban development. If Burrowing Owls are present at the Project site at time of site disturbance, the Burrowing Owls would be more likely to initially relocate to the immediately surrounding properties, including additional locations within the Chino Airport. However, the NTS basins represent the nearest conservation area providing regional mitigation for the loss of burrowing owl habitat.Consistent with the RMP, the following measures shall apply to the portion of the Project site within the RMP boundary regarding burrowing owl mitigation:~~

A6-4
CONT'D

- ~~Prior to disturbance of the occupied burrows, suitable and unoccupied replacement burrows shall be provided at a ratio of 2:1 within the City of Chino designated relocation area (e.g. the NTS basins). A qualified biologist through coordination with the City shall confirm that the artificial burrows are currently unoccupied and suitable for use by owls.~~

- ~~Until suitable replacement burrows have been provided/confirmed within the designated relocation area (e.g. the NTS basins), no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the nonbreeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31).~~

- ~~Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive~~

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~~methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.~~

- ~~If Burrowing Owls are present at the time that the occupied burrows are to be disturbed, then the owls shall be excluded from the site following the 2012 CDFG Staff Report and Table 4-6 of the RMP.~~

- ~~Pursuant to mitigation measure B-3(8) of The Preserve EIR, and as noted on Page 4-39 of the RMP, the Project shall pay the required mitigation fee prior to initiation of ground disturbing activities. One priority for funding supported by the mitigation fees is the establishment and long-term management of burrowing owl habitat within the Drainage Area B conservation area.~~

CDFW has several concerns within the portion of MM BIO-3 for the areas within the City of Chino RMP boundary and thus requested that portion MM BIO-3 be removed. MM BIO-3 states that, "Burrowing Owls to be relocated from properties within the City's Subarea 2 are intended to be accommodated within a "300-acre conservation area" and/or additional Candidate Relocation Areas as described on Page 4-16 and 4-21 of the RMP. One such contingency conservation area is identified in the RMP as "Drainage Area B". Drainage Area B consists of a series of Natural Treatment System (NTS) facilities that were constructed south of Kimball Avenue and west of Mill Creek Road" (DEIR, p. 5.3-24). A6-4 CONT'D

CDFW is not familiar with the 300-acre conservation area, or the Candidate Relocation Areas described in the RMP, and whether those areas would be suitable for burrowing owl. CDFW is familiar with the NTS facilities and does not believe those areas are appropriate to use as mitigation to offset Project impacts. It is CDFW's understanding that the NTS facilities have been identified as passive relocation sites for several adjacent projects, but currently do not support the number of owls that have been passively relocated in the past, and perhaps do not support any owls at all.

MM BIO-3 also states, "the Project shall pay the required mitigation fee prior to initiation of ground disturbing activities. One priority for funding supported by the mitigation fees is the establishment and long-term management of burrowing owl habitat within the Drainage Area B conservation area" (DEIR, p. 5.3-25). The payment of a mitigation fee to offset the loss of burrowing habitat is inappropriate and inadequate, and defers the identification of a specific and enforceable mitigation measure to outside of the CEQA process, depriving the public an opportunity to comment on the adequacy of the future mitigation. Furthermore, CDFW is aware that Drainage B (or the NTS) has been placed in conservation, with long-term management funding, as mitigation for other project

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impacts. As such, it would be inappropriate to "stack" additional mitigation obligations and funding onto an already encumbered site.

CDFW finds the section of MM BIO-3 under the "City of Chino, RMP Boundary" header inappropriate and inadequate and suggests that portion of the measure be deleted, and that the entirety of the Project follow the mitigation measures specified for "Areas Outside of the Chino RMP Boundary" as shown in the above revised measure. A6-4 CONT'D

Nesting Birds

It is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Fish and Game Code sections 3503, 3503.5, and 3513 afford protective measures as follows: Fish and Game Code section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by the rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.). The issuance of this Agreement does not in any way exempt or excuse compliance with these statutes. CDFW appreciates the inclusion of MM BIO-1, but requests revisions to address species that may nest outside of the specified nesting season. CDFW recommends MM BIO-1 be revised as follows: A6-5

BIO-1 Prior to the issuance of permits for any construction activity, the project applicant shall demonstrate compliance with the federal MBTA **and Fish and Game Code** to the satisfaction of the City of Ontario that ~~either of~~ the following has been accomplished:

- Conduct ~~grading activities and vegetation removal outside of the nesting season (February 1 to August 31), to avoid impacts to nesting birds, including raptors.~~
- ~~If vegetation removal will occur during the bird nesting season, between February 1 and August 31,~~ pre-construction nesting bird surveys ~~shall be performed~~ within three days prior to any disturbance of the site, including **staging, site preparation,** disking, demolition activities, and grading. If active nests are found, they shall be flagged and the biologist shall establish suitable buffers around the nest (generally a minimum of 200 feet up to 500 feet for raptors and a minimum of 50 feet up to 300 feet for passerine species, with specific buffer widths to be determined by a

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qualified biologist). The buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. A6-5 CONT'D

Bats

Regulations of particular relevance to this project include Title 14, Section 251.1 of the California Code of Regulations, which prohibits harassment (defined in that section as an intentional act that disrupts an animal's normal behavior patterns, including breeding, feeding, or sheltering) of nongame mammals (e.g., bats), and California Fish and Game Code Section 4150, which prohibits "take" or possession of all nongame mammals or parts thereof. Any activities resulting in bat mortality (e.g., the destruction of an occupied bat roost that results in the death of bats), disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), or various modes of nonlethal pursuit or capture may be considered "take" as defined in Section 86 of the California Fish and Game Code. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." In addition, impacts to bat maternity colonies, which are considered native wildlife nursery sites, could be considered potentially significant under CEQA.

The DEIR recognizes that the Project site may support roosting and breeding bats, including western red bat and western yellow bat, and that the removal of potential roosting/breeding bat habitat would be potentially significant. The DEIR proposes to implement MM BIO-4 to mitigate impacts to bats by survey "between late-spring and late summer and/or in the fall (generally mid-March through late October)". To capture information regarding the use of the project site for breeding, CDFW recommends that bat surveys be done during the maternity season (April 1 through August 31). Further, the Project specifies that "If the results of the bat survey find a total of a single roosting individual of a special-status bat species or 25 or more individuals of non-special-status bat species with potential to be present in the project impact area, a Bat Management Plan shall be developed." CDFW is unclear why the City chose a threshold of 25 non special-status bats to justify the development of a Bat Management Plan and recommends that if roosts are found, a Bat Avoidance, Monitoring, and Protection Plan (BAMPP) be prepared to minimize impacts to bats regardless of species conservation status, number of individuals, or colony type. A6-6

CDFW recommends the measure be revised not only to consider the potential impacts from the loss of habitat, but also the potential impacts from the loss of roosts through the removal of agricultural structures, residential buildings, and trees. CDFW recommends MM BIO-4 be revised as follows:

BIO-4 Prior to implementation of project activities, a ~~qualified~~ CDFW-approved bat biologist shall be retained to determine whether potential roosting sites for bats may be affected. For **habitats or structures** ~~large ornamental trees~~ suitable for bat roosting/nursery, **an appropriate combination of structure inspection, sampling, exit counts,** and acoustic surveys shall

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be performed prior to initial ground disturbance and vegetation removal to determine whether the project footprint and a 300-foot buffer supports a nursery or roost, and by which species. This survey work will occur between **April 1 through August 31** ~~late spring and late summer and/or in the fall (generally mid-March through late October)~~.

If the results of the bat surveys find~~s a total of a single~~ roosting individual**s** ~~of a special status bat species or 25 or more individuals of non-special-status bat species with potential to be present in the study area (i.e., western Mastiff bat, big free-tailed bat, pallid bat, western red bat, and western yellow bat)~~, a Bat Management Plan shall be developed to ensure mortality to bats does not occur. For each location confirmed to be occupied by bats, the plan will provide details both in text and graphically where exclusion devices/and or staged tree removal will need to occur, the timing for exclusion work, and the timeline and methodology needed to exclude the bats. The plan will need to be reviewed and approved by CDFW prior to disturbance of the roost(s). **The results of the bat surveys *will* be provided as an appendix to the Final EIR *and will* include: 1) the exact location of all maternity sites, if applicable (location shall be adequately described and drawn on a map); 2) the number of bats present at the time of visit (count or estimate); 3) each species of bat present shall be named (include how the species was identified); and 4) the location, amount, and distribution of all bat guano shall be described and pinpointed on a map.**

A6-6 CONT'D

If surveys determine that roosts potentially supporting special-status bats will be lost as a result of the Project, the Applicant shall mitigate the loss through the perpetual conservation and management of occupied habitat, approved by CDFW, at a minimum 1:1 ratio.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and or/candidate plant and animal species, pursuant to CESA. CDFW recommends that a CESA incidental Take Permit (ITP) be obtained for tricolored blackbird (*Agelaius tricolor)* if the Project has the potential to result in "take" (California Fish and Game Code Section 86 defines "take" as hunt, pursue, catch, capture or kill or attempt to hunt, pursue, catch, capture or kill') of State-listed CESA species, either through construction or over the life of the Project. CESA ITPs are issued to conserve, protect, enhance, and restore State-listed CESA species and their habitats.

A6-7

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Artificial night lighting

CDFW is concerned regarding the lack of impact analysis of the indirect effects due to night lighting on the adjacent habitats. The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to affect biological resources as a result of the Project (including the plan's land use designations, policies and programs). To ensure that project impacts to biological resources are fully analyzed, a discussion of potential impacts from lighting created by Project activities should be included in the Final EIR. CDFW suggests this analysis be completed and included in the Final EIR. If, following the completion of an appropriate analysis, the City determines impacts to habitat connectivity could be significant, CDFW suggests the DEIR be recirculated to disclose this information along with an appropriate and enforceable mitigation measure. A6-8

Mitigation

When considering mitigation, it is important that the land ultimately conserved for mitigation has the same or better resource value than the resource value being impacted. Mitigation lands should be enhanced and managed in perpetuity to mitigate for the impact and loss of habitat. If the mitigation land would require restoration, it would be important to consider the time it will take for the sites to fully establish, whether there will be a temporary loss of function and value, and whether some types of biological resources cannot be restored or recreated within a reasonable period (e.g., 1-3 years).

CDFW recommended mitigation, including the permanent conservation of lands, for several species presumed present that would be potentially significantly impacted by the Project. If mitigation lands identified will meet species requirements for some or all of the species requiring mitigation, the mitigation may be co-located on a single property (i.e., separate mitigation parcels for each requirement may not be necessary). A6-9

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). Information can be submitted online or via completion of the CNDDB field survey form at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

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FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

A6-9
CONT'D

CDFW stresses the importance of the Final EIR including supporting documents used to identify or analyze impacts to inform CDFW and the public. This includes any jurisdictional delineations, biological survey reports, and habitat assessments. In addition, CDFW recommends that the City include in the Final EIR the recommended new or revised avoidance, minimization and mitigation measures offered by CDFW to reduce project impacts.

CDFW appreciates the opportunity to comment on the DEIR for the Ontario Ranch Business Park Specific Plan Project (SCH No. 2019050018) and hopes our comments assist the City of Ontario in identifying and mitigating Project impacts on biological resources. If you should have any questions pertaining to the comments provided in this letter, please contact Cindy Castaneda, Environmental Scientist, at 909-484-3979 or at cindy.castaneda@wildlife.ca.gov.

Sincerely,

Scott Wilson

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LETTER A6 – California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager (17 of 22 pages)

ATTACHMENT A

MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PURPOSE OF THE MMRP
The purpose of the MMRP is to ensure compliance with mitigation measures during project implementation. Mitigation measures must be implemented within the time periods indicated in the table below.

TABLE OF MITIGATION MEASURES
The following items are identified for each mitigation measure: Mitigation Measure, Implementation Schedule, and Responsible Party. The Mitigation Measure column summarizes the mitigation requirements. The Implementation Schedule column shows the date or phase when each mitigation measure will be implemented. The Responsible Party column identifies the person or agency that is primarily responsible for implementing the mitigation measure.

Mitigation Measure	Implementation Schedule	Responsible Party
Tricolored blackbird-1: The Applicant shall mitigate impacts to tricolored blackbird by creating 256.8 acres of suitable, breeding, foraging habitat at a CDFW-approved location within southwest San Bernardino County. Habitat shall be conserved in perpetuity via conveyance of a conservation easement to a CDFW-approved conservation entity and a management fund (endowment) shall be established by the Applicant consisting of an interest-bearing account with the amount of capital necessary to generate sufficient interest and/or income to fund all monitoring, management, and protection of the conservation area(s), including but not limited to, reasonable administrative overhead, biological monitoring, invasive species and trash removal, fencing and signage replacement and repair, law enforcement measures, long-term management reporting (as described below), and other actions designed to maintain and improve the habitat of the conserved land(s), in perpetuity. A Property Analysis Record, or substantially equivalent analysis, shall be conducted to determine the management needs and costs described above, which then will be used to calculate the capital needed for the management of the fund.	Post-construction	Project Proponent

A6-10

2. Response to Comments

LETTER A6 – California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager (18 of 22 pages)

Except for uses appropriate to a habitat conservation area, the public shall not have access to the mitigation area(s), and no activities shall be permitted within the site, except maintenance of habitat, including the removal of nonnative plant species, trash, and debris, and the installation of native plant materials.		
Western Pond Turtle-1: The Applicant shall mitigate impacts to western pond turtle by creating 183 acres of suitable, breeding, foraging habitat at a CDFW-approved location within southwest San Bernardino County. Habitat shall be conserved in perpetuity via conveyance of a conservation easement to a CDFW-approved conservation entity and a management fund (endowment) shall be established by the Applicant consisting of an interest-bearing account with the amount of capital necessary to generate sufficient interest and/or income to fund all monitoring, management, and protection of the conservation area(s), including but not limited to, reasonable administrative overhead, biological monitoring, invasive species and trash removal, fencing and signage replacement and repair, law enforcement measures, long-term management reporting (as described below), and other actions designed to maintain and improve the habitat of the conserved land(s), in perpetuity. A Property Analysis Record, or substantially equivalent analysis, shall be conducted to determine the management needs and costs described above, which then will be used to calculate the capital needed for the management of the fund. Except for uses appropriate to a habitat conservation area, the public shall not have access to the mitigation area(s), and no activities shall be permitted within the site, except maintenance of habitat, including the removal of nonnative plant species, trash, and debris, and the installation of native plant materials.	Post-construction	Project Proponent
BIO-1: Prior to the issuance of permits for any construction activity, the project applicant shall demonstrate compliance with the federal MBTA and	Prior to commencing ground- or vegetation-	Project Proponent

A6-10 CONT'D

LETTER A6 – California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager (19 of 22 pages)

Fish and Game Code to the satisfaction of the City of Ontario that the following has been accomplished: Conduct pre-construction nesting bird surveys within three days prior to any disturbance of the site, including staging, site preparation, disking, demolition activities, and grading. If active nests are found, they shall be flagged and the biologist shall establish suitable buffers around the nest (generally a minimum of 200 feet up to 500 feet for raptors and a minimum of 50 feet up to 300 feet for passerine species, with specific buffer widths to be determined by a qualified biologist). The buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.	disturbing activities	
BIO-3: Prior to issuance of a demolition or grading permit for any ground disturbing activity, a qualified biologist shall conduct a pre-construction presence/absence survey for burrowing owls within 14 days prior to site disturbance. Surveys shall be conducted consistent with the procedures in outlined in the "California Department of Fish and Wildlife (CDFW) 2012 Staff Report on Burrowing Owl Mitigation." If the species is absent, no additional mitigation will be required. If burrowing owl(s) are observed onsite during the pre-construction clearance survey; • Prior to disturbance of the occupied burrows, suitable and unoccupied replacement burrows shall be provided at a ratio of 2:1 within designated off-site conserved lands to be identified through coordination with CDFW and the City in which the burrowing owl(s) is(are) detected (either the City of Ontario or the City of Chino). A qualified biologist shall confirm that the artificial burrows are currently unoccupied and suitable for use by owls. • Until suitable replacement burrows have been provided/confirmed within the off-site conserved lands to be identified through coordination with CDFW and the City of Ontario or the City of	Prior to commencing ground- or vegetation-disturbing activities	Project Proponent

A6-10 CONT'D

2. Response to Comments

LETTER A6 – California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager (20 of 22 pages)

Chino, no disturbance shall occur within ~~50~~ a minimum of 200 meters (approximately 160 feet) of occupied burrows during the nonbreeding season (September 1 through January 31) or within ~~75~~ 500 meters (approximately 250 feet) during the breeding season (February 1 through August 31). If reduced setbacks are implemented, a broad-scale, long-term, scientifically-rigorous monitoring program shall be implemented by the City to ensures that burrowing owls are not detrimentally affected by the project. • Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either:1) breeding behavior has not been observed and the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. • If burrowing owls are present at the time that the occupied burrows are to be disturbed, then the owls shall be excluded from the site following the 2012 CDFG Staff Report.		
BIO-4: Prior to implementation of project activities, a CDFW-approved bat biologist shall be retained to determine whether potential roosting sites for bats may be affected. For habitats or structures suitable for bat roosting/nursery, an appropriate combination of structure inspection, sampling, exit counts, and acoustic surveys shall be performed prior to initial ground disturbance and vegetation removal to determine whether the project footprint and a 300-foot buffer supports a nursery or roost, and by which species. This survey work will occur between April 1 through August 31. If the results of the bat surveys find roosting individuals, a Bat Management Plan shall be developed to ensure mortality to bats does not occur. For each location confirmed to be occupied by bats,	Prior to commencing ground- or vegetation-disturbing activities	Project Proponent

A6-10
CONT'D

LETTER A6 – California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager (21 of 22 pages)

the plan will provide details both in text and graphically where exclusion devices/and or staged tree removal will need to occur, the timing for exclusion work, and the timeline and methodology needed to exclude the bats. The plan will need to be reviewed and approved by CDFW prior to disturbance of the roost(s). The results of the bat surveys *will* be provided as an appendix to the Final EIR *and will* include: 1) the exact location of all maternity sites, if applicable (location shall be adequately described and drawn on a map); 2) the number of bats present at the time of visit (count or estimate); 3) each species of bat present shall be named (include how the species was identified); and 4) the location, amount, and distribution of all bat guano shall be described and pinpointed on a map. If surveys determine that roosts potentially supporting special-status bats will be lost as a result of the Project, the Applicant shall mitigate the loss through the perpetual conservation and management of occupied habitat, approved by CDFW, at a minimum 1:1 ratio.		
BIO-5: Within the breeding season (May-July) prior to the onset of construction activities, a CDFW-approved qualified biologist shall conduct pre-construction trapping surveys, following U.S. Geological Survey trapping protocol, for western pond turtle within all areas of any suitable aquatic habitat for this species (retention ponds). If Western pond turtles are observed or trapped during the pre-construction survey, the Applicant shall prepare for CDFW review and approval, a translocation plan identifying proposed protocol for trapping and relocating turtles, including identifying potential, appropriate receiver sites to relocate western pond turtles to. If no western pond turtles are observed during the pre-construction survey, then construction activities may begin. If construction is delayed or halted for more than 30 days, another pre-construction survey for western pond turtle shall be conducted. Within seven days of the pre-construction survey, a report of findings from the survey shall be submitted to the CDFW. During	Prior to commencing ground- or vegetation-disturbing activities	Project Proponent

A6-10 CONT'D

2. Response to Comments

LETTER A6 – California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager (22 of 22 pages)

construction, a qualified biological monitor who has been approved by the CDFW to relocate western pond turtles shall be onsite to ensure that no western pond turtles are harmed. If western pond turtles are observed in the construction area at any time during construction, the onsite biological monitor shall be notified and construction in the vicinity of the sighting shall be halted until such a time as a turtle has been removed from the construction zone, and relocated by an approved biologist. If a sighting occurs during construction, the biologist shall prepare a report of the event and submit it to CDFW.		

A6-10
CONT'D

A6. Response to Comments from California Department of Fish and Wildlife (CDFW), Scott Wilson, Environmental Program Manager, dated March 27, 2020.

Intro The commenter provides introductory comments related to CDFW's role as a Trustee Agency and a summary of the project. Introductory comments are noted.

A6-1 The commenter asserts that the EIR did not provide a complete inventory of special-status species and impact to these species. CDFW therefore is providing comments and recommendations on the impact analysis and mitigation measures based on the DEIR, aerial imagery, and best available scientific data. The commenter provides additional recommended mitigation to reduce potential impacts to tricolored blackbirds.

The City disagrees with the assertion that the DEIR did not provide a complete inventory of special-status species. The General Biological Assessment (GBA) prepared for the project (DEIR Appendix D1) included a literature review and field survey of the project site and surrounding areas. The Prado Dam 7.5' USGS topographic quadrangle and eight surrounding quadrangles were used to identify sensitive species in the California Natural Diversity Data Base (CNDDB). Additional resources reviewed during the literature search included the United States Fish and Wildlife (USFWS) Endangered Species Lists, and the California Native Plant Society's (CNPS) Rare plant lists to obtain species information for the project area. The field survey consisted of walking linear transects spaced approximately 50 feet apart for 100 percent coverage of the project site. All species observed were recorded and Global Positioning System (GPS) way points were taken to delineate specific habitat types, species locations, state or federal waters, or any other information that would be useful for the assessment of the project site. A comprehensive list of all plant and wildlife species that were detected during the field survey was recorded, which is included in Appendix A of the GBA prepared for the project (DEIR Appendix D1). During the field survey, onsite habitats were assessed to determine suitability to support special status species with the potential to occur within the project area, as determined by the literature search. The site is a heavily impacted active dairy with little or no suitable habitat and the "ponds" are man-made urine and waste collectors. The DEIR and GBA identifies whether special-status wildlife species have the potential to occur on the site, whether focused protocol surveys were needed, whether the project will result in impacts to special-status wildlife species with the potential to occur, and includes recommendations to avoid, minimize, and/or mitigate for potential impacts to special-status wildlife species.

According to the CNDDB, tricolored blackbird colonies have been recorded within the vicinity of the project site. Further, the GBA prepared for the project found that suitable, but significantly impacted, habitat for this species occurs on the project site, and the species does have a potential to occur on the project site. Tricolored blackbirds require open accessible water, a secure substrate in which to place their nests, and suitable nearby foraging areas that provide adequate food sources for breeding (Beedy and Hamilton

1999). If any one of these required elements is missing, the species will not breed in that location (Beedy and Hamilton 1999). Although the GBA prepared for the project found that suitable habitat for this species occurs on the project site; breeding habitat is contingent upon the onsite waste filled stock ponds. The species' preferred foraging habitats include agricultural crops such as rice, alfalfa, irrigated pastures, and ripening or cut grain fields, as well as annual grasslands, cattle feedlots, and dairies. Therefore, the site does provide potentially suitable foraging habitat for tricolored blackbird. Mitigation Measure BIO-1 is intended to offset potential direct impacts to tricolored blackbird that may be nesting on or within the vicinity of the project site during the nesting season. However, state law protections only protect against the taking of the species, not the mitigation for loss of habitat and therefore CDFW's requested mitigation is not necessary. Therefore, Mitigation Measure BIO-1 requires avoidance in lieu of a taking.

A6-2 The commenter asserts that Mitigation Measure BIO-5 would not offset the losses of occupied breeding and foraging habitat for the western pond turtle. The commenter states that western pond turtles may move up to 500 meters from water.

According to the CNDDB, the nearest recorded occurrence of western pond turtle lies approximately 4.5 miles to the southeast of the project area within the Santa Ana River floodplain, well beyond the 500 meter travel path. Although the stock ponds located on the project site arguably provide potential habitat for this species, the species was not observed during the general biological assessment field survey. The species is a species of special concern, but not threatened or endangered. Further, the onsite stock ponds are not suitable habitat because they retain animal waste and also do not contain water throughout the year; therefore, the ponds do not provide a permanent source of open water necessary for the species. It is unlikely that this species occurs within the project area; however, the proposed Mitigation Measure BIO-5 (as revised pursuant to response to Comment A6-3) will provide for relocation of the species in the unlikely event that western pond turtle is found onsite during pre-construction surveys.

A6-3 The commenter requests revisions to Mitigation Measure BIO-5. Based on CDFW's recommendation, Mitigation Measure BIO-5 will be revised to require preconstruction surveys to occur within the breeding season (May-July) prior to the onset of construction activities as provided in Section 3, *Revisions to DEIR*, herein.

A6-4 The commenter recognizes the known occurrence of burrowing owl in the vicinity of the Project and agrees that any impacts to burrowing owl could be significant without mitigation. The commenter suggests revisions to Mitigation Measure BIO-3 for areas outside of the Chino RMP boundary. The commenter finds the section of Mitigation Measure BIO-3 under the "City of Chino, RMP Boundary" header inappropriate and inadequate and suggests that portion of the measure be deleted, and that the entirety of the project follow the mitigation measures specified for "Areas Outside of the Chino RMP Boundary" as recommended.

In 2003, the City of Chino certified The Preserve Chino Sphere of Influence – Subarea 2 Final EIR and the The Preserve Resource Management Plan (RMP) with input and approval from U.S. Army Corps of Engineers (ACOE) and CDFW (Michael Baker Associates, 2003). The RMP for The Preserve includes extensive mitigation measures to lessen the impacts of development in The Preserve area on burrowing owls. It is appropriate that if burrowing owl(s) is(are) detected within the Project's disturbance footprint in the City of Chino RMP boundary, the owl(s) are required to be handled as indicated by the RMP. Therefore, no revisions are made. The RMP can be found in the Subarea 2 Final EIR Appendices B-01 through B-05, and can be accessed at: https://www.cityofchino.org/city_hall/departments/community_development/planning/plans/the_preserve_

A6-5 The commenter requests revisions to Mitigation Measure BIO-1 to address species that may nest outside of the specified nesting season. Based on CDFW's recommendation, Mitigation Measure BIO-1 will be revised to address species that may nest outside of the specified nesting season, as set forth in Section 3, *Revisions to DEIR*, herein.

A6-6 The commenter recommends revisions to Mitigation Measure BIO-4 to mitigate impacts from the potential loss of habitat and loss of roosts through the removal of agricultural structures, residential buildings, and trees.

The GBA prepared for the project found that the project site provides suitable foraging opportunities but does not provide suitable roosting opportunities for bats. The site is developed with active dairy farm and agricultural facilities. The agricultural structures, residential buildings, and trees are located within an active site, and roosting bats or colonies were not observed during the biological field survey. Based on CDFW's recommendation, Mitigation Measure BIO-4 will be revised to minimize impacts to bats regardless of species conservation status, number of individuals, or colony type; however due to the low potential for impacts to roosting bats, compensatory mitigation is not required. Revisions are set forth in Section 3, *Revisions to DEIR*, herein.

A6-7 The commenter recommends that a CESA incidental Take Permit (ITP) be obtained for tricolored blackbird if the project has the potential to result in "take" as defined by California Fish and Game Code Section 86.

Refer to response to Comment A6-1. Mitigation Measure BIO-1 is intended to offset potential direct impacts to tricolored blackbird that may be nesting on or within the vicinity of the project site during the nesting season. If an active tricolored blackbird colony is found onsite, the project proponent will avoid the species by creating a sufficient buffer until the species has moved on from the Project site.

A6-8 The commenter requests an analysis of indirect impacts due to lighting on biological resources. The project site consists of a dairy farm and agricultural fields. The project site

is adjacent to Euclid Avenue to the west, Merrill Avenue to the south, the unimproved right-of-way of Sultana Avenue to the east, and Eucalyptus Avenue to the north. Surrounding land uses include agricultural uses to the north and east, residential and agricultural uses to the west, and commercial/industrial uses to the south. The Chino Airport is located to the south. The project area consists of urban development and agricultural lands. No sensitive habitats occur adjacent to or within the vicinity of the project site. As documented in the DEIR Appendix A, impacts related to lighting would be less than significant. The Specific Plan requires lighting fixtures to be selected and located to confine the area of illumination to within the site boundaries, including lighting for parking areas, pedestrian walkways, graphics and signage, architectural and landscape features, shipping and loading areas, and any additional exterior areas. This would reduce the potential for spill light. All subsequent development within the Specific Plan area would be required to conform with the Specific Plan Development Regulations and Design Guidelines addressing light, glare and overspill.

Additionally, the proposed project would be subject to the City's Development Code, (Development Code, Division 6.01 – District Standards and Guidelines, Lighting). Any night lighting will be directed away from the adjacent land uses to avoid potential impacts from direct nighttime lighting. The Specific Plan guidelines and the City's Development Regulations initially are enforced through the City's permit plan check process. Finally, the project accommodates a variety of industrial-serving commercial, low-intensity office, technology, light manufacturing, and warehouse/distribution which would create lighting typical for business park uses. Thus, operations consistent with Allowable Uses, Chapter 4, Land Use and Development Standards, of the Specific Plan would not result in unusual night lighting and would not impact adjacent habitats. No significant impacts are anticipated.

A6-9 The commenter's explanation of the mitigation process and submission of environmental data pertaining to special status species and natural communities, as well as filing fees is noted. This information will be forwarded onto the decision-makers for their review and consideration. The mitigation measures provided by CDFW in Attachment A have been revised and incorporated as documented in response to Comments A6-1 through A6-7.

A6-10 The commenter includes an example Mitigation Monitoring and Reporting Program and requested mitigation measures. The mitigation measures provided by CDFW in Attachment A have been revised and incorporated as documented in response to Comments A6-1 through A6-7. A Mitigation Monitoring and Reporting Program will be adopted as required pursuant to Public Resources Code Section 21081.6.

LETTER A7 – Governor's Office of Planning and Research (OPR), Scott Morgan, Director, State Clearinghouse (1 page)

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Gavin Newsom
Governor

Kate Gordon
Director

March 30, 2020

Richard Ayala
Ontario, City of
303 East "B" Street
Ontario, CA 91761

Subject: Ontario Ranch Business Park Specific Plan
SCH#: 2019050018

Dear Richard Ayala:

The State Clearinghouse submitted the above named EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on 3/27/2020, and the comments from the responding agency (ies) is (are) available on the CEQA database for your retrieval and use. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

A7-1

Check the CEQA database for submitted comments for use in preparing your final environmental document: https://ceqanet.opr.ca.gov/2019050018/3. Should you need more information or clarification of the comments, **we recommend that you contact the commenting agency directly**.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL 1-916-445-0613 state.clearinghouse@opr.ca.gov www.opr.ca.gov

2. Response to Comments

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A7. Response to Comments from Governor's Office of Planning and Research (OPR), Scott Morgan, Director, State Clearinghouse, dated March 30, 2020.

A7-1 The letter indicates that the proposed project has complied with the State Clearinghouse review requirements for draft environmental documents; no further response is necessary.

2. Response to Comments

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LETTER A8 – City of Chino, Warren Morelion, AICP, City Planner (1 of 4 pages)

March 30, 2020

Richard Ayala, Senior Planner
City of Ontario Planning Department
303 East "B" Street
Ontario, CA 91764

Re: Notice of Availability of a Draft EIR: Ontario Ranch Business Park Specific Plan (State Clearinghouse #2019050018)

Dear Mr. Ayala,

This letter is in response to the Notice of Availability of a draft Environmental Impact Report (EIR) for the Ontario Ranch Business Park Specific Plan, made available on February 13, 2020. Thank you for the opportunity to review the draft EIR. The City's comments are outlined below:

Planning A8-1

1) The project description for the EIR references a Development Agreement (DA) which has not been included. Additional information should be provided that indicates how the DA will impact the timing, design, conditions of approval, fees (entitlement, Development Impact Fees (DIF) and construction fees), and/or environmental mitigation of the project.

2) On page 4-5, Figure 4-1 should be revised to clearly display existing land uses adjacent to the Project Area and located in the City of Chino, such as those to the west and south of the project area. A8-2

3) On page 4-20, Table 4-3, "City of Chino – Projects" is missing the projects noted below. The projects should be added to the EIR so that the documents projections/analyses have greater accuracy. These additional projects will likely require that the traffic impact analysis be amended to correctly analyze impacts to traffic near the project site and in the vicinity.

   a. The Eagle's Nest V and VI airport hangar project is proposed to be developed at the Chino Airport along the southern portion of Merrill Avenue, west of the Grove/Merrill intersection. The project currently proposes 155,299-square feet of hangar space with 7,528-square feet of office mezzanine. A8-3

   b. The Town Center at The Preserve commercial center and adjacent Homecoming Phase 5 apartment community project are proposed south Pine Avenue between East Preserve Loop and West Preserve Loop. The project currently proposes 88,000-square feet of retail space, 17,000-square feet of office space, and 26,700-square feet of restaurant space in addition to 173 residential apartment units and 16 live /work units.

1

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2. Response to Comments

LETTER A8 – City of Chino, Warren Morelion, AICP, City Planner (2 of 4 pages)

Water / Environmental

4) Chino has existing infrastructure located in Merrill, adjacent to the proposed project, and near Schaefer and Bon View, that must be protected.

5) Chino has an existing water treatment facility (at SE corner of Schaefer and Campus) located in proximity of the proposed project. This facility is susceptible to adverse impacts from air-borne dust; all such potential impacts (e.g. during construction of the proposed project) must be mitigated to protect the quality of potable water produced by this facility. Additionally, this water treatment facility will make future connections to storm water and sanitary sewer facilities that extend northeasterly from the proposed project. A8-4

6) Chino proposes new infrastructure (pipelines) to be located in Merrill (adjacent to the proposed project) and in Euclid (south of the proposed project), and has coordinated the final design of these proposed pipelines with Ontario staff.

Drainage

7) The project is located in a larger watershed that drains south into the City of Chino via an existing ditch on the east side of Euclid Ave. The watershed drains to the El Prado Regional Park located south of Pine Ave on the east side of Euclid Ave. The existing ditch floods yearly during the rainy season, causing the easterly legs of the Euclid Ave/Kimball Ave and Euclid Ave/Bickmore Ave intersections to be closed by Chino public work crews for safety concerns. The shutdowns force traffic to use Pine Ave, the only other east-west street in the region. Additionally, overflow from the ditch floods Euclid Ave and causes further delay to traffic. The City of Chino is currently updating the Preserve Master Plan of Drainage for the Euclid Ave corridor to determine solutions to resolve the current flooding problems. In the meantime, delays to emergency vehicle response times and degradation of circulation conditions is a problem during storm events. A8-5

8) We have reviewed the "Preliminary Hydrology Calculations" dated July 25, 2019. We ask that the following comments be addressed:

   a. Add to the "Study Purpose" section of the Introduction language that indicates the purpose of the study is to determine what if any downstream drainage impacts the project may have and recommend mitigation measures to address the impacts.

   b. The "Study Purpose" section also indicates that existing and proposed peak runoff flow rates during 25-year and 100-year events were analyzed without stating why these conditions were studied. Given the frequency of flooding, the City of Chino requests that 5, 10, 25 and 100-year event be studied and that peak flow rates in the developed condition not exceed 80% of the peak flow rates in the corresponding pre-developed condition. This criteria is regularly used for development within Chino when in adequate storm drain facilities exists downstream of a project. A8-6

   c. In addition to flow rates, an analysis and possible mitigation measures should be provided for duration of flooding in the existing ditch. The nature of detention basins (as proposed to decrease flow rates) is to lengthen the time storm water flows downstream. Given the A8-7

2

LETTER A8 – City of Chino, Warren Morelion, AICP, City Planner (3 of 4 pages)

regular flooding that is experienced, lengthening the time of flooding during storm events is a concern. A8-7 CONT'D

d. The project will be widening streets along its perimeter and the increase to stormwater runoff caused by the additional impervious area should be addressed. A8-8

e. The discussion section of the study indicates that an onsite detention basin exists on the site. The existing condition hydrology calculations ignore this fact and the existing conditions flow rates are too high. We request the effects of the existing detention basin on existing condition flow rates be taken into account. A8-9

f. The proposed storm drain system will intercept storm water that currently drains through the undeveloped site, changing the hydrogeomorphology conditions. The increase to flow rates downstream of the project due to the changes should be addressed. A8-10

g. The study should discuss financial contributions this project should make toward improving downstream storm drain systems within the City of Chino if any of the above concerns cannot be addressed through onsite infrastructure. A8-11

h. The master plan of drainage for the two agencies have different flow rates and acreages for the stormwater flows at the Euclid Ave/Merrill Ave intersections. The study should acknowledge this fact and if necessary, address the concern. A8-12

Traffic / Transportation

9) On page 5.14-22 improvements to Euclid Avenue (SR-83) include improving a 33-foot half-width raised median to prohibit left turns into and out of driveways 1 and 2. To further prohibit left turns into and out of driveways 1 and 2 and to prohibit temporary truck parking in the Euclid Avenue (Sr-83) median, the project will need to be conditioned to construct the entire ultimate Euclid Avenue median from Eucalyptus Avenue to Merrill Avenue. The City of Chino has available funding mechanisms that could be utilized to contribute towards this improvement. A8-13

10) On page 5.14-23 improvement to Merrill Avenue includes the ultimate half-width improvement. The project will need to be conditioned to build the ultimate full roadway width improvements according to both the City of Ontario and the City of Chino's General Plans and The Preserve Specific Plan. The City of Chino has available funding mechanisms that could be utilized to contribute towards the ultimate improvement. A8-14

11) On page 5.14-23 improvements to the intersection of Euclid Avenue (SR-83) & Merrill Avenue (#11) includes the installation of a westbound right-turn overlap. This traffic signal operation would require the prohibition of southbound U-turn movements. While the southbound U-turn movements are not expected to be in high volume, it is an impact that should be identified as part of this mitigation measure. A8-15

12) In Appendix L, on page 27 of the include Traffic Impact Analysis, truck turning exhibits are provided for various intersections. At the intersection of Sultana Avenue and Merrill Avenue, truck turning templates should be provided for the westbound right turn movement and the southbound left turn movement to review the needed curb and gutter alignment and signing and striping required to ensure proper truck turning. A8-16

3

2. Response to Comments

LETTER A8 – City of Chino, Warren Morelion, AICP, City Planner (4 of 4 pages)

13) In Appendix L, on page 59, Exhibit 3-13 shows the City of Chino's truck routes. On March 17, 2020, the City of Chino approved an update to the citywide truck routes. A new truck route map shows the removal of Kimball Avenue from future Mayhew Avenue to Hellman Avenue as a truck route. This exhibit will need to be updated by the one provided. A8-17

If you have any questions, please contact Michael Hitz, Principal Planner, by email at mhitz@cityofchino.org, or by phone at 909-334-3525.

Sincerely,

Warren Morelion, AICP
City Planner

cc: Michael Hitz, AICP, Principal Planner
David Hammer, P.E., Civil Engineering Manager
Dennis Ralls, T.E., Transportation Manager

4

A8. Response to Comments from City of Chino, Warren Morelion, AICP, City Planner, dated March 30, 2020.

A8-1 The commenter noted that a copy of the proposed Development Agreement was not included. Approval of a statutory development agreement authorized pursuant to California Government Code Section 65864 et seq. is required by this Specific Plan. The Development Agreement shall include, but not be limited to, methods for financing, acquisition, and construction of necessary infrastructure. The Development Agreement shall be fully executed prior to recordation of the first Final Map.

Specific Plan backbone infrastructure will be installed by the project developer, in accordance with the applicable City-adopted infrastructure plan for the area, as well as the provisions of this Specific Plan and an approved Development Agreement. Fair share responsibilities for improvements will be addressed in a Development Agreement with the City of Ontario. The timing for installation of infrastructure and utilities within the Specific Plan area will be determined as part of the City's approval of parcel maps. Infrastructure will be constructed and made available in a timely manner as development progresses. All of the Specific Plan required infrastructure can be found in the Specific Plan Section 3.4 (Figure 3.9) for Potable Water, Section 3.5 (Figure 3.11) for Recycled Water, and Section 3.6 (Figure 3.13) for Sewer phasing will be determined per separate Development Agreement.

The Development Agreement was still being negotiated as of August 2020 and will be approved as a part of the Development Plan and Tentative Parcel Map applications. The timing, design, conditions of approval, fees and/or environmental mitigation will be consistent with the DEIR and the mitigation measures. The development agreement is referenced at Section 3.4.1 of the EIR and analyzed throughout.

A8-2 The commenter requests a revision to Figure 4-1 to identify land uses adjacent to the site in the City of Chino. Figure 4-1 has been revised to show the surrounding land uses to the west and south of the project site. This change has been incorporated into the EIR, as identified in Section 3, *Revisions to the Draft EIR*, in this FEIR.

A8-3 The commenter requests two additional related projects to be added to Table 4-3 of the DEIR. The cumulative development project list was developed based on consultation with the Planning Departments at the City of Ontario, City of Chino, City of Chino Hills, City of Eastvale, and City of Jurupa Valley at the time the traffic study was prepared. Although the City of Chino is requesting the inclusion of two additional projects, the traffic forecasts evaluated in the traffic study are considered conservative and would likely capture the traffic attributable to these projects. The proposed project's opening year of 2021 considered a very conservative amount of cumulative traffic attributable to other projects presented in the traffic study that were in process at the time. Upon review of the growth between the Existing baseline and Opening Year Cumulative forecasts in the

traffic study, the growth observed at intersections that would likely be affected by adding the two City of Chino projects is on average 6 percent per year (or 19 percent over 3 years). The SCAG RTP/SCS identifies growth forecasts for the City of Chino identifies projected growth in population of 79,400 in 2012 to 120,400 in 2040, or a 51.64% increase over the 28-year period. The change in population equates to roughly a 1.50% growth rate, compounded annually. Similarly, growth over the same 28-year period in households is projected to increase by 61.90%, or a 1.74% annual growth rate. Finally, growth in employment over the same 28-year period is projected to increase by 18.78%, or a 0.62% annual growth rate. As such, the growth assumed for Opening Year Cumulative conditions is in excess of the annual growth observed for the City and would likely be overstated and account for the inclusion of these two projects. The inclusion of these projects is not anticipated to significantly alter the findings or mitigation measures of the EIR.

A8-4 The commenter states that Chino has existing infrastructure in Merrill that need to be protected. Additionally, Chino has an existing water treatment facility at the southeast corner of Schaefer and Campus that needs to be protected from the project's construction activities and that will make future connections to storm water and sanitary sewer facilities that extend northeasterly from the project. Chino also proposes new infrastructure in Merrill and Euclid and has coordinated final design with Ontario staff.

Construction-related project impacts are analyzed throughout the EIR. With respect to fugitive dust, the project is required to comply with South Coast Air Quality Management District's Rule 403. This rule requires best available control measures to be applied to earth moving and grading activities to prevent, reduce, or mitigate fugitive dust emissions. With respect to existing and future infrastructure in the City of Chino, the Applicant will coordinate with both cities of Ontario and Chino for future infrastructure during final design.

A8-5 The commenter describes flooding problems during storm events in the City of Chino. The commenter states that the project site is located in a larger watershed that drains south into the City of Chino via an existing ditch on the east side of Euclid Ave, which drains to the El Prado Regional Park. The existing ditch floods yearly during the rainy season, causing the easterly legs of the Euclid Ave/Kimball Ave and Euclid Ave/Bickmore Ave intersections to be closed and that overflow from the ditch floods Euclid Ave. The commenter states that the City of Chino is currently updating the Preserve Master Plan of Drainage for the Euclid Ave corridor to determine solutions to resolve the current flooding problems.

The proposed project would utilize on-site storm water detention until the double 10-foot by 10-foot reinforced concrete box culvert along Euclid Avenue is complete. The proposed onsite storm drain system would be sufficiently sized to limit proposed condition site discharge to less than the existing stormwater discharge for a 25-year storm event. Therefore, the proposed project would not worsen existing flood conditions, and

would not contribute to delays to emergency vehicle response times and circulation as a result of storm events.

The final stormwater infrastructure design will take into consideration Chino's update to the Preserve Master Plan of Drainage for the Euclid Ave corridor. The project will be required to contribute funds to the construction (by others) of the master planned storm drain facilities south of Merrill Avenue according to a formula and timing to be determined in the Development Agreement. In addition, the project shall mitigate flooding of existing storm drain facilities downstream of the project site (south of Merrill Avenue), in the City of Chino, to the satisfaction of the City of Chino.

A8-6 The City of reviewed the Preliminary Hydrology Calculations provided in Appendix I1 of the DEIR. Responses to these comments are provided below.

Add to the "Study Purpose" section of the Introduction language that indicates the purpose of the study is to determine what if any downstream drainage impacts the project may have and recommend mitigation measures to address the impacts. The purpose of the hydrology study (DEIR Appendix I1) was to determine 25-year and 100-year, existing and proposed condition peak flow rates from the project site. These events are analyzed to determine the proper mitigation measures necessary such that there are no adverse effects on existing downstream facilities. Detailed detention analysis shows that the 100-year post-developed condition can be reduce to less than 90% of the 25-year pre-developed condition (see DEIR Impact 5.9-2, starting on Page 5.9-17 and Appendix I2).

A "study purpose" section will be added to the project specific final hydrology & hydraulic report and will be coordinated with the City of Chino and City of Ontario.

The "Study Purpose" section also indicates that existing and proposed peak runoff flow rates during 25-year and 100-year events were analyzed without stating why these conditions were studied. Given the frequency of flooding, the City of Chino requests that 5, 10, 25 and 100-year event be studied and that peak flow rates in the developed condition not exceed 80% of the peak flow rates in the corresponding pre-developed condition. This criteria is regularly used for development within Chino when in adequate storm drain facilities exists downstream of a project. The current report, dated November 1, 2019, considers the 25- and 100-year events, as required by San Bernardino County, which is a more stringent detention analysis than requested by the City. The City requests that 80% of the existing condition 100-year shall be met. However, the project meets a higher standard than requested by the City by limiting the 100-year storm to 90% of the existing condition 25-year event. The 25-year event in the existing condition is approximately 65% of the 100-year event. The project improves the 100-year proposed condition to considerably less than 90% of the 100-year existing. Consequently, the 25-year storm comparisons between existing and proposed conditions can be achieved since the 100-year is already less than the 25-year event.

While not calculated at this time, the 5- and 10-year volumes are expected to be less than the 25-year volumes, and the 25-year can be adequately stored. The actual discharge for each of these events are specific to storm drain and grading plans typically calculated at the time of precise grading plans. The peak flow rates for all of the requested events can accurately be completed with precise grading; and will be addressed at that time. Furthermore, the final hydrology and hydraulic study will be coordinated with City of Chino's updated Master Plan of Drainage and will be submitted to both cities for review and approval prior to any construction permits.

In addition to flow rates, an analysis and possible mitigation measures should be provided for duration of flooding in the existing ditch. The nature of detention basins (as proposed to decrease flow rates) is to lengthen the time storm water flows downstream. Given the regular flooding that is experienced, lengthening the time of flooding during storm events is a concern.

A8-7 The commenter states that an analysis and possible mitigation measures should be provided for duration of flooding in the existing ditch. The commenter is concerned about the lengthening of time of existing flooding during storm events.

Detention basins are utilized to reduce peak flow rates while temporarily storing some volume. There are 10 different hydrograph\detention analyses in Appendix "C" of the hydrology report (DEIR Appendix I1). The hydrographs are established over a 24-hour period. The undetained peak flow typically occurs around hour 16.2 or so. While each detention area is different, the highest peak flow leaving the detention areas occurs between 0.2 – 1.0 hour later. The same is expected for the existing detention areas, so overall there will not be a significant difference in peak flow times leaving the site between existing and proposed conditions. The final hydrology and hydraulic study will be coordinated with City of Chino's updated Master Plan of Drainage and will be submitted to both cities for review and approval prior to any construction permits. The project will be required to contribute funds to the construction (by others) of the master planned storm drain facilities south of Merrill Avenue according to a formula and timing to be determined in the Development Agreement. In addition, the project shall mitigate flooding of existing storm drain facilities downstream of the project site (south of Merrill Avenue), in the City of Chino, to the satisfaction of the City of Chino and in coordination with the City of Ontario.

A8-8 The commenter states that the project will result in widening streets along its perimeter and increase stormwater runoff; the additional impervious area should be addressed.

Although the proposed project would increase impervious surfaces, as substantiated in Chapter 5.9, *Hydrology and Water Quality,* and Chapter 5.16, *Utilities and Service Systems*, impacts would be less than significant. Stormwater runoff from the project would surface drain to various catch basins throughout the site, and the proposed project would construct an additional detention system at the site, as the existing storm drain

infrastructure does not have the capacity to accept stormwater flows in access of the 25-year storm. With the proposed BMPs and onsite detention, the 100-year peak flow rate from the project site to Merrill Avenue would be approximately 65.5 cfs which is less than the peak flow under existing conditions for the 25-year storm (79.6 cfs).

The Applicant will coordinate with both City of Chino and City of Ontario for the street widening of Euclid Avenue. Prior to any permits, the increased surface run-off due to the street widening will be analyzed as part of the project specific hydrology & hydraulic study and will comply to all drainage requirements as set forth by City of Chino and City of Ontario, in addition to SWRCB water quality requirements.

A8-9 The commenter states that onsite detention basin exists on the site and the existing condition hydrology calculations do not take this into account to calculate the existing condition flow rates, resulting in existing flow rates that are too high. The commenter requests the effects of the existing detention basin on existing condition flow rates be taken into account.

The site does contain areas where storm water runoff is stored. Ultimately, all flows from the site discharge to the southerly portion of the project site. There is a bermed area with an existing concrete spillway at the southerly property line. This spillway allows flow to discharge into Merrill Avenue. The current report demonstrates that the 100-year post-developed flow can be limited to less than 90% of the pre-developed 25-year peak flow rate. Detention analysis for the existing basins and the other storm events will be addressed with hydrology based on precise grading plans. Analysis that includes existing conditions flow rates will be included as part of the project specific final hydrology & hydraulic study as part of the grading permit/plan check process. The final hydrology and hydraulic study will be coordinated with City of Chino's Master Plan of Drainage Update and will be submitted to both cities for review and approval prior to any construction permits.

A8-10 The commenter states that increased flow rates downstream of the project due to changes in the hydrogeomophology conditions should be addressed.

Refer to response to Comment A8-9. The project as proposed will comply with the drainage requirements as set forth by City of Chino and City of Ontario, in addition to SWRCB water quality requirements. A hydraulic analysis of the existing ditch (pre- and post-construction) within Euclid Avenue will be included as part of the project specific final hydrology & hydraulic study demonstrating that the project will not have adverse impacts. The final hydrology and hydraulic study will be coordinated with City of Chino's Master Plan of Drainage Update and will be submitted to both cities for review and approval prior to any construction document permits.

A8-11 The commenter states that the study should discuss financial contributions this project should make toward improving downstream storm drain systems within the City of Chino, if any of the above concerns cannot be addressed through onsite infrastructure.

It is not the purpose of CEQA to discuss financial contributions. The onsite infrastructure will be determined with precise grading plans. This infrastructure will include onsite storm drain systems, underground and above ground storage and BMP features all of which will be used to determine peak flow discharge and storage for various storm events. The final hydrology and hydraulic study will be coordinated with City of Chino's Master Plan of Drainage Update and will be submitted to both cities for review and approval prior to any construction permits. The financial contributions from this project for improving downstream storm drain systems in the City of Chino will be determined via a separate Development Agreement between Owner and the City of Ontario.

A8-12 The commenter states that the master plan of drainage for the two agencies have difference flow rates and acreages for stormwater flows at the Euclid Avenue and Merrill Avenue intersections, which would be addressed.

The project as proposed will comply to the drainage requirements as set forth by City of Chino and City of Ontario, in addition to SWRCB water quality requirements. The final hydrology and hydraulic study will be coordinated with City of Chino's Master Plan of Drainage Update and will be submitted to both cities for review and approval prior to any construction document permits.

A8-13 The commenter states that the project needs to be conditioned to construct the entire ultimate Euclid Avenue median from Eucalptus to Merrill Avenue to further prohibit left turns into and out of Driveways 1 and 2. The City of Chino has available funding mechanisms that could contribute towards this improvement.

The project is conditioned to construct the raised landscape median along Euclid Ave from Eucalyptus Ave to Merrill Ave. The available funding mechanisms that the City of Chino has, which can be utilized to contribute towards the improvements to Euclid Avenue (SR-83) is noted. This information will be forwarded onto the decision-makers for their review and consideration.

A8-14 The commenter states that the project needs to be conditioned to build the ultimate full roadway width improvements on Merrill Avenue according to the City of Chino and City of Ontario's General Plans and The Preserve Specific Plan.

The available funding mechanisms that the City of Chino has, which can be utilized to contribute towards the improvements to Merrill Avenue is noted. The project presently is conditioned to construct full half street improvements on both sides of Merrill Ave from Euclid Ave to Sultana Avenue. Your request will be forwarded to the decision makers for their consideration.

A8-15 The commenter states that the traffic signal operation at the intersection of Euclid Avenue and Merrill would require the prohibition of southbound U-turn movements and that southbound U-turn movements should be analyzed. The City agrees with the commenter that the southbound U-turn movement will need to be prohibited due to the recommendation of the westbound right-turn overlap phase. Since U-turns would be prohibited, no further analysis is warranted.

A8-16 The commenter states that the Traffic Impact Analysis (DEIR Appendix L1) should be updated to show truck turning templates for the intersection of Sultana Avenue and Merrill Avenue.

Exhibit 1 (see Appendix C of this FEIR) includes the truck turn templates for the intersection of Sultana Avenue and Merrill Avenue which includes the southbound left and westbound right turn movements as noted in the comment.

A8-17 The commenter states that the City of Chino's truck routes identified in Appendix L of the Traffic Report (DEIR Appendix L1) should be updated to the City's new truck route map approved on March 17, 2020. The new truck route map shows the remove of Kimball Avenue from future Mayhew Avenue to Hellman Avenue as a truck route.

The City of Chino's comment with respect to the City's recently adopted truck route map is noted. However, the proposed project does not send any truck traffic along Kimball Avenue east of Mayhew Avenue. As such, the City of Chino's adoption of a new truck route does not affect the analysis or findings/recommendations in the traffic study (Appendix L1 of the DEIR).

2. Response to Comments

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LETTER A9 – Department of Transportation, District 8, Planning, Rosa Clark, Office Chief (1 of 3 pages)

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF LOCAL DEVELOPMENT-INTERGOVERNMENTAL REVIEW
DISTRICT 8, PLANNING
464 W. 4TH STREET, 6TH FLOOR MS-725
SAN BERNARDINO, CA 92401
PHONE (909) 806-3923
TTY 711
www.dot.ca.gov/dist8

Making Conservation a California Way of Life.

May 19, 2020

File: 08-SBd-83-PM 4.224
Cross Street: Euclid Avenue
SCH# # 2019050018 (DEIR)

Mr. Richard Ayala
Senior Planner
City of Ontario, Planning Department
303 East "B" Street
Ontario, CA 91761

Notice of Availability/Draft Environmental Impact Report,
Ontario Ranch Business Park

Dear Mr. Ayala,

Thank you for including California Department of Transportation (Caltrans, District 8) in the environmental review process for a specific plan, proposed east of Euclid Avenue, north of Merrill Avenue, south of Eucalyptus Avenue, and west of Sultana Avenue in the City of Ontario. The proposed project is to develop and operate eight warehouse buildings with area ranging from 46,900 square feet to 618,353 square feet for a maximum development of 1,905,027 square feet of warehouse and office uses on eleven parcels covering 85.6 acres. INTRO

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when a proposed development may impact our facilities. As a responsible agency as defined by the California Environmental Quality Act, it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the City of Ontario, due to the project's potential impact to the State Route 83 (SR-83), it is also subject to the policies and regulations that govern the SHS. We offer the following comments:

Traffic Operations:

1) Provide the Truck turning Templates for all movement at the intersections of #8 and #11.
2) The Northbound right turn lanes at the intersection of #8 and #11 should include standard right turn lanes, standard shoulders and bike buffers. A9-1
3) Only one driveway will be allowed on SR-83 for the proposed project.
4) Construct Euclid Avenue (SR-83) from Eucalyptus Avenue to Merrill Avenue at its ultimate half-section width.

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

2. Response to Comments

LETTER A9 – Department of Transportation, District 8, Planning, Rosa Clark, Office Chief (2 of 3 pages)

5) Based on Table 2-4: Description of Freeway Mainline LOS, there are some discrepancies in Table 3-3, 5-3 and 7-3. Please verify.

6) Table 6-1, the 2022 with project AM LOS at intersection 34 should be F, not E.

A9-1 CONT'D

Electrical Operations:

1) This proposal shows two right-in/right-out driveways along the SR-83 site frontage. Number of driveways serving the site is subject to the approval of Traffic Operations Office.

2) Comments pertaining to any traffic signal modifications required will be made during the Caltrans Encroachment Permit Phase.

A9-2

Hydrology/Hydraulics:

1) Analysis demonstrates that the development as proposed is not expected to adversely affect Caltrans drainage facilities. However, reliance upon a non-existent public storm drain system including SR-83 right-of-way is shown. We are therefore anticipating that this storm drain within SR-83 system will be complete prior to completion of site development.

2) Additional discussion of the master plan drainage system, including a cursory history of the area development and the ultimate San Bernardino Flood Control Master Plan should be included in the formal drainage study for review during the Encroachment Permit Process.

3) An in-depth review of the on-and-off site hydrology/hydraulics pertaining to this proposed development will be undertaken during the Caltrans Encroachment Permit review process.

A9-3

Stormwater/Water Quality Management Plan:

1) All comments apply to SR-83 right-of-way only.

2) The intentional or unintentional discharge of sediment or debris into SR-83 R/W must be avoided either during or after on-site construction activities occur.

A9-4

These comments are based on the review of certain studies contained in the Draft Environmental Impact Report made available at the City of Ontario's website. Changes to one or more of these comments may be necessary to comply with Caltrans standards, policies, and procedures, that may be in effect at the time Caltrans Encroachment Permit activity is commenced.

LETTER A9 – Department of Transportation, District 8, Planning, Rosa Clark, Office Chief (3 of 3 pages)

Mr. Richard Ayala
May 19, 2020
Page 3

If this project is modified in any way prior to the City's conceptual approval for development, please forward copies of revised plans to this Office so that proposed changes may be evaluated for potential impacts to the SR-83. If you have any questions regarding this letter, please contact Jacob Mathew at (909) 806-3928 or me at (909) 806-3923 for assistance. A9-4 CONT'D

Sincerely,

Rosa F. Clark

ROSA F. CLARK
Office Chief
Local Development-Intergovernmental Review (LD-IGR)

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2. Response to Comments

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A9. Response to Comments from Department of Transportation, District 8, Planning, Rosa Clark, Office Chief, dated May 19, 2020.

Intro The commenter presents introductory statements regarding the project description and Caltrans responsibilities. Reponses to Caltrans comments are provided in responses to Comments A9-1 through A9-4.

A9-1 The commenter requests: truck turning templates for all movements at the intersections of #8 and #11, including standard right turn lanes, shoulders and bike buffers at northbound right turn lanes; one driveway along SR-83; construction of Euclid along the project frontage at its ultimate half-section width; and revisions to Tables 2-4, 3-3, 5-3, 7-3, and 6-1.

Exhibit 1 (see Appendix C of this FEIR) includes the truck turns for the intersection of Sultana Avenue and Merrill Avenue. A minimum of two access points are needed along SR-83 to allow for building operations, which requires approval from Caltrans (see Figure 3-5, *Circulation Plan*, in Section 3 of this FEIR). Truck turning templates at Euclid/Eucalyptus and Euclid/Merrill and the consolidation of the two driveways on Euclid to a single driveway will be addressed at the time of final design and during the Caltrans Encroachment Permit phase. Section 5.14, *Transportation*, of the DEIR has been revised to address comments on the tables and provided in Section 3, *Revisions to the Draft EIR*, herein. Additionally, an errata to the Traffic Impact Assessment has been included in Appendix C, herein.

A9-2 The commenter states that the right-in/right-out driveways along SR-83 are subject to approval of Traffic Operations Office and any traffic signal modifications will be made during the Caltrans Encroachment Permit phase. This comment is acknowledged; no further response is necessary.

A9-3 The commenter states that they anticipate the storm drain within SR-83 to be complete prior to completion of site development. As described in Section 3, *Project Description*, the project will construct the storm drain in SR-83 north of Merrill Avenue.

During the Caltrans Encroachment Permit phase, Caltrans will request additional discussion of the master plan drainage system and an in-depth review of on- and of site hydrology/hydraulics. This comment is acknowledged; no further response is necessary.

A9-4 The commenter limits its comments to SR-83 right-of-way only and states that discharge of sediment or debris into SR-83 during construction shall be avoided. This comment is acknowledged; no further response is necessary.

2. Response to Comments

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3. Revisions to the Draft EIR

3.1 INTRODUCTION

This section contains revisions to the DEIR based upon (1) additional or revised information required to prepare a response to a specific comment; (2) applicable updated information that was not available at the time of DEIR publication; and/or (3) typographical errors. This section also includes additional mitigation measures to fully respond to commenter concerns as well as provide additional clarification to mitigation requirements included in the DEIR.

None of the revisions to the DEIR require recirculation of the document. Recirculation is only required when significant new information is added. Information is not significant unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect or a feasible way to mitigate or avoid such an effect. Recirculation is not required where the new information merely clarifies, amplifies, or makes insignificant modifications. (CEQA Guidelines § 15088.5.) As explained below, none of the changes adds any new significant information and recirculation is not required.

Changes made to the DEIR are identified here in ~~strikeout text~~ to indicate deletions and in <u>underlined text</u> to signify additions.

3.2 DEIR REVISIONS IN RESPONSE TO WRITTEN COMMENTS

The following text has been revised in response to comments received on the DEIR.

3. Revisions to the Draft EIR

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Page 1-11 through 1-16, Table 1-3, *Summary of Environmental Impacts, Mitigation Measures, and Level of Significance After Mitigation*, Chapter 1, *Executive Summary*. This table has been revised to revise and incorporate additional air quality and biological resources mitigation measures in response to commenters. The same revisions to air quality mitigation measures are also reflected in Page 1-24 through 1-27, 5.7 *Greenhouse Gas Emissions*.

5.2 AIR QUALITY				
Impact 5.2-1: Construction activities associated with the proposed project would generate short-term VOC and NOX emissions in exceedance of SCAQMD's threshold criteria.	Significant Impact	AQ-1	Construction contractors shall, at minimum, use equipment that meets the United States Environmental Protection Agency's (EPA) Tier 4 ~~Interim~~ Final emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower for all Phase 1 rough grading and rough grading soil hauling activities, unless it can be demonstrated to the City of Ontario Building Department that such equipment is not available. Where equipment is not available, the next available engine Tier (e.g., US EPA Tier 4 Interim equipment) shall be used. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 ~~Interim~~ Final emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. For construction equipment 25 horsepower or less (e.g., plate compactors, pressure washers), the Construction Contractor shall use battery-powered or alternative fuel-powered equipment. During construction activity, electrical hook-ups or other charging mechanisms (including generators) for electric construction tools, such as saws, drills and compressors, shall be provided where feasible. Prior to construction, the project engineer shall ensure that all construction (e.g., demolition and grading) plans clearly show the requirement for EPA Tier 4 ~~Interim~~ Final emissions standards for construction equipment over 50 horsepower and battery-powered or alternative fuel-powered equipment for engines under 25 horsepower for the specific activities stated above. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Ontario. The construction equipment list shall state the makes, models, Equipment Identification Numbers, and number of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5	Significant and Unavoidable

			minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.	
		AQ-2	During building construction, the construction contractor shall, at minimum, use paints with a volatile organic compound (VOC) content of 20 grams per liter or less for all interior and exterior coatings of the Phase 1 buildings (i.e., Buildings 1 through 3). This requirement shall be noted on all construction management plans verified by the City of Ontario prior to issuance of any construction permits and during interior coating activities and verified by the City of Ontario during construction activities.	
		AQ-3	During building construction, the construction contractor shall, at minimum, use paints with a volatile organic compound (VOC) content of 50 grams per liter or less for all interior and exterior coatings of the Phase 2 buildings (i.e., Buildings 4 through 8). This requirement shall be noted on all construction management plans verified by the City of Ontario prior to issuance of any construction permits and during interior coating activities and verified by the City of Ontario during construction activities.	
		AQ-4	During Phase 1 and Phase 2 construction, the construction contractor shall, at minimum, use paints with a volatile organic compound (VOC) content of 50 grams per liter or less for all surface parking lot striping. This requirement shall be noted on all construction management plans verified by the City of Ontario prior to issuance of any construction permits and during interior coating activities and verified by the City of Ontario during construction activities.	
Impact 5.2-2: Long-term operation of the project would generate emissions in exceedance of SCAQMD's threshold criteria.	Significant Impact	AQ-5	Only electric-powered off-road equipment (e.g., yard trucks/hostlers) shall be utilized onsite for daily warehouse and business operations. The project developer/facility owner shall disclose this requirement to all tenants/business entities prior to the signing of any lease agreement. In addition, the limitation to use only electric-powered off-road equipment shall be included all leasing agreements. Prior to issuance of a Business License for a new tenant/business entity, the project developer/facility owner and tenant/business entity shall provide to the City of Ontario Planning Department and Business License Department a signed document (verification document) noting that the project development/facility owner has disclosed to the tenant/business entity the requirement to use only electric-powered equipment for daily operations. ~~This~~	Significant and Unavoidable

			~~verification document shall be signed by authorized agents for the project developer/facility owner and tenant/business entities. In addition, if applicable, the tenant/business entity shall provide documentation (e.g., purchase or rental agreement) to the City of Ontario Planning Department and Business License Department to verify, to the City's satisfaction, that any off-road equipment utilized will be electric-powered.~~	
		AQ-6	All truck/dock bays that serve cold storage facilities within the proposed buildings shall be electrified to facilitate plug-in capability and support use of electric standby and/or hybrid electric transport refrigeration units. All site and architectural plans submitted to the City of Ontario Planning Department shall note all the truck/dock bays designated for electrification. Prior to the issuance of a Certificate of Occupancy, the City of Ontario Building Department shall verify electrification of the designated truck/dock bays.	
		AQ-7	To reduce idling emissions from transport trucks, signage shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations (e.g., Rule 2485). At minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict non-essential idling to no more than two (2) consecutive minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations. All signage shall be made of weather-proof materials. All site and architectural plans submitted to the City of Ontario Planning Department shall note the locations of these signs. Prior to issuance of the Certificate of Occupancy, the City of Ontario Building Department shall verify the installation of these signs.	
		AQ-8	For tenants that require use of trucks with transport refrigeration units (TRUs), all TRU operating onsite shall be required to meet the US Environmental Protection Agency (EPA) Tier 4 standard, which requires engines to achieve 0.02 grams per brake horsepower hour (g/bhp-hr) of particulate matter (PM). The project developer/facility owner shall disclose this requirement to all tenants/business entities that require cold storage and use of TRUs prior to the signing of any lease agreement. In addition, the limitation to use only Tier 4 off-road equipment shall be included all leasing agreements. Prior to issuance of a Business License for a new tenant/business entity, the project developer/facility owner and tenant/business entity shall provide to the	

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		City of Ontario Planning Department and Business License Department a signed document (verification document) noting that the project development/facility owner has disclosed to the tenant/business entity the requirement to use only Tier 4 TRUs for daily operations. . AQ-~~8~~9 All landscaping equipment (e.g., leaf blower) used for property management shall be electric-powered only. The property manager/facility owner shall provide documentation (e.g., purchase, rental, and/or services agreement) to the City of Ontario Planning Department to verify, to the City's satisfaction, that all landscaping equipment utilized will be electric-powered. AQ-~~9~~10 All paints used for interior and exterior architectural re-coatings of all buildings shall at minimum, have a volatile organic compound (VOC) content of ~~25~~ 20 grams per liter or less. AQ-~~10~~11 Paints used in re-striping of the parking lot shall, at minimum, have a volatile organic compound (VOC) content of 50 grams per liter or less. AQ-12 The project shall install the necessary infrastructure (e.g., conduit in parking lots) to support the future transition to zero emissions (ZE) and near zero emission (NZE) trucks. These requirements shall be noted on all site plans and verified by the City of Ontario during site inspections prior to issuance of occupancy permits. AQ-13 The City of Ontario shall require phased-in use of on-road trucks that have zero-emissions or near-zero emissions—such as trucks with natural gas engines that meet the California Air Resources Board's (CARB) adopted optional nitrogen oxides (NO_X) emissions standard of 0.02 gram per break horsepower-hour (g/bhp-hr). At a minimum, operators on-site shall commit to using year 2010 or newer trucks with engines that meet CARB's 2010 emissions standards—which are 0.01 g/bhp-hr for particulate matter (PM) and 0.20 g/bhp-hr for NOx—or newer, cleaner trucks or equipment. These requirements shall be noted on all site plans and verified by the City of Ontario during site inspections during project operation. During operation, the building tenant and/or building owner shall maintain records of all truck deliveries to the warehouse on an annual basis. These records shall be made available to the City of Ontario upon request.	

		AQ-14 Prior to the issuance of occupancy permit, the applicant and/or building operators shall submit an employee training handbook to the City of Ontario that includes the following: ■ Required facility operator management and employee training on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. ■ Required facility operator management and employee training on keeping vehicle records in diesel technologies and compliance with CARB regulations. ■ Required facility operator management and employee to attend courses approved by the California Air Resources Board. ■ The facility operators shall maintain records on-site demonstrating compliance with training and shall make records available for inspection by the City of Ontario upon request. AQ-15 The City of Ontario shall require that check-in points for trucks provide sufficient stacking distance within the individual parcels to ensure that there are no trucks queuing outside of the facility and that truck traffic does not idle on public streets. The applicant for a warehouse project that includes check-in points for trucks shall submit a queuing analysis to the City of Ontario Engineering Division prior to approval of grading permits.	
Impact 5.2-3: Construction-related emissions associated with land uses accommodated under the proposed project would not expose sensitive receptors to substantial concentrations of criteria air pollutants.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.2-4: Project-related construction activities would not result in potentially significant cancer risk impacts to nearby off-site sensitive receptors.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.2-5: Long-term operation of the land uses associated with buildout of the proposed project would not expose sensitive receptors to substantial concentrations of criteria air pollutants and toxic air contaminants.	Less Than Significant	No mitigation measures are required.	Less Than Significant

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Impact 5.2-6: Construction activities and long-term operation of the land uses associated with buildout of the proposed project would expose sensitive receptors to substantial concentrations of toxic air contaminants.	Potentially Significant	Mitigation Measures AQ-5 through AQ-~~8~~15 apply. AQ-~~11~~16 Construction contractors shall, at minimum, use equipment that meets the United States Environmental Protection Agency's (EPA) Tier 4 ~~Interim~~ Final emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower for all Phase 2 building construction activities, unless it can be demonstrated to the City of Ontario Building Department that such equipment is not available. Where equipment is not available, the next available engine Tier (e.g., US EPA Tier 4 Interim equipment) shall be used. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 ~~Interim~~ Final emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. For construction equipment 25 horsepower or less (e.g., plate compactors, pressure washers), the Construction Contractor shall use battery-powered or alternative fuel-powered equipment. During construction activity, electrical hook-ups or other charging mechanisms (including generators) for electric construction tools, such as saws, drills and compressors, shall be provided where feasible. Prior to construction, the project engineer shall ensure that all construction (e.g., demolition and grading) plans clearly show the requirement for EPA Tier 4 ~~Interim~~ Final emissions standards for construction equipment over 50 horsepower and battery-powered or alternative fuel-powered equipment for engines under 25 horsepower for the specific activity stated above. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Ontario. The construction equipment list shall state the makes, models, Equipment Identification Numbers, and number of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5 minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.	Less Than Significant
Impact 5.2-7: The proposed project would generate long-term emissions in exceedance of the SCAQMD regional significance thresholds and be inconsistent with the applicable air quality management plan.	Potentially Significant	Mitigation Measures AQ-5 through AQ-~~10~~15 apply.	Significant and Unavoidable

Impact 5.2-8: Operation of land uses accommodated under the proposed project could result in other emissions that would adversely affect a substantial number of people.	Potentially Significant	AQ-~~12~~17	Prior to future discretionary approval, if it is determined that a project has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared by the project applicant, subject to review and approval by the City of Ontario Planning Department. Facilities that have the potential to generate nuisance odors include but are not limited to: ■ Wastewater treatment plants ■ Composting, green waste, or recycling facilities ■ Fiberglass manufacturing facilities ■ Painting/coating operations ■ Large-capacity coffee roasters ■ Food-processing facilities The odor management plan shall show compliance with the South Coast Air Quality Management District's Rule 402 for nuisance odors. The Odor Management Plan shall identify the best available control technologies for toxics (T-BACTs) that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. T-BACTs may include, but are not limited to scrubbers (i.e., air pollution control devices) at the industrial facility. T-BACTs identified in the odor management plan shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.	Less Than Significant
Cumulative Impacts (Operational criteria pollutants)	Potentially Significant	Mitigation Measures AQ-5 through AQ-~~8~~15 apply.		Significant and Unavoidable
5.3 BIOLOGICAL RESOUCES				
Impact 5.3-1: Development of the proposed project has the potential to impact nine sensitive animal species and nesting birds; no impacts to sensitive plant species or sensitive habitat would occur.	Potentially Significant	BIO-1	Prior to the issuance of permits for any construction activity, the project applicant shall demonstrate compliance with the federal MBTA and Fish and Game Code Sections 3503 and 3503 to the satisfaction of the City of Ontario that either of the following has been accomplished: • Conduct pre-construction nesting bird surveys within three days prior to any disturbance of the site, including staging, site preparation, disking, demolition activities, and grading. If active nests are found, they shall be flagged and the biologist shall establish suitable buffers around the nest (generally a minimum of 200 feet up to 500 feet for raptors and a minimum of 50 feet up to 300 feet for passerine species, with specific buffer widths to	Less Than Significant

		be determined by a qualified biologist). The buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. • ~~Conduct grading activities and vegetation removal outside of the nesting season (February 1 to August 31) to avoid impacts to nesting birds, including raptors.~~ • ~~If vegetation removal will occur during the bird nesting season, between February 1 and August 31, pre-construction nesting bird surveys shall be performed within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are found, they shall be flagged and the biologist shall establish suitable buffers around the nest (generally a minimum of 200 feet up to 500 feet for raptors and a minimum of 50 feet up to 300 feet for passerine species, with specific buffer widths to be determined by a qualified biologist). The buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests~~.	
		BIO-3 Prior to issuance of a demolition or grading permit for any ground disturbing activity, a qualified biologist shall conduct a pre-construction presence/absence survey for burrowing owls within 14 days prior to site disturbance. Surveys shall be conducted consistent with the procedures in outlined in the "California Department of Fish and Wildlife (CDFW) 2012 Staff Report on Burrowing Owl Mitigation." If the species is absent, no additional mitigation will be required. City of Chino, RMP Boundary. If burrowing owl(s) is(are) detected within the Project's disturbance footprint in the City of Chino RMP boundary, the owl(s) are required to be handled as indicated by the RMP: Areas Outside of the Chino RMP Boundary. If burrowing owl(s) are observed onsite during the pre-construction clearance survey; • Prior to disturbance of the occupied burrows, suitable and unoccupied replacement burrows shall be provided at a ratio of 2:1 within designated off-site conserved lands to be identified through coordination with CDFW and the City in which the burrowing owl(s) is(are) detected (either the City of Ontario or the City of Chino). A qualified biologist shall confirm that the artificial burrows are currently unoccupied and suitable for use by owls.	

		• Until suitable replacement burrows have been provided/confirmed within the off-site conserved lands to be identified through coordination with CDFW and the City of Ontario or the City of Chino, no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the nonbreeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31). <u>If reduced setbacks are implemented, a broad-scale, long-term, scientifically-rigorous monitoring program shall be implemented by the City to ensures that burrowing owls are not detrimentally affected by the project</u>. • Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. • If burrowing owls are present at the time that the occupied burrows are to be disturbed, then the owls shall be excluded from the site following the 2012 CDFG Staff Report. City of Chino, RMP Boundary. If burrowing owl(s) is(are) detected within the Project's disturbance footprint in the City of Chino RMP boundary, the owl(s) are required to be handled as indicated by the RMP: The RMP addresses mitigation requirements for impacts to burrowing owls. The RMP states that the 1995 CDFG Staff Report on Burrowing Owl Mitigation (as supplemented by the RMP) shall be followed when burrowing owls are detected on properties. If avoidance of occupied habitat is infeasible, provisions shall be made to passively relocate owls from sites in accordance with the current 2012 CDFG Staff Report (supersedes 1995 CDFG Staff Report). According to the Preserve EIR and RMP, Burrowing Owls to be relocated from properties within the City's Subarea 2 are intended to be accommodated within a "300-acre conservation area" and/or additional Candidate Relocation	

		Areas as described on Page 4-16 and 4-21 of the RMP. One such contingency conservation area is identified in the RMP as "Drainage Area B." Drainage Area B consists of a series of Natural Treatment System (NTS) facilities that were constructed south of Kimball Avenue and west of Mill Creek Road. When the NTS facilities were constructed, approximately 50 artificial owl burrows were installed within the basins to accommodate relocated owls and additional owls dispersing to the site. This location was given top priority as an owl relocation site by the RMP due to its proximity to areas that have been and will be converted to urban development. If Burrowing Owls are present at the Project site at time of site disturbance, the Burrowing Owls would be more likely to initially relocate to the immediately surrounding properties, including additional locations within the Chino Airport. However, the NTS basins represent the nearest conservation area providing regional mitigation for the loss of burrowing owl habitat. Consistent with the RMP, the following measures shall apply to the portion of the Project site within the RMP boundary regarding burrowing owl mitigation: • Prior to disturbance of the occupied burrows, suitable and unoccupied replacement burrows shall be provided at a ratio of 2:1 within the City of Chino designated relocation area (e.g. the NTS basins). A qualified biologist through coordination with the City shall confirm that the artificial burrows are currently unoccupied and suitable for use by owls. • Until suitable replacement burrows have been provided/confirmed within the designated relocation area (e.g. the NTS basins), no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the nonbreeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31). • Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.	

		• If Burrowing Owls are present at the time that the occupied burrows are to be disturbed, then the owls shall be excluded from the site following the 2012 CDFG Staff Report and Table 4-6 of the RMP. • Pursuant to mitigation measure B-3(8) of The Preserve EIR, and as noted on Page 4-39 of the RMP, the Project shall pay the required mitigation fee prior to initiation of ground disturbing activities. One priority for funding supported by the mitigation fees is the establishment and long-term management of burrowing owl habitat within the Drainage Area B conservation area. BIO-4 Prior to implementation of project activities, a qualified biologist shall be retained to determine whether potential roosting sites for bats may be affected. For ~~large ornamental trees~~ habitats or structures suitable for bat roosting/nursery, an appropriate combination of structure inspection, sampling, exit counts, and acoustic surveys shall be performed prior to initial ground disturbance and vegetation removal to determine whether the project footprint and a 300-foot buffer supports a nursery or roost, and by which species. This survey work will occur between ~~late spring and late summer and/or in the fall (generally mid-March through late October)~~ April 1 through August 31. If the results of the bat survey finds roosting individuals ~~a total of a single roosting individual of a special-status bat species or 25 or more individuals of non-special-status bat species with potential to be present in the study area (i.e., western Mastiff bat, big free-tailed bat, pallid bat, western red bat, and western yellow bat)~~, a Bat Management Plan shall be developed to ensure mortality to bats does not occur. For each location confirmed to be occupied by bats, the plan will provide details both in text and graphically where exclusion devices/and or staged tree removal will need to occur, the timing for exclusion work, and the timeline and methodology needed to exclude the bats. The plan will need to be reviewed and approved by CDFW prior to disturbance of the roost(s). BIO-5 Within ~~14 days~~ the breeding season (May- July) prior to the onset of construction activities, a qualified biologist shall conduct pre-construction visual surveys, following U.S. Geological Survey visual survey protocol, for western pond turtle within all areas ~~that fall within 100 feet~~ of any suitable aquatic ~~and upland nesting~~ habitat for this species (retention ponds). If	

		Western pond turtles are observed during the pre-construction survey, the Applicant shall prepare for CDFW review and approval, a translocation plan identifying proposed protocol for trapping and relocating turtles, including identifying potential, appropriate receiver sites ~~shall be contacted~~ to relocate western pond turtles ~~to ensure that no western pond turtles are harmed~~. If no western pond turtles are observed during the pre-construction survey, then construction activities may begin. If construction is delayed or halted for more than 30 days, another pre-construction survey for western pond turtle shall be conducted. Within seven days of the pre-construction survey, a report of findings from the survey shall be submitted to the CDFW. During construction, a qualified biological monitor who has been approved by the CDFW to relocate western pond turtles shall be onsite to ensure that no western pond turtles are harmed. If western pond turtles are observed in the construction area at any time during construction, the onsite biological monitor shall be notified and construction in the vicinity of the sighting shall be halted until such a time as a turtle has been removed from the construction zone, and relocated by an approved biologist. If a sighting occurs during construction, the biologist shall prepare a report of the event and submit it to CDFW.	

Page 1-42 through 1-43, Table 1-3, *Summary of Environmental Impacts, Mitigation Measures, and Level of Significance After Mitigation*, Chapter 1, *Executive Summary*. The following impact level has been revised to correct a typographically error and show that the implementation of the mitigation measure would reduce tribal cultural resource impacts to less than significant.

5.15 TRIBAL CULTURAL RESOURCES				
Impact 5.15-1: Grading activities have the potential to encounter unknown, buried tribal cultural resources.	Significant Impact	TCR-1	Prior to commencement of any excavation activities, the project developer shall retain a Native American Monitor of Gabrieleño Ancestry to: ■ Conduct a Native American Indian Sensitivity Training for construction personnel. The training session shall include a handout and focus on how to identify Native American resources encountered during earthmoving activities and the procedures followed if resources are discovered, the duties of the Native American Monitor of Gabrieleño Ancestry, and the general steps the Monitor would follow in conducting a salvage investigation. ■ Monitor all project-related, ground-disturbing construction activities (e.g., pavement removal, auguring, boring, grading, excavation, potholing, trenching, and grubbing) of previously undisturbed native soils to a maximum depth of 30 feet below ground surface. At their discretion and expense, a Native American Monitor of Gabrieleño Ancestry can be present during the removal of dairy manure to native soil.	~~Significant and Unavoidable~~ Less Than Significant

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Page 3-10, Chapter 3, *Project Description*. The text in Section 3.4.1.2, *Ontario Ranch Business Park Specific Plan*, has been revised to add additional information.

- **Euclid Avenue (SR-83).** Euclid Avenue is an expressway under Caltrans' jurisdiction that is designated as an eight-lane Principal Arterial in TOP's Functional Roadway Classification Plan. The centerline of this street forms the boundary between the City of Ontario to the east and the City of Chino to the west. Euclid Avenue is designed with a 200-foot wide right-of-way, a 66-foot wide center median, and 52-feet of pavement including curb and gutter. Proposed improvements would occur on the half width of Euclid Avenue along the project site's western boundary in the City of Ontario. Improvements include a 15-foot wide parkway with a 5-foot wide sidewalk and an 8-foot wide on-site multipurpose trail within a 35-foot wide landscape buffer. This would create a 50-foot wide neighborhood edge as specified in the Ontario Ranch Colony Streetscape Master Plan.

Page 3-15, Chapter 3, *Project Description*. The text in Section 3.4.1.2, *Ontario Ranch Business Park Specific Plan*, has been revised to provide consistency with the updated Figure 3-6.

Pedestrian and Bicycle

Implementation of the Specific Plan would improve all trail and bikeways along the project frontages in conjunction with street improvements (see Figure 3-6, *Bicycle and Pedestrian Plan*). Sidewalks would be 5-feet wide and provided along all streets abutting the project site. Multipurpose trails would be provided on the east side of Euclid Avenue, ~~the south side of Eucalyptus Avenue,~~ and the north side of Merrill Avenue. A Class II bikeway on the north side of Merrill Avenue will be provided to link to the City's bike path system (see TOP, Figure M-3).

Figures 3-5, *Circulation Plan*, and 3-6, *Bicycle and Pedestrian Plan*, Chapter 3, *Project Description*. Have been revised and are provided in Appendix A, herein.

Refer to Appendix A, herein.

Page 3-16, Chapter 3, *Project Description*. The text in Section 3.4.1.2, *Ontario Ranch Business Park Specific Plan*, *Potable Water* Plan, has been revised to provide consistency with updated Figures 3-7a and 3-7b.

Potable water system improvements for implementation of the Specific Plan require the planning, design, and construction of the 925 Pressure Zone (PZ) Phase 2 West Backbone, which include: extending the 24-inch potable water main generally along Eucalyptus Avenue from Grove Avenue to Carpenter~~Archibald~~ Avenue; installing a 30-inch potable water main in Grove Avenue connecting from the 24-inch potable water main in Eucalyptus Avenue and extending to Chino Avenue; installing a 42-inch potable water main in Grove Avenue connecting from the 30-inch potable water main in Grove Avenue at Chino Ave and extending to Francis Avenue; installing a 42-inch potable water main in Francis Avenue connecting from the 42-inch potable water

main in Grove Avenue and extending to Bon View Avenue; installing a 42-inch potable water main in Bon View Avenue connecting from the 42-inch potable water main in Francis Avenue and extending to Bon View Avenue Reservoir site and to the Reservoir; a 9 million gallon reservoir on the Bon View Reservoir site; and, two 2,500 gpm wells with any treatment necessary to meet water quality standards and the 16-inch and 24-inch collection main from the wells to the reservoirs.

In addition to the 925 Pressure Zone (PZ) Phase 2 West Backbone, implementation of the Specific Plan requires the planning, design, and construction of a Secondary Loop between the 925 Pressure Zone (PZ) Phase 2 West Backbone and the Specific Plan area which includes: installing a 16-inch potable water main in Eucalyptus Avenue connecting to the 30-inch 925 Pressure Zone (PZ) Phase 2 West Backbone main in Grove Avenue and extending to Euclid Avenue; installing a 16-inch potable water main in Euclid Avenue connecting from the 16-inch potable water main in Eucalyptus Avenue and extending to Merrill Avenue; installing a 16-inch potable water main in Merrill Avenue connecting from the 16-inch potable water main in Euclid Avenue and extending to Walker~~Vineyard~~ Avenue; and installing a 16-inch potable water main in Walker~~Vineyard~~ Avenue connecting from the 16-inch potable water main in Merrill Avenue and extending to connect to the 24-inch potable water main in Eucalyptus Avenue.

Figures 3-7a, *Potable Water Plan*, 3-7b, *Potable Water Plan*, 3-8, *Recycled Water Plan*, 3-9, *Sewer Plan*, Chapter 3, *Project Description*. Have been revised and are provided in Appendix A, herein.

Refer to Appendix A, herein.

Page 3-23, Chapter 3, *Project Description*. The text in Section 3.4.1.2, *Ontario Ranch Business Park Specific Plan*, *Sewer Plan and Storm Drain Plan*, have been revised to provide consistency with updated Figure 3-9 and provided updated information, respectively.

Sewer Plan

There are no sewer mains located within the vicinity of the Specific Plan area. Regional wastewater treatment services are provided to the City of Ontario and its neighboring agencies by the Inland Empire Utilities Agency (IEUA). Several regional trunk sewers collect sewage generated in the City and transport it to IEUA's Regional Plant No.1 and Regional Plant No.5 for treatment. The City of Ontario's sewer service area is divided into eight sewer sheds, primarily based on the outlet points where the City's system ties into the IEUA downstream facility. Ontario Ranch is located in Sewer shed 8.

The Specific Plan includes a network of new public sewer mains (see Figure 3-9), consistent with the City of Ontario's Sewer Master Plan. A 36-inch sewer main will connect to an existing IEUA interceptor trunk main sewer at either the 54- or 60-inch portion located in Kimball Avenue to the south, run north in Euclid Avenue to Merrill Avenue, then east to Sultana Avenue. The final point of connection to the existing IEUA interceptor trunk sewer at Euclid Avenue and Kimball Avenue will be determined at the time of final design subject to approval of the City and IEUA. A 18-inch sewer main will run from Merrill Avenue north within Euclid Avenue to Eucalyptus Avenue~~ connect from Eucalyptus along Euclid Avenue to an existing IEUA interceptor trunk~~

~~main sewer located in Kimball Avenue to the south~~. The IEUA interceptor trunk sewer main is 54-inches east of Euclid and 60-inches west of Euclid Avenue. Intergovernmental coordination is underway to discuss alternative sewer routes south of the project through the Chino Airport.

An 36~~18~~-inch sewer main will run along Merrill Avenue from Euclid Avenue to Sultana and an 8-inch sewer line will connect from Merrill Avenue north along Sultana Avenue. An eight-inch private main will also be installed in an on-site easement to provide for connections at the northeast portion of the site. Six-inch sewer laterals will connect buildings to sewer mains.

The ultimate sizing and alignment of the sewer shall be consistent with the City of Ontario Sewer Master Plan and/or a City conducted and approved hydraulic analysis. A Sewer Sub-Area Master Plan (SSAMP) shall be prepared for each Tract Map and development within the Specific Plan.

The total estimated cost of the proposed sewer infrastructure is $9.4 million (Murow 2020; see Appendix N).

Storm Drain Plan

The Specific Plan area storm drain improvements (see Figure 3-10) are consistent with the facilities specified in Drainage Area XIV of the City of Ontario Master Plan of Drainage. The Specific Plan will construct storm drains consistent with the Master Plan of Drainage, including storm drain improvements along the project frontage with a 108-inch reinforced concrete pipe (RCP) along Euclid Avenue, a 90- to 66-inch RCP along Eucalyptus Avenue, a 30-inch RCP along Sultana Avenue, and a 9.5-foot by 9.5-foot RCP along Merrill Avenue. Runoff would be conveyed to an open channel along Euclid (Airport Channel) south of Merrill in the City of Chino. The City of Chino plans to construct a mainline storm drain along Euclid south of Merrill and a double 10-foot by 10-foot reinforced concrete box culvert with a point of connection at Pine Avenue as part of its Master Plan of Drainage. Currently, the ultimate discharge location downstream is not fully improved. Until the ultimate discharge location downstream is fully improved, the project would utilize on-site storm water detention, subject to City of Ontario review and approval, so that discharge from Specific Plan development remains less than peak flow rates prior to development.

Catch basins located throughout the site would collect runoff. On-site storm drain systems would convey runoff southerly to a reinforced concrete box facility in Merrill Avenue. Landscaped areas adjacent to Euclid Avenue would continue to drain to the street. The proposed project includes construction of storm drains in Eucalyptus Avenue and Euclid Avenue. ~~The construction of these facilities would require additional drainage improvements south of Merrill Avenue at Euclid Avenue. An expanded~~ The reinforced concrete box facility in Merrill Avenue will end just north of the existing earthen channel ~~would be~~ located between the paved portions of Euclid Avenue and the existing easterly right-of-way. The storm water will then bubble up in the structure and spill out into the existing channel where it will continue to flow south to eventually discharge south of Pine Avenue in the City of Chino.

The total estimated cost of the proposed stormwater infrastructure is $9.1 million (Murow 2020; see Appendix N).

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Page 3-39, Chapter 3, *Project Description*. The text in Section 3.4.2, *Phasing,* has been revised to fix a typographical error.

The project would be built in two Phases. Phase 1 would include development of PA-2 (Buildings ~~4-8~~ 1-3), the southern portion of the project site identified for construction of storage, warehousing, and industrial development. Phase 2 would develop PA-1 (Buildings ~~1-3~~ 4-8), the northern portion of the project site identified for business park development. See Figure 3-14, *Conceptual Phasing Plan*.

Page 3-43, Chapter 3, *Project Description*. The following figure, Figure 3-14, *Conceptual Phasing Plan,* is revised.

See Appendix A, herein.

Page 4-5, Chapter 4, *Environmental Setting*. The following figure, Figure 4-1, *Surrounding Land Use Map,* is revised in response to Comment A8-2.

See Appendix A, herein.

Page 4-15, Section.4, *Assumptions Regarding Cumulative Impacts*, text and Table 4-2, *Ontario General Plan Buildout Capacities*. The following was revised to update the City's general plan buildout capacities adopted January 2020.

The land use intensities allowed by the adopted general plan and the growth projections in the land use elements are detailed in Tables 4-2. Table 4-2 shows TOP has a buildout capacity of 345,971 ~~345,936~~ population, 99,887 ~~99,878~~ residential units, and 247,575,980 ~~247,445,148~~ nonresidential square footage (TOP 2010). This buildout includes the planned land use and development intensity for the "New Model Colony (NMC)" Special Planning Areas.

Table 4-2 Ontario General Plan Buildout Capacities

Land Use	Acres[2]	Assumed Density/Intensity[3]	Units	Population[4]	Non-Residential Square Feet	Jobs[5]
Residential						
Rural	529	2.0 du/ac	1,059	4,232		
Low Density[6]	7,255	4.0 du/ac (OMC) 4.5 du/ac (NMC)	30,584	122,244		
Low-Medium[6] Density	999	8.5 du/ac	8,500 ~~8,492~~	33,976 ~~33,941~~		
Medium Density	1,897	18.0 du/ac (OMC) 22.0 du/ac (NMC)	38,200	133,791		
High Density	183	35.0 du/ac	6,415	21,470		
Subtotal	10,864		84,758 ~~84,750~~	315,713 ~~315,679~~		
Mixed Use						
Downtown	113	• 60% of the area at 35 du/ac • 40% of the area at 0.80 FAR for office and retail	2,365	4,729	1,569,554	2,808
East Holt Boulevard	57	• 25% of the area at 30 du/ac • 50% of the area at 1.0 FAR office • 25% of area at 0.80 FAR retail	428	856	1,740,483	3,913
~~Meredith~~	~~93~~	~~• 47% of the area at 39.46 du/ac~~ ~~• 48% at 0.35 FAR for office and retail uses~~ ~~• 5% at 0.75 FAR for Lodging~~	~~1,725~~	~~3,450~~	~~832,497~~	~~975~~
Meredith	93	• 23% of the area at 37.4 du/ac • 72% at 0.35 FAR for office and retail uses • 5% at 0.75 FAR for Lodging	800	1,600	1,172,788	1,462
Transit Center	76	• 10% of the area at 60 du/ac • 90% of the area at 1.0 FAR office and retail	457	913	2,983,424	5,337
Inland Empire Corridor	37	• 50% of the area at 20 du/ac • 30% of area at 0.50 FAR office • 20% of area t 0.35 FAR retail	368	736	352,662	768
Guasti	77	• 20% of the area at 30 du/ac • 30% of area at 1.0 FAR retail • 50% of area at .70 FAR office	465	929	2,192,636	4,103
Ontario Center	345	• 30% of area at 40 du/ac • 50% of area at 1.0 FAR office • 20% of area at 0.5. FAR retail	4,139	8,278	9,014,306	22,563
Ontario Mills	240	• 5% of area at 40 du/ac • 20% of area at 0.75 FAR office • 75% of area at 0.5 FAR retail	479	958	5,477,126	7,285
NMC West/South	315	• 30% of area at 35 du/ac • 70% of area at 0.7 FAR office and retail	3,311	6,621	6,729,889	17,188
NMC East	264	• 30% of area at 25 du/ac • 30% of area at 0.35 FAR for office • 40% of area at 0.3 FAR for retail uses	1,978	3,956	2,584,524	4,439
Euclid/Francis	10	• 50% of the area at 30 du/ac • 50% of area at 0.8 FAR retail	156	312	181,210	419

3. Revisions to the Draft EIR

Table 4-2 Ontario General Plan Buildout Capacities

Land Use	Acres[2]	Assumed Density/Intensity[3]	Units	Population[4]	Non-Residential Square Feet	Jobs[5]
SR-60/ Hamner Tuscana Village	41	• 18% of the area at 25 du/ac • 57% of the area at 0.25 FAR retail • 25% of the area at 1.5 FAR office	185	369	924,234	2,098
Subtotal	1,668		15,129 ~~16,054~~	32,257 ~~32,107~~	34,922,836 ~~34,582,545~~	72,383 ~~71,896~~
Residential						
Neighborhood[6] Commercial	281	0.30 FAR			3,671,585	8,884
General Commercial	519 ~~533~~	0.30 FAR			6,788,695 ~~6,964,199~~	6,307 ~~6,470~~
Office/ Commercial	514	0.75 FAR			16,805,775	37,269
Hospitality	142 ~~141~~	1.00 FAR			6,177,679 ~~6,157,642~~	7,082 ~~7,060~~
Subtotal	1,470				33,599,200	59,682
~~Neighborhood[6] Commercial~~	~~281~~	~~0.30 FAR~~			~~3,671,585~~	~~8,884~~
Employment						
Business Park	1,507	0.40 FAR			26,261,610	46,075
Industrial	6,372	0.55 FAR			152,947,800 ~~152,661,502~~	134,383 ~~134,132~~
Subtotal	7,879				179,209,410 ~~178,923,112~~	180,459 ~~180,207~~
Other						
Open Space– Non-Recreation	1,232	Not applicable				
Open Space–Parkland[6]	950	Not applicable				
Open Space- Water	59	Not applicable				
Public Facility	97	Not applicable				
Public School	632	Not applicable				
LA/Ontario International Airport	1,677	Not applicable				
Landfill	137	Not applicable				
Railroad	251	Not applicable				
Roadways	4,871	Not applicable				
Subtotal	9,906					
TOTAL	31,786		99,887 ~~100,812~~	345,971 ~~347,821~~	247,575,980 ~~247,235,690~~	312,383 311,896

Source: Ontario General Plan Land Use Element, 2020.

Notes: FAR = floor area ratio; du = dwelling units; sf = square feet; ac= Acre

1 Historically, citywide buildout levels do not achieve the maximum allowable density/intensity on every parcel and are, on average, lower than allowed by the Policy Plan. Accordingly, the buildout projections in this Policy Plan do not assume buildout at the maximum density or intensity and instead are adjusted downward. To view the buildout assumptions, access the Methodology report.

2 Acres are given as adjusted gross acreages, which do not include the right-of-way for roadways, flood control facilities, or railroads.

3 Assumed Density/Intensity includes both residential density, expressed as units per acre, and non-residential intensity, expressed as floor area ratio (FAR), which is the amount of building square feet in relation to the size of the lot.

4 Projections of population by residential designation are based on a persons-per-household factor that varies by housing type. For more information, access the Methodology report.

5 To view the factors used to generate the number of employees by land use category, access the Methodology report.

6 Acreages and corresponding buildout estimates for these designations do not reflect underlying land uses within the Business Park, Industrial and Commercial Overlays. Estimates for these areas are included within the corresponding Business Park, Industrial and General Commercial categories.

Page 5.2-11, Section 5.2, *Air Quality*. The following text is revised in response to Comment A3-2.

- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust, and requires best available control measures to be applied to earth moving and grading activities. ~~In general, the rule prohibits new developments from the installation of wood-burning devices.~~ Additionally, Rule 403 requires large grading operations, which are defined as projects that include 50 or more acres of disturbed surface area; or earth-moving operations with a daily earth-moving or throughput volume of 5,000 cubic yard or more three times during the most recent 365-day period, to prepare and implement a fugitive dust control plan.

Page 5.2-15, Section 5.2, *Air Quality*. The following text is has been updated.

… As a result, the estimated basinwide population-weighted risk decreased by approximately 57 percent since MATES III (SCAQMD 2015a). According to the MATES IV web application, cancer risk in the project vicinity is 831.2 in one million.

Page 5.2-32, Section 5.2, *Air Quality*. Table 5.2-11, *Maximum Daily Regional Operational Phase Emissions*, is revised in response to Comment A5-3.

Table 5.2-11 Maximum Daily Regional Operational Phase Emissions

Sources	Criteria Air Pollutants (lbs/day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	43	<1	<1	<1	<1	<1
Energy	<1	3	3	<1	<1	<1
Mobile – Passenger Vehicles[1]	12	13	159	<1	45	12
Mobile – Transport Trucks[1]	~~5~~ 6	~~105~~ 188	~~31~~ 44	1	31	10
Transport Refrigeration Units[2,3]	1	4	6	<1	<1	<1
Off-Road Equipment[4]	<1	3	31	<1	<1	<1
Maximum Daily Emissions	~~61~~ 62	~~129~~ 211	~~231~~ 244	1	76	~~23~~ 22
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold	Yes	Yes	No	No	No	No

Source: CalEEMod, Version 2016.3.2. Based on trip generation information provided by Urban Crossroads (Appendix L1).
Notes: Highest winter or summer. Emissions totals may not equal 100 percent due to rounding. **Bold** = Exceedance.
[1] Based on calendar year 2022 aggregated emission rates derived EMFAC2017 Version 1.0.2 and CalEEMod methodology.
[2] Based on calendar year 2022 aggregated Instate Trailer TRU emission rates obtained from OFFROAD2017 Version 1.0.1.
[3] Based on 69 trucks with TRUs per day and 30 mins of idling per truck per day.
[4] Based on three diesel-powered and four CNG-powered yard trucks at the facility operating for four hours per day. Emissions based on emission rates for a 175 horsepower diesel-powered rail yard tractor and CNG-powered airport fuel truck derived from OFFROAD2017 Version 1.0.1.

3. Revisions to the Draft EIR

Page 5.2-33, Section 5.2, *Air Quality*. Table 5.2-12. *Potential Overlap of Construction and Operational Activities*, is revised in response to Comment A5-3.

Table 5.2-12 Potential Overlap of Construction and Operational Activities

	Emissions (pounds per day)					
Maximum Daily Emissions	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Year 2022 Construction Peak Emissions	104	99	56	<1	14	7
Year 2022 Maximum Operational Emissions	~~61~~ 62	~~129~~ 211	~~231~~ 244	1	76	~~23~~ 22
Max Daily Combined Emissions[1]	~~165~~ ~~166~~	~~228~~ 310	~~287~~ 300	1	90	29

Source: CalEEMod, Version 2016.3.2.
Notes:
[1] The maximum daily operational emissions are based on full buildout. Therefore, the maximum daily combined emissions represent a conservative scenario because in practice, only a proportion of the allowable land use space would be operating while the rest of the proposed project is constructed and fully built out.

Page 5.2-38, Section 5.2, *Air Quality*. Table 5.2-15, *Localized Onsite Operational Emissions*, is revised in response to Comment A5-3.

Table 5.2-15 Localized Onsite Operational Emissions

	Pollutants (lbs/day)			
Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Area Sources	<1	<1	<1	<1
Off-Road Equipment[1,2]	3	31	<1	<1
Onsite Truck Travel[3,4]	~~2~~ 3	~~<1~~ 1	<1	<1
Truck Idling[3]	5	3	<1	<1
Transport Refrigeration Units[5,6]	4	6	<1	<1
Maximum Daily Onsite Operation Emissions	~~14~~ 16	41	1	<1
SCAQMD Screening-Level LST	270	2,193	4	2
Exceeds Screening-Level LST?	No	No	No	No

Source: CalEEMod Version 2016.3.2.; SCAQMD 2008.
Notes: In accordance with SCAQMD methodology, only onsite stationary sources and mobile equipment occurring on the proposed project site are included in the analysis. Operational LSTs are based on sensitive receptors within 82 feet (25 meters) of a 5.0-acre site in SRA 33.
[1] Based on three diesel-powered and four CNG-powered yard trucks at the facility operating for four hours per day.
[2] Based on calendar year 2022 emission rates for a 175 horsepower diesel-powered rail yard tractor and CNG-powered airport fuel truck derived from OFFROAD2017 Version 1.0.1.
[3] Based on year 2022 emission rates derived EMFAC2017 Version 1.0.2 and CalEEMod methodology.
[4] Based on the proportion of distance traveled onsite compared to the overall distance traveled. It is anticipated that each truck would travel approximately 0.61 mile onsite on average.
[5] Based on 69 trucks with TRUs per day and 30 mins of idling per TRU per day.
[6] Based on calendar year 2022 aggregated Instate Trailer TRU emission rates obtained from OFFROAD2017 Version 1.0.1.

Page 5.2-46 through 5.2-49, Section 5.2, *Air Quality*. The following Mitigation Measures have been revised and/or incorporated at the request of Commenters.

Impact 5.2-1

AQ-1 Construction contractors shall, at minimum, use equipment that meets the United States Environmental Protection Agency's (EPA) Tier 4 ~~Interim~~ Final emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower for all Phase 1 rough grading and rough grading soil hauling activities, unless it can be demonstrated to the City of Ontario Building Department that such equipment is not available. Where equipment is not available, the next available engine Tier (e.g., US EPA Tier 4 Interim equipment) shall be used. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 ~~Interim~~ Final emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. For construction equipment 25 horsepower or less (e.g., plate compactors, pressure washers), the Construction Contractor shall use battery-powered or alternative fuel-powered equipment. During construction activity, electrical hook-ups or other charging mechanisms (including generators) for electric construction tools, such as saws, drills and compressors, shall be provided where feasible.

Prior to construction, the project engineer shall ensure that all construction (e.g., demolition and grading) plans clearly show the requirement for EPA Tier 4 ~~Interim~~ Final emissions standards for construction equipment over 50 horsepower and battery-powered or alternative fuel-powered equipment for engines under 25 horsepower for the specific activities stated above. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Ontario. The construction equipment list shall state the makes, models, Equipment Identification Numbers, and number of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5 minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

AQ-2 During building construction, the construction contractor shall, at minimum, use paints with a volatile organic compound (VOC) content of 20 grams per liter or less for all interior and exterior coatings of the Phase 1 buildings (i.e., Buildings 1 through 3). This requirement shall be noted on all construction management plans verified by the City of Ontario prior to issuance of any construction permits and during interior coating activities and verified by the City of Ontario during construction activities.

AQ-3 During building construction, the construction contractor shall, at minimum, use paints with a volatile organic compound (VOC) content of 50 grams per liter or less for all interior and exterior coatings of the Phase 2 buildings (i.e., Buildings 4 through 8). This requirement shall

be noted on all construction management plans verified by the City of Ontario prior to issuance of any construction permits and during interior coating activities and verified by the City of Ontario during construction activities.

AQ-4 During Phase 1 and Phase 2 construction, the construction contractor shall, at minimum, use paints with a volatile organic compound (VOC) content of 50 grams per liter or less for all surface parking lot striping. This requirement shall be noted on all construction management plans verified by the City of Ontario prior to issuance of any construction permits and during interior coating activities and verified by the City of Ontario during construction activities.

Impacts 5.2-2

Off-Road Equipment

AQ-5 Only electric-powered off-road equipment (e.g., yard trucks/hostlers) shall be utilized onsite for daily warehouse and business operations. The project developer/facility owner shall disclose this requirement to all tenants/business entities prior to the signing of any lease agreement. In addition, the limitation to use only electric-powered off-road equipment shall be included all leasing agreements.

Prior to issuance of a Business License for a new tenant/business entity, the project developer/facility owner and tenant/business entity shall provide to the City of Ontario Planning Department and Business License Department a signed document (verification document) noting that the project development/facility owner has disclosed to the tenant/business entity the requirement to use only electric-powered equipment for daily operations. ~~This verification document shall be signed by authorized agents for the project developer/facility owner and tenant/business entities. In addition, if applicable, the tenant/business entity shall provide documentation (e.g., purchase or rental agreement) to the City of Ontario Planning Department and Business License Department to verify, to the City's satisfaction, that any off-road equipment utilized will be electric-powered.~~

AQ-8 For tenants that require use of trucks with transport refrigeration units (TRUs), all TRU operating onsite shall be required to meet the US Environmental Protection Agency (EPA) Tier 4 standard, which requires engines to achieve 0.02 grams per brake horsepower hour (g/bhp-hr) of particulate matter (PM). The project developer/facility owner shall disclose this requirement to all tenants/business entities that require cold storage and use of TRUs prior to the signing of any lease agreement. In addition, the limitation to use only Tier 4 off-road equipment shall be included all leasing agreements.

Prior to issuance of a Business License for a new tenant/business entity, the project developer/facility owner and tenant/business entity shall provide to the City of Ontario Planning Department and Business License Department a signed document (verification document) noting that the project development/facility owner has disclosed to the tenant/business entity the requirement to use only Tier 4 TRUs for daily operations.

Landscaping Equipment

AQ-~~8~~9 All landscaping equipment (e.g., leaf blower) used for property management shall be electric-powered only. The property manager/facility owner shall provide documentation (e.g., purchase, rental, and/or services agreement) to the City of Ontario Planning Department to verify, to the City's satisfaction, that all landscaping equipment utilized will be electric-powered.

Architectural Coatings & Paints

AQ-~~9~~10 All paints used for interior and exterior architectural re-coatings of all buildings shall at minimum, have a volatile organic compound (VOC) content of ~~20~~ 25 grams per liter or less.

AQ-~~10~~11 Paints used in re-striping of the parking lot shall, at minimum, have a volatile organic compound (VOC) content of 50 grams per liter or less.

Transportation Sector

AQ-12 The project shall install the necessary infrastructure (e.g., conduit in parking lots) to support the future transition to zero emissions (ZE) and near zero emission (NZE) trucks. These requirements shall be noted on all site plans and verified by the City of Ontario during site inspections prior to issuance of occupancy permits.

AQ-13 The City of Ontario shall require phased-in use of on-road trucks that have zero-emissions or near-zero emissions—such as trucks with natural gas engines that meet the California Air Resources Board's (CARB) adopted optional nitrogen oxides (NO_x) emissions standard of 0.02 gram per break horsepower-hour (g/bhp-hr). At a minimum, operators on-site shall commit to using year 2010 or newer trucks with engines that meet CARB's 2010 emissions standards—which are 0.01 g/bhp-hr for particulate matter (PM) and 0.20 g/bhp-hr for NOx—or newer, cleaner trucks or equipment. These requirements shall be noted on all site plans and verified by the City of Ontario during site inspections during project operation. During operation, the building tenant and/or building owner shall maintain records of all truck deliveries to the warehouse on an annual basis. These records shall be made available to the City of Ontario upon request.

AQ-14 Prior to the issuance of occupancy permit, the applicant and/or building operators shall submit an employee training handbook to the City of Ontario that includes the following:

- Required facility operator management and employee training on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Required facility operator management and employee training on keeping vehicle records in diesel technologies and compliance with CARB regulations.

- Required facility operator management and employee to attend courses approved by the California Air Resources Board.

- The facility operators shall maintain records on-site demonstrating compliance with training and shall make records available for inspection by the City of Ontario upon request.

AQ-15 The City of Ontario shall require that check-in points for trucks provide sufficient stacking distance within the individual parcels to ensure that there are no trucks queuing outside of the facility and that truck traffic does not idle on public streets. The applicant for a warehouse project that includes check-in points for trucks shall submit a queuing analysis to the City of Ontario Engineering Division prior to approval of grading permits.

Impact 5.2-6

Mitigation Measures AQ-5 through AQ-~~8~~15 are applicable to Impact 5.2-6. Additionally, the following mitigation measure is also prescribed to reduce impacts associated with Impact 5.2-6.

AQ-~~11~~16 Construction contractors shall, at minimum, use equipment that meets the United States Environmental Protection Agency's (EPA) Tier 4 ~~Interim~~ Final emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower for all Phase 2 building construction activities, unless it can be demonstrated to the City of Ontario Building Department that such equipment is not available. Where equipment is not available, the next available engine Tier (e.g., US EPA Tier 4 Interim equipment) shall be used. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 ~~Interim~~ Final emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. For construction equipment 25 horsepower or less (e.g., plate compactors, pressure washers), the Construction Contractor shall use battery-powered or alternative fuel-powered equipment. During construction activity, electrical hook-ups or other charging mechanisms (including generators) for electric construction tools, such as saws, drills and compressors, shall be provided where feasible.

Prior to construction, the project engineer shall ensure that all construction (e.g., demolition and grading) plans clearly show the requirement for EPA Tier 4 ~~Interim~~ Final emissions standards for construction equipment over 50 horsepower and battery-powered or alternative fuel-powered equipment for engines under 25 horsepower for the specific activity stated above. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Ontario. The construction equipment list shall state the makes, models, Equipment Identification Numbers, and number of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted

to 5 minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

Impact 5.2-7

Apply Mitigation Measures AQ-5 through AQ-~~10~~15.

Impact 5.2-8

AQ-~~12~~17 Prior to future discretionary approval, if it is determined that a project has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared by the project applicant, subject to review and approval by the City of Ontario Planning Department. Facilities that have the potential to generate nuisance odors include but are not limited to:

- Wastewater treatment plants
- Composting, green waste, or recycling facilities
- Fiberglass manufacturing facilities
- Painting/coating operations
- Large-capacity coffee roasters
- Food-processing facilities

The odor management plan shall show compliance with the South Coast Air Quality Management District's Rule 402 for nuisance odors. The Odor Management Plan shall identify the best available control technologies for toxics (T-BACTs) that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. T-BACTs may include, but are not limited to scrubbers (i.e., air pollution control devices) at the industrial facility. T-BACTs identified in the odor management plan shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.

Page 5.2-50, Section 5.2, *Air Quality*. The following text has been revised in response to Comment A3-2.

Implementation of Mitigation Measure AQ-1 would require off-road construction equipment of 50 horsepower or greater used for Phase 1 rough grading activities to be fitted with engines that meet the EPA's Tier 4 ~~Interim~~ Final emissions standards…

Page 5.2-50, Section 5.2, *Air Quality*. The following text has been revised to reflect the revised mitigation measure numbering.

Implementation of Mitigation Measure AQ-5 would limit off-road equipment used in daily operations to be electric-powered only. As shown in Table 5.2-19, implementation of Mitigation Measures AQ-2 through AQ-

~~10~~15 would reduce emissions to the extent possible. However, project-related operation phase emissions would still exceed the VOC and NO_X regional significance thresholds. Therefore, Impact 5.2-2 would remain ***significant and unavoidable.***

Page 5.2-51, Section 5.2, *Air Quality*. Table 5.2-19, *Maximum Daily Regional Operational Phase Emissions With Mitigation*, is revised in response to Comment A5-3.

Table 5.2-19 Maximum Daily Regional Operational Phase Emissions With Mitigation

Sources	Criteria Air Pollutants (lbs/day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Area[1]	40	<1	<1	<1	<1	<1
Energy	<1	3	3	<1	<1	<1
Mobile – Passenger Vehicles[2]	12	13	159	<1	45	12
Mobile – Transport Trucks[2]	~~5~~ 6	~~105~~ 188	~~31~~ 44	1	31	10
Transport Refrigeration Units[4]	1	4	6	<1	<1	<1
Off-Road Equipment[3]	0	0	0	0	0	0
Maximum Daily Emissions	~~57~~ 58	~~126~~ 208	~~199~~ 213	1	76	~~23~~ 22
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold	Yes	Yes	No	No	No	No

Source: CalEEMod, Version 2016.3.2. Based on trip generation information provided by Urban Crossroads (Appendix L1).
Notes: Highest winter or summer. Emissions totals may not equal 100 percent due to rounding. **Bold** = Exceedance.
[1] Incorporates Mitigation Measures AQ-2 through AQ-4, AQ-~~9~~10, and AQ-~~10~~11, which require use of low VOC paints and Mitigation Measure AQ-~~8~~9, which limits landscaping equipment to be electric-powered only.
[2] Based on calendar year 2022 aggregated emission rates derived from EMFAC2017 Version 1.0.2 and CalEEMod methodology.
[3] Incorporates Mitigation Measure AQ-5, which only allows use of electric-powered off-road equipment.

Page 5.2-52, Section 5.2, *Air Quality*. The following text has been in response to Comment A3-2 and revisions to the mitigation measure numbering.

Implementation of Mitigation Measure AQ-~~11~~16 would require off-road construction equipment of 50 horsepower or greater used for Phase 2 building construction activities to be fitted with engines that meet the EPA's Tier 4 ~~Interim~~ Final emissions standards. As shown in Table 5.2-20, implementation of Mitigation Measure AQ-~~11~~16 in addition to Mitigation Measure AQ-1, which is prescribed to reduce project-related regional construction impacts, would reduce the total combined cancer risk to 7.6 in a million. In addition, while not accounted for in Table 5.2-20, Mitigation Measures AQ-5 through AQ-~~8~~15 would provide further reductions in health risks through the use of cleaner and lower emitting off-road equipment. Therefore, with incorporation of mitigation, Impact 5.2-6 would be reduced to less than significant.

Page 5.2-52, Section 5.2, *Air Quality*. Table 5.2-20, *Combined Construction and Operational HRA with Mitigation*, is revised in to reflect the updated mitigation measure numbering.

Table 5.2-20 Combined Construction and Operational HRA With Mitigation

Source	Cancer Risk – 30-year Residential (per million)	Chronic Hazard Index
Construction Emissions – 2-year duration[1]	4.1	0.013
Operational Emissions – 28-year duration	3.6	0.002
Cumulative Total[2]	7.6	0.015
SCAQMD Threshold	10	1.0
Exceeds Threshold?	No	No

Sources: Appendix C2.
Notes:
[1] Incorporates Mitigation Measures AQ-1 and AQ-~~11~~16, which requires all equipment of 50 horsepower or more used for Phase 1 rough grading activities and Phase 2 building construction activities be fitted with engines that meet the EPA's Tier 4 ~~Interim~~ Final emissions standards.
[2] Totals are not rounded.

Page 5.2-52, Section 5.2, *Air Quality*. The following text has been revised in to reflect the updated mitigation measure numbering.

Mitigation Measure AQ-~~12~~17 would ensure that odor impacts are minimized and facilities would comply with SCAQMD Rule 402. Therefore, Impact 5.2-8 would be reduced to less than significant.

Page 5.3-22, Section 5.3, *Biological Resources*. The following mitigation measures have been revised in response to Comments A6-1, A6-3, and A6-7.

Impact 5.3-1

BIO-1 Prior to the issuance of permits for any construction activity, the project applicant shall demonstrate compliance with the federal MBTA and Fish and Game Code Sections 3503 and 3503 to the satisfaction of the City of Ontario that either of the following has been accomplished:

- ~~Conduct grading activities and vegetation removal outside of the nesting season (February 1 to August 31) to avoid impacts to nesting birds, including raptors.~~
- ~~If vegetation removal will occur during the bird nesting season, between February 1 and August 31, pre-construction nesting bird surveys shall be performed within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are found, they shall be flagged and the biologist shall establish suitable buffers around the nest (generally a minimum of 200 feet up to 500 feet for raptors and a minimum of 50 feet up to 300 feet for passerine species, with specific buffer widths to~~

~~be determined by a qualified biologist). The buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests~~.

BIO-3 Prior to issuance of a demolition or grading permit for any ground disturbing activity, a qualified biologist shall conduct a pre-construction presence/absence survey for burrowing owls within 14 days prior to site disturbance. Surveys shall be conducted consistent with the procedures in outlined in the "California Department of Fish and Wildlife (CDFW) 2012 Staff Report on Burrowing Owl Mitigation." If the species is absent, no additional mitigation will be required.

Areas Outside of the Chino RMP Boundary. If burrowing owl(s) are observed onsite during the pre-construction clearance survey;

- Prior to disturbance of the occupied burrows, suitable and unoccupied replacement burrows shall be provided at a ratio of 2:1 within designated off-site conserved lands to be identified through coordination with CDFW and the City in which the burrowing owl(s) is(are) detected (either the City of Ontario or the City of Chino). A qualified biologist shall confirm that the artificial burrows are currently unoccupied and suitable for use by owls.
- Until suitable replacement burrows have been provided/confirmed within the off-site conserved lands to be identified through coordination with CDFW and the City of Ontario or the City of Chino, no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the nonbreeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31). <u>If reduced setbacks are implemented, a broad-scale, long-term, scientifically-rigorous monitoring program shall be implemented by the City to ensures that burrowing owls are not detrimentally affected by the project.</u>
- Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- If burrowing owls are present at the time that the occupied burrows are to be disturbed, then the owls shall be excluded from the site following the 2012 CDFG Staff Report.

City of Chino, RMP Boundary. If burrowing owl(s) is(are) detected within the Project's disturbance footprint in the City of Chino RMP boundary, the owl(s) are required to be handled as indicated by the RMP:

The RMP addresses mitigation requirements for impacts to burrowing owls. The RMP states that the 1995 CDFG Staff Report on Burrowing Owl Mitigation (as supplemented by the RMP) shall be followed when burrowing owls are detected on properties. If avoidance of

occupied habitat is infeasible, provisions shall be made to passively relocate owls from sites in accordance with the current 2012 CDFG Staff Report (supersedes 1995 CDFG Staff Report).

According to the Preserve EIR and RMP, Burrowing Owls to be relocated from properties within the City's Subarea 2 are intended to be accommodated within a "300-acre conservation area" and/or additional Candidate Relocation Areas as described on Page 4-16 and 4-21 of the RMP. One such contingency conservation area is identified in the RMP as "Drainage Area B".

Drainage Area B consists of a series of Natural Treatment System (NTS) facilities that were constructed south of Kimball Avenue and west of Mill Creek Road. When the NTS facilities were constructed, approximately 50 artificial owl burrows were installed within the basins to accommodate relocated owls and additional owls dispersing to the site. This location was given top priority as an owl relocation site by the RMP due to its proximity to areas that have been and will be converted to urban development. If Burrowing Owls are present at the Project site at time of site disturbance, the Burrowing Owls would be more likely to initially relocate to the immediately surrounding properties, including additional locations within the Chino Airport. However, the NTS basins represent the nearest conservation area providing regional mitigation for the loss of burrowing owl habitat.

Consistent with the RMP, the following measures shall apply to the portion of the Project site within the RMP boundary regarding burrowing owl mitigation:

- Prior to disturbance of the occupied burrows, suitable and unoccupied replacement burrows shall be provided at a ratio of 2:1 within the City of Chino designated relocation area (e.g. the NTS basins). A qualified biologist through coordination with the City shall confirm that the artificial burrows are currently unoccupied and suitable for use by owls.
- Until suitable replacement burrows have been provided/confirmed within the designated relocation area (e.g. the NTS basins), no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the nonbreeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31).
- Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- If Burrowing Owls are present at the time that the occupied burrows are to be disturbed, then the owls shall be excluded from the site following the 2012 CDFG Staff Report and Table 4-6 of the RMP.

- Pursuant to mitigation measure B-3(8) of The Preserve EIR, and as noted on Page 4-39 of the RMP, the Project shall pay the required mitigation fee prior to initiation of ground disturbing activities. One priority for funding supported by the mitigation fees is the establishment and long-term management of burrowing owl habitat within the Drainage Area B conservation area.

BIO-4 Prior to implementation of project activities, a qualified biologist shall be retained to determine whether potential roosting sites for bats may be affected. For ~~large ornamental trees~~ habitats or structures suitable for bat roosting/nursery, an appropriate combination of structure inspection, sampling, exit counts and acoustic surveys shall be performed prior to initial ground disturbance and vegetation removal to determine whether the project footprint and a 300-foot buffer supports a nursery or roost, and by which species. This survey work will occur between ~~late-spring and late-summer and/or in the fall (generally mid-March through late October)~~April 1 through August 31.

If the results of the bat survey finds roosting individuals ~~a total of a single roosting individual of a special-status bat species or 25 or more individuals of non-special-status bat species with potential to be present in the study area (i.e., western Mastiff bat, big free-tailed bat, pallid bat, western red bat, and western yellow bat)~~, a Bat Management Plan shall be developed to ensure mortality to bats does not occur. For each location confirmed to be occupied by bats, the plan will provide details both in text and graphically where exclusion devices/and or staged tree removal will need to occur, the timing for exclusion work, and the timeline and methodology needed to exclude the bats. The plan will need to be reviewed and approved by CDFW prior to disturbance of the roost(s).

BIO-5 Within ~~14 days~~ the breeding season (May – July) prior to the onset of construction activities, a qualified biologist shall conduct pre-construction visual surveys, following U.S. Geological Survey visual survey protocol, for western pond turtle within all areas ~~that fall within 100 feet~~ of any suitable aquatic ~~and upland nesting~~ habitat for this species (retention ponds). If Western pond turtles are observed during the pre-construction survey, the Applicant shall prepare for CDFW review and approval, a translocation plan identifying proposed protocol for trapping and relocating turtles, including identifying potential, appropriate receiver sites ~~shall be contacted~~ to relocate western pond ~~turtles to ensure that no western pond turtles are harmed~~. If no western pond turtles are observed during the pre-construction survey, then construction activities may begin. If construction is delayed or halted for more than 30 days, another pre-construction survey for western pond turtle shall be conducted. Within seven days of the pre-construction survey, a report of findings from the survey shall be submitted to the CDFW.

During construction, a qualified biological monitor who has been approved by the CDFW to relocate western pond turtles shall be onsite to ensure that no western pond turtles are harmed. If western pond turtles are observed in the construction area at any time during construction, the onsite biological monitor shall be notified and construction in the vicinity of the sighting

shall be halted until such a time as a turtle has been removed from the construction zone, and relocated by an approved biologist. If a sighting occurs during construction, the biologist shall prepare a report of the event and submit it to CDFW.

Page 5.7-7, Section 5.7, *Greenhouse Gas Emissions*. The following text has been revised in to reflect the updated mitigation measure numbering.

Update to Corporate Average Fuel Economy Standards ~~(2010/2012)~~

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. However, on March 30, 2020, the USEPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as The Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021-2026. ~~The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers were required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017 to 2025 that will require a fleet average of 54.5 miles per gallon in 2025. While the EPA is reexamining the 2017–2025 emissions and CAFE standards~~ However, a consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet these standards (CARB 2019d).

Page 5.7-41, Section 5.7, *Greenhouse Gas Emissions*. The following text has been revised as a result of revised mitigation measures numbering.

Mitigation Measures AQ-5 through AQ-~~10~~15 from Section 5.3, *Air Quality*, apply and would reduce GHG emissions of the proposed project.

3. Revisions to the Draft EIR

Page 5.7-43, Section 5.7, *Greenhouse Gas Emissions*. The following mitigation measure numbering has been revised.

Landscaping Equipment

AQ-~~8~~9 All landscaping equipment (e.g., leaf blower) used for property management shall be electric-powered only. The property manager/facility owner shall provide documentation (e.g., purchase, rental, and/or services agreement) to the City of Ontario Planning Department to verify, to the City's satisfaction, that all landscaping equipment utilized will be electric-powered.

Page 5.8-10, Section 5.8, *Hazards and Hazardous Materials*. The following text is revised in response to Comment A1-1.

… The Airport Land Use Compatibility Plan (ALUCP) for Chino Airport completed by the County of Riverside in 2008 provides additional guidance for development around Chino Airport. The project site is not within an existing or current airport noise hazard zone and is in ~~Zone D~~ Zone E as designated in the ALUCP (Mead and Hunt 2004a).

Page 5.8-16, Section 5.8, *Hazards and Hazardous Materials*. The following text is revised in response to Comment A1-1.

As discussed in Section 5.8.1.2 and shown in Figures 5.8-1 and 5.8-2 the project site is within the ONT and Chino Airport's AIA. The proposed project is in ~~Zone D~~ Zone E of the Chino Airport as designated in the ALUCP. Warehousing and office buildings are permitted in ~~Zone D~~ Zone E (Mead and Hunt 2004b)…

Page 5.10-14, Section 5.8, *Land Use and Planning*. The following text is revised in response to Comment A1-1.

Goal Land Use 5: Integrated airport systems and facilities that minimize negative impacts to the community and maximize economic benefits.	
LU5-1: *Coordination with Airport Authorities.* We collaborate with FAA, Caltrans Division of Aeronautics, airport owners, neighboring jurisdictions, and other shareholders in the preparation, update and maintenance of airport-related plans.	Policy LU5-1 reduces adverse impacts associated with airfield/airport operations. Consistent*:* The Applicant and City Staff would coordinate with the airport authority for the Chino Airport in evaluation of project land uses in the context of the Chino Airport Overlay and Riverside County ALUCP for Chino Airport as the Project site is in ~~Zone D~~ Zone E of the Chino Airport as designated by ALUCP. The project resides in airport influence areas (AIA) for both the Chino Airport and the Ontario International Airport, however, the project is not within an Ontario International Airport safety zone, noise impact zone, or airspace protection zone. Please refer also to related discussions presented in this EIR Section 5.8, *Hazards/Hazardous Materials.*

	The project does not propose elements or aspects that would interfere with or obstruct City collaboration or coordination with agencies or shareholders participating in or responsible for the preparation, update and maintenance of airport-related plans. Therefore, the project is consistent with Policy LU5-1.

Page 5.10-23, Section 5.10, *Land Use and Planning*. The following text is revised in response to Comment A1-1.

The project site is not within a safety zone, a noise impact zone, or an airspace protection zone of Ontario International Airport. The proposed project is in ~~Zone D~~ Zone E of the Chino Airport as designated in the ALUCP. Warehousing and office buildings are permitted in ~~Zone D~~ Zone E (Mead and Hunt 2004b). Furthermore, the maximum building height for the proposed project is 55 feet and do not require ALUC review (Mead and Hunt 2004c), and would not conflict with building height restrictions identified in the airport land use plans.

Page 5.12-5, Section 5.12, *Population and Housing*. The following text has been updated.

On ~~January 28~~March 30, 2020, the ~~Planning Commission~~City Council approved a revision to the Policy Plan (General Plan) land use table (see General Plan Table LU-03) showing this change. 159 of these 975 units will directly offset the units that are permitted on the project site under the current General Plan designation.

3. Revisions to the Draft EIR

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Appendix A. Revised Figures

Appendix

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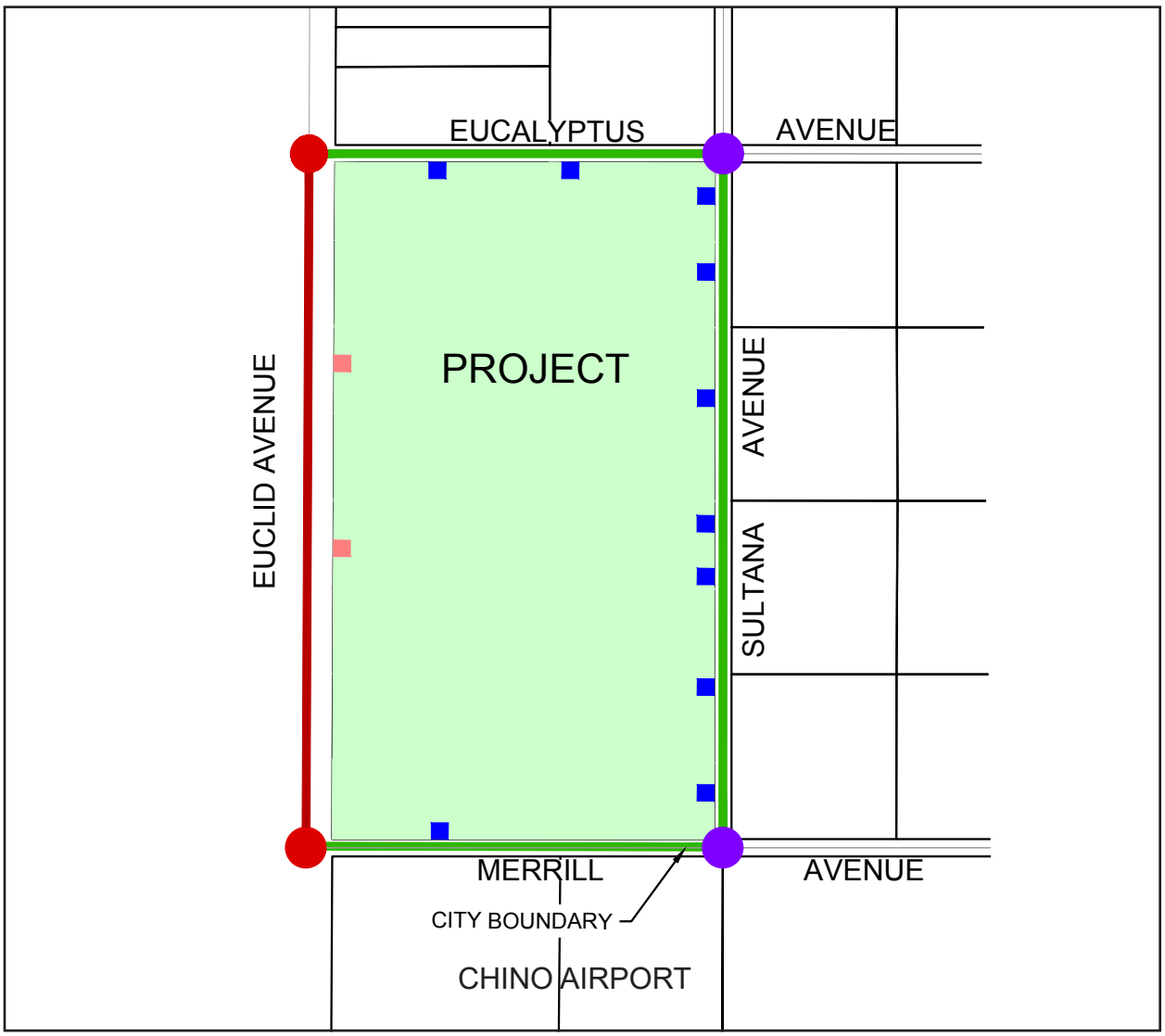
Figure 3-5 - Circulation Plan
3. Project Description



Principal Arterial
Collector
New Signalized Intersection
Modify Existing Signalized Intersection
Full Access Driveway
RI/RO Driveway
Specific Plan Area

Note: Traffic signals will be interconnected. All access points shall conform to the traffic & transportation guidelines and are subject to city approval.

0 600
Scale (Feet)

Source: EDP, 2020

Appendix

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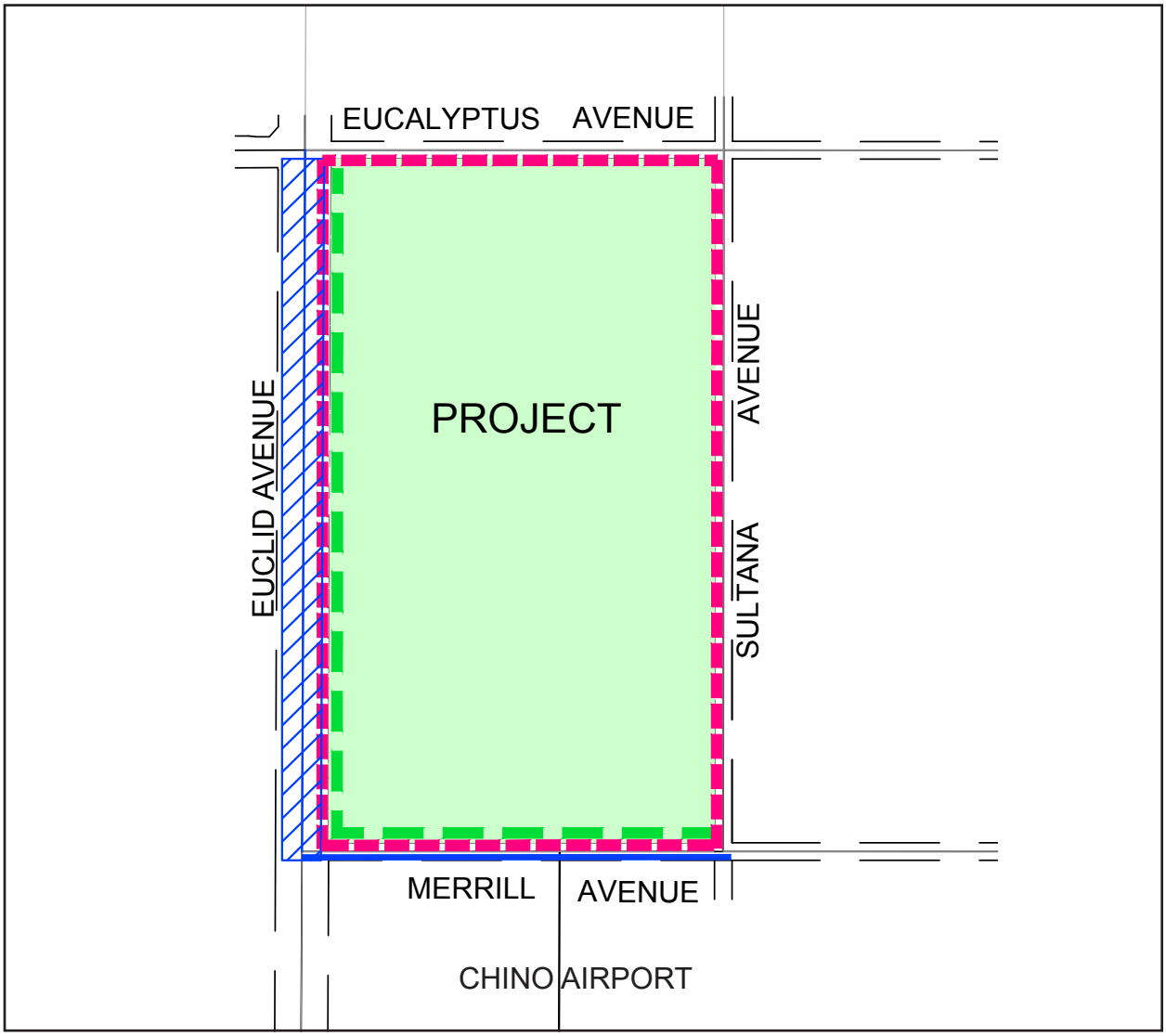
Figure 3-6 - Bicycle and Pedestrian Plan
3. Project Description



Source: EDP, 2020

Appendix

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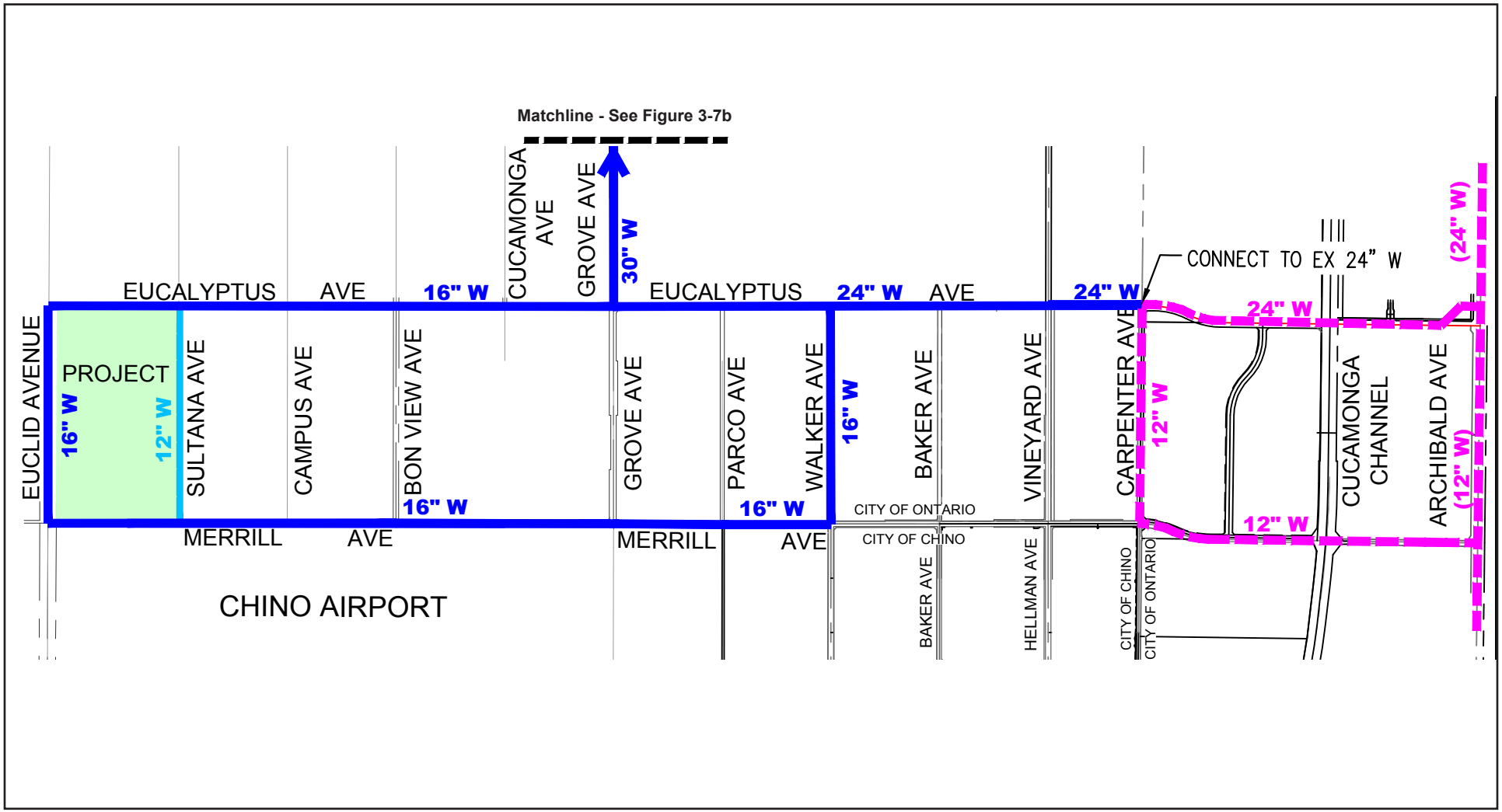
Figure 3-7a - Potable Water Plan
3. Project Description



Specific Plan Area
Specific Plan Required Potable Water Main/Facility (Per Master Plan)
Specific Plan Required Potable Water Main (Project Specific)
Ex Domestic Water Main (City of Ontario)

0 1,800
Scale (Feet)

Source: EDP, 2020

Appendix

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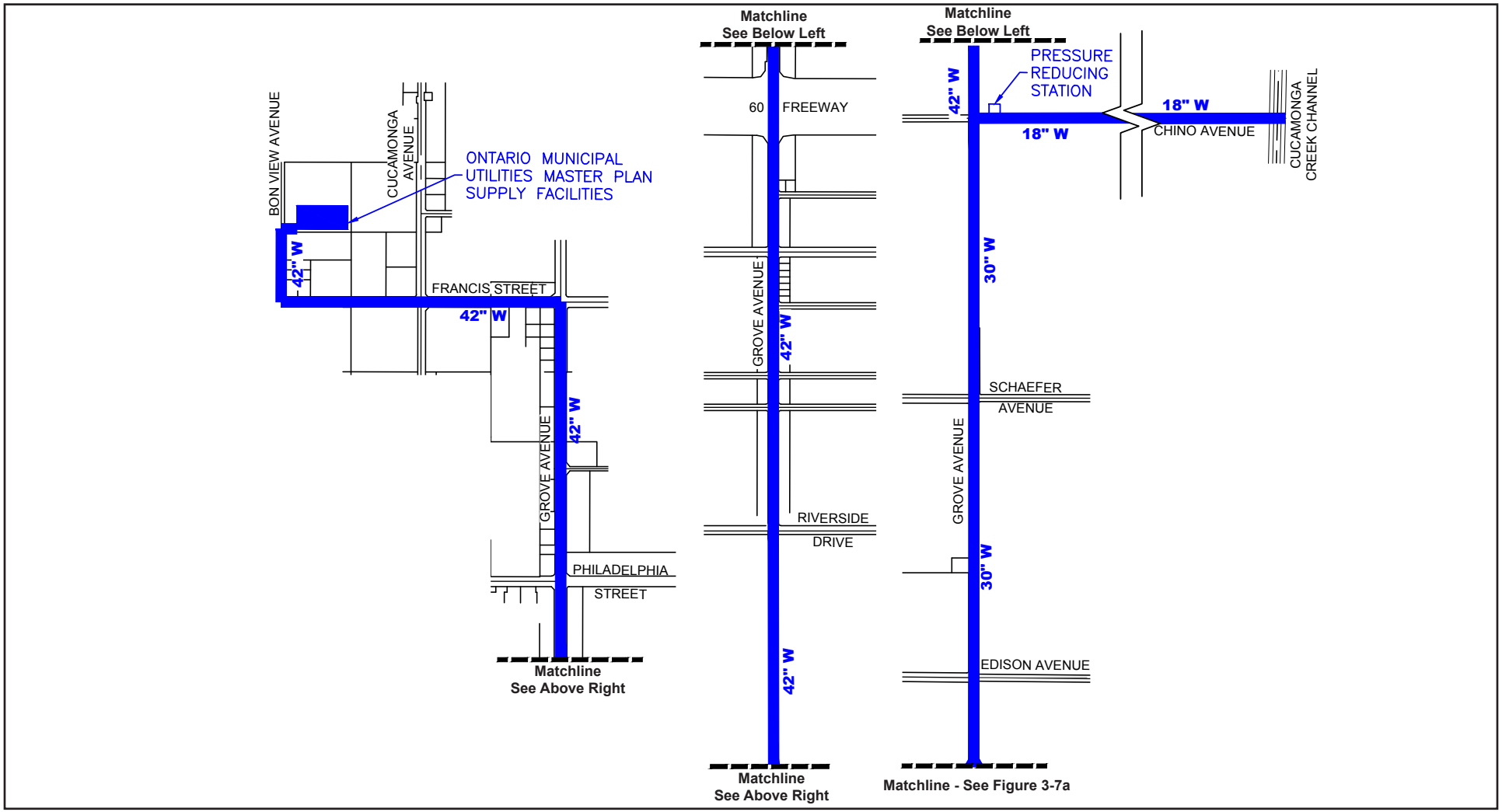
Figure 3-7b - Potable Water Plan

3. Project Description



Source: EDP, 2020

Appendix

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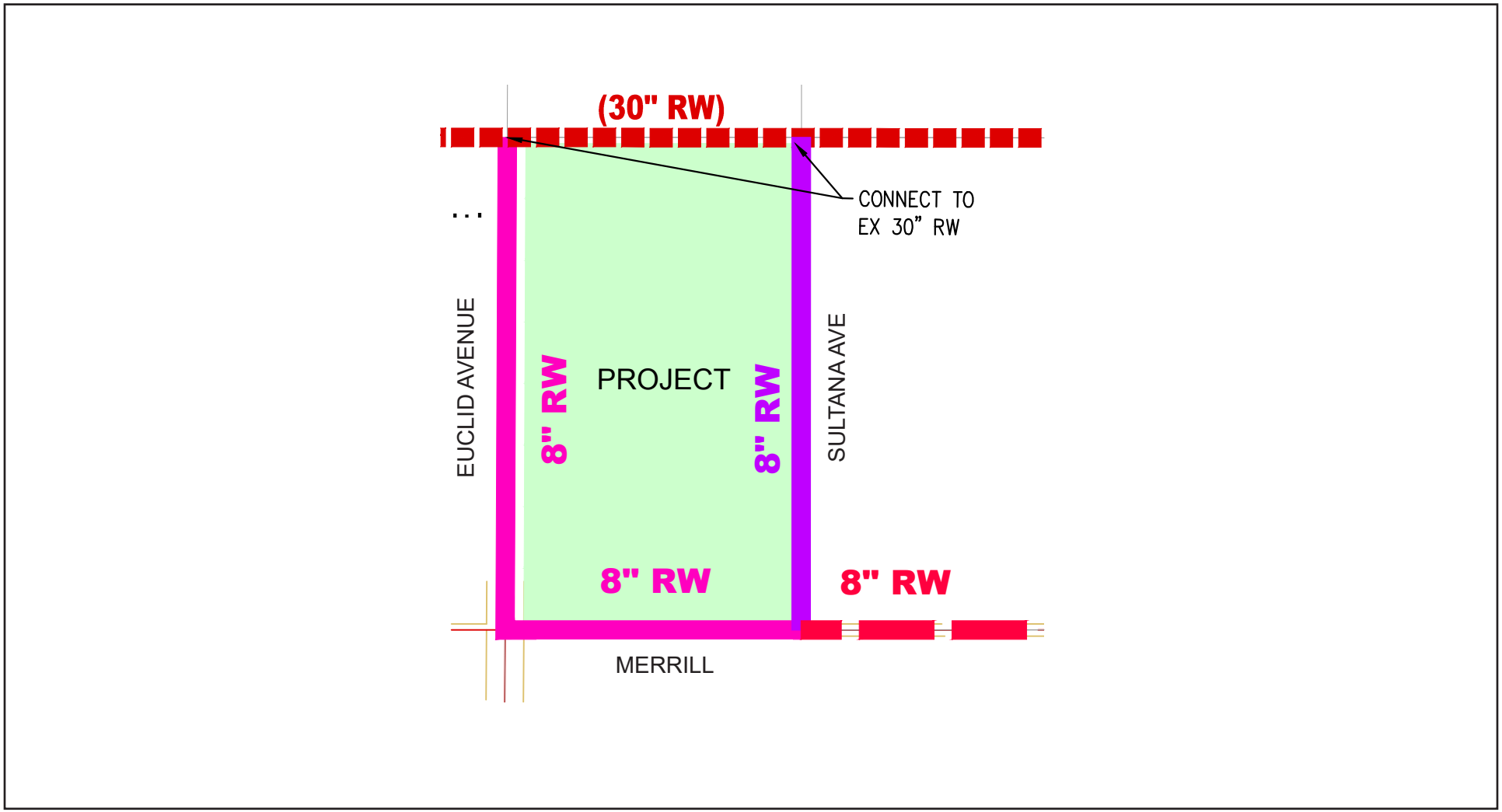
Figure 3-8 - Recycled Water Plan
3. Project Description



Source: EDP, 2020

Appendix

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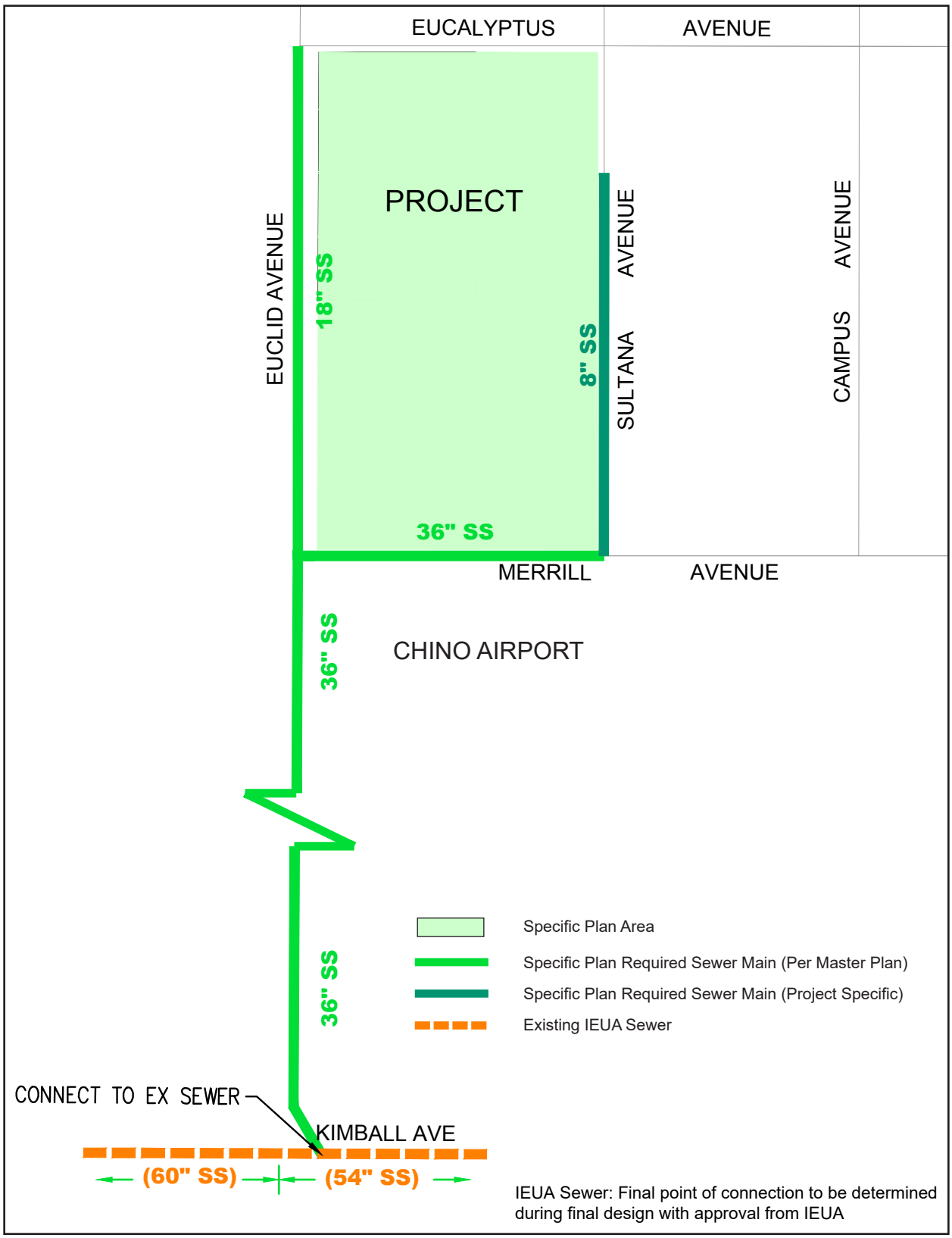
Figure 3-9 - Sewer Plan
3. Project Description



Source: EDP, 2020

Appendix

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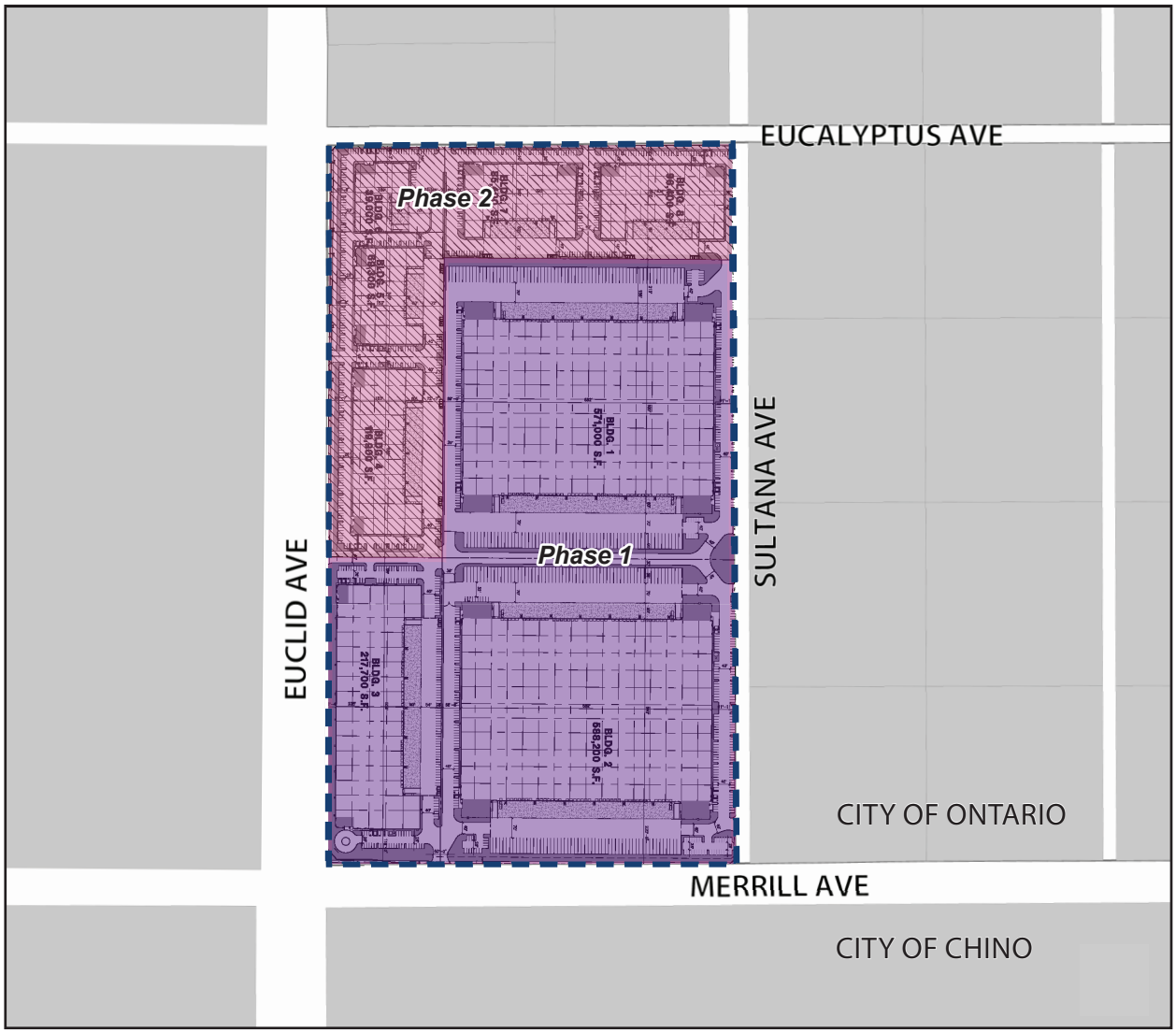
Figure 3-14 - Conceptual Phasing Plan
3. Project Description



Conceptual Phasing Plan

Specific Plan Boundary

Phase 1

Phase 2

0 600
Scale (Feet)

Source: EDP, 2019

Appendix

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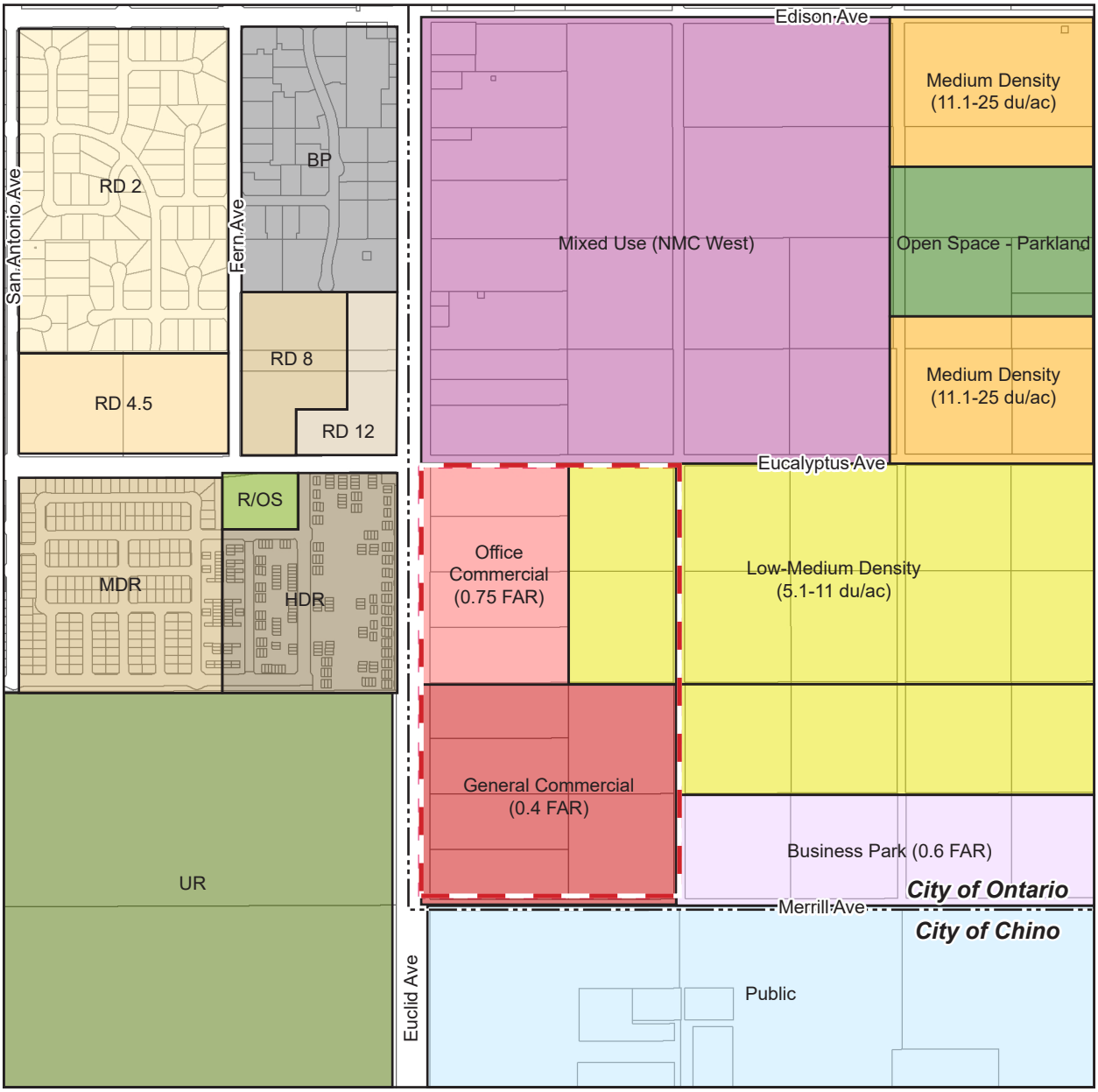
Figure 4-1 - Surrounding Land Use Map
4. Environmental Setting



Chino

Residential
- RD 2 (2 du/ac)
- RD 4.5 (4.5 du/ac)
- RD 8 (8 du/ac)
- RD 12 (12 du/ac)

Industrial
- BP (Business Park)
- MDR (Medium Density Residential)
- HDR (High Density Residential)

Open Space
- R/OS (Recreational/ Open Space
- UR (Urban Reserve)

Other
- P (Public)

Specific Plan Boundary
City Boundary

Ontario

Residential
- Low-Medium Density (5.1-11 du/ac)
- Medium Density (11.1-25 du/ac)

Retail/Service
- General Commercial (0.4 FAR)
- Office Commercial (0.75 FAR)

Employment
- Business Park (0.6 FAR)

Other
- Open Space - Parkland

Mixed Use
- Mixed Use (NMC West)

0 1,000
Scale (Feet)

Source: City of Ontario, 2010; City of Chino, 2020

Appendix

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Appendix B. Revised Appendix C Air Quality and HRA Pages

Appendix

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2. Project Description

The Ontario Ranch Business Park project site encompasses 11 parcels totaling 85.6 acres in the City of Ontario. The project site is in the southwestern portion of Ontario, immediately north of the City of Chino in San Bernardino County. The project site is located east of Euclid Avenue, north of Merrill Avenue, west of the unimproved right-of-way of Sultana Avenue, and south of Eucalyptus Avenue. The development would include eight warehouse and business park buildings ranging from 46,900 square feet to 618,353 square feet, for a maximum development of 1,905,027 square feet of warehouse and office uses. Office uses are ancillary to the warehouses and occupy up to 75,000 SF spread across the eight buildings.

The project site and vicinity are depicted in Figure 1. Nearby surrounding land uses consist of agricultural uses designated for future mixed-use to the north, residential and recreational uses within the City of Chino to the west, agricultural, public uses and the Chino Airport to the south, and agricultural uses to the east. The project site contains an operational dairy farm. The site contains two single-family residential structures, a dairy barn, a storage structure, approximately 10 feed storage barns, and numerous livestock corrals.

The Ontario Ranch Business Park Specific Plan (ORBPSP) consists of two Planning Areas (PA), PA-1 and PA-2, that will accommodate a variety of commercial, office, technology, light manufacturing, and warehouse/distribution uses. The ORBPSP land use plan implements the vision of the City's General Plan by providing opportunities in two land use designations, approximately 24 acres of Business Park (BP) and 62 acres of Industrial General (IG), which would allow for employment in manufacturing, distribution, research and development, service, and supporting retail at intensities designed to meet the demand of current and future market conditions.

The project would be built in two Phases. Phase 1 would include PA-2 (Buildings 1-3), the southern portion of the project site identified for industrial development. Phase 2 would develop PA-1 (Buildings 4-8) which is the northern portion of the project site identified for business park development. The project includes frontage improvements to the buildout condition identified in the TOP Circulation Element. Full buildout is identified below, with the project responsible for a half-width improvement only:

- Merrill Avenue: Collector Street, 4 Lanes (98-ft right-of-way [ROW])
- Euclid Avenue: Other Principal Arterial, 8 Lanes (200-ft ROW)
- Eucalyptus Avenue: Collector Street, 4 Lanes (108-ft ROW)
- Sultana Avenue: Collector Street, 2 Lanes (66-ft ROW)

For purposes of the environmental analysis, to analyze worst case conditions, construction of the project site under the Specific Plan is anticipated to occur over a 26-month period, commencing in October 2020 with completion in November 2022.

2. Project Description

The proposed site plan is depicted in Figure 2. The proposed site configuration includes the following details:

- Building 1: 600,964 SF and 82 truck bays
- Building 2: 618,353 SF and 82 truck bays
- Building 3: 227,806 SF and 39 truck bays
- Building 4: 130,030 SF and 21 truck bays
- Building 5: 79,200 SF and 11 truck bays
- Building 6: 46,900 SF and 6 truck bays
- Building 7: 95,624 SF and 14 truck bays
- Building 8: 106,150 SF and 14 truck bays
- Building Total: 1,905,027 SF with 269 total truck bays

The anticipated total development is proposed to consist of the following:

- 1,019,317 SF high-cube fulfillment center warehousing,
- 200,000 SF high-cube cold storage warehousing,
- 357,836 SF warehousing, and
- 327,874 SF business park (mix of merchant wholesale, professional services, warehouse/storage, and research and development uses.

Typically, industrial warehouse projects include indoor and outdoor cargo handling equipment to move containers short-distances on-site. As part of the Project's design, all indoor cargo handling equipment (i.e., forklifts) will be electric consistent with industry standards. However, outdoor equipment such as yard trucks will have a mix of diesel-fueled and non-fueled engines. Warehouse projects typically have 3.6 yard trucks per million square feet of building space (SCAQMD, 2014). Therefore, a total of 7 yard trucks (3 diesel-fueled, 4 compressed natural gas [CNG] fueled) were assumed operating 4 hours per day, 365 days per year at the project site.

Operation Localized Significance Thresholds - Sensitive Receptor

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
33	5.00	25	82

Source Receptor **Southwest San Bernardino Valley**
Distance (meters) 25

NOx	**270**
CO	**2,193**
PM10	**4.00**
PM2.5	**2.00**

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	5	270	303	378	486	778
	5	270	303	378	486	778
		270	303	378	486	778
CO	5	2193	2978	5188	9611	29410
	5	2193	2978	5188	9611	29410
		2193	2978	5188	9611	29410
PM10	5	4	12	20	34	78
	5	4	12	20	34	78
		4	12	20	34	78
PM2.5	5	2	3	5	11	41
	5	2	3	5	11	41
		2	3	5	11	41

Southwest San Bernardino Valley
5.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	270	303	378	486	778
CO	2193	2978	5188	9611	29410
PM10	4	12	20	34	78
PM2.5	2	3	5	11	41

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
33	5	33	5
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2010 - Table C-1. 2006 – 2008

	NOx	CO	PM10	PM2.5
Mobile Truck	187.66	44.49	30.75	10.11

Total VMT	31,840	Total Feet	168,115,200
Total Trips	796	Feet per trip travel onsite	3200
Total Feet Traveled onsite	2,547,200	Percent of MMT	1.52%

	NOx	CO	PM10	PM2.5
Mobile-Source Emissions (highest)	187.66	44.49	30.75	10.11
% Mobile Source Emissions onsite	2.84	0.67	0.47	0.15
Mobile Truck	2.84	0.67	0.47	0.15
Total	***2.84***	***0.67409***	***0.465977273***	***0.15312***
LST Thresholds	**270**	**2193**	**4**	**2**
Exceeds Threshold?	**No**	**No**	**No**	**No**
Amount Exceeding Thresholds	**0**	**0**	**0**	**0**

Regional Operation Emissions Worksheet*

*CalEEMod, Version 2016.3.2 and EMFAC2017, Version 1.0.2

Unmitigated

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	43.12	0.00	0.20	0.00	0.00	0.00
Energy	0.38	3.44	2.89	0.02	0.26	0.26
Mobile - Passenger	11.98	12.06	158.95	0.42	44.62	12.00
Mobile - Trucks	5.60	183.36	44.49	0.80	30.75	10.11
Transport Refrigeration Units	0.52	4.21	6.44	0.00	0.07	0.06
Off-Road Equipment	0.12	3.35	31.18	0.01	0.02	0.02
Total	**61.72**	**206.42**	**244.14**	**1.25**	**75.72**	**22.44**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	43.12	0.00	0.20	0.00	0.00	0.00
Energy	0.38	3.44	2.89	0.02	0.26	0.26
Mobile - Passenger	11.34	12.81	136.61	0.39	44.62	12.00
Mobile - Trucks	5.16	187.66	30.84	0.80	30.65	10.06
Transport Refrigeration Units	0.52	4.21	6.44	0.00	0.07	0.06
Off-Road Equipment	0.12	3.35	31.18	0.01	0.02	0.02
Total	**60.63**	**211.47**	**208.15**	**1.22**	**75.61**	**22.40**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	43.117600	0.001820	0.199200	0.000010	0.000710	0.000710
Energy	0.378100	3.437200	2.887200	0.020600	0.261200	0.261200
Mobile - Passenger	11.982300	12.806600	158.952200	0.419700	44.618200	11.996400
Mobile - Trucks	5.600400	187.662300	44.489700	0.798500	30.754500	10.105700
Transport Refrigeration Units	0.522721	4.205970	6.436041	0.000909	0.066529	0.061207
Off-Road Equipment	0.119230	3.353921	31.178660	0.008349	0.016969	0.015611
Total	**61.72**	**211.47**	**244.14**	**1.25**	**75.72**	**22.44**
Regional Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	Yes	Yes	No	No	No	No

Mitigated[1]

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	39.55	0.00	0.12	0.00	0.00	0.00
Energy	0.38	3.44	2.89	0.02	0.26	0.26
Mobile - Passenger	11.98	12.06	158.95	0.42	44.62	12.00
Mobile - Trucks	5.60	183.36	44.49	0.80	30.75	10.11
Transport Refrigeration Units	0.52	4.21	6.44	0.00	0.07	0.06
Off-Road Equipment	0	0	0	0	0	0
Total	**58.04**	**203.06**	**212.88**	**1.24**	**75.70**	**22.42**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	39.55	0.00	0.12	0.00	0.00	0.00
Energy	0.38	3.44	2.89	0.02	0.26	0.26
Mobile - Passenger	11.34	12.81	136.61	0.39	44.62	12.00
Mobile - Trucks	5.16	187.66	30.84	0.80	30.65	10.06
Transport Refrigeration Units	0.52	4.21	6.44	0.00	0.07	0.06
Off-Road Equipment	0	0	0	0	0	0
Total	**56.95**	**208.11**	**176.89**	**1.21**	**75.59**	**22.38**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	39.551700	0.001010	0.115700	0.000010	0.000300	0.000300
Energy	0.378100	3.437200	2.887200	0.020600	0.261200	0.261200
Mobile - Passenger	11.982300	12.806600	158.952200	0.419700	44.618200	11.996400
Mobile - Trucks	5.600400	187.662300	44.489700	0.798500	30.754500	10.105700
Transport Refrigeration Units	0.52	4.21	6.44	0.00	0.07	0.06
Off-Road Equipment	0	0	0	0	0	0
Total	**58.04**	**208.11**	**212.88**	**1.24**	**75.70**	**22.42**
Regional Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	Yes	Yes	No	No	No	No

[1] Incorporates Mitigation Measure AQ-5 which requires off-road equipment used for daily operations be electric-powered only.

Localized Operation Emissions Worksheet*

*CalEEMod, Version 2016.3.2 and EMFAC2017, Version 1.0.2

Unmitigated

Summer

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.20	0.00	0.00
Off-Road Equipment	3.35	31.18	0.02	0.02
Onsite Truck Travel	2.84	0.67	0.47	0.15
Truck Idling	5.19	2.97	0.01	0.01
Transport Refrigeration Unit	4.21	6.44	0.07	0.06
Total	**15.59**	**41.46**	**0.56**	**0.24**

Winter

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.20	0.00	0.00
Off-Road Equipment	3.35	31.18	0.02	0.02
Onsite Truck Travel	2.84	0.67	0.47	0.15
Truck Idling	5.19	2.97	0.01	0.01
Transport Refrigeration Unit	4.21	6.44	0.07	0.06
Total	**15.59**	**41.46**	**0.56**	**0.24**

Max Daily

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.20	0.00	0.00
Off-Road Equipment	3.35	31.18	0.02	0.02
Onsite Truck Travel	2.84	0.67	0.47	0.15
Truck Idling	5.19	2.97	0.01	0.01
Transport Refrigeration Unit	4.21	6.44	0.07	0.06
Total	**15.59**	**41.46**	**0.56**	**0.24**
5-Acre-LST	**269.99**	**2,192.80**	**4.00**	**2.00**
Exceeds Thresholds?	No	No	No	No

Appendix C. TIA Report Errata

Appendix

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1.6 SITE ACCESS RECOMMENDA

Euclid Avenue (SR-83) will remain striped with 2 northbound through lanes until such time in the future when Euclid Avenue (SR-83) is widened to the north with additional receiving lanes. The northbound right turns at Driveway 1 and Driveway 2 will remain for ultimate conditions.

The following site adjacent roadw
access. Exhibit 1-4 shows the imp

1.6.1 SITE ADJACENT ROADWAY RECOMMENDATIONS

Euclid Avenue (SR-83) – Euclid Avenue (SR-83) is a north-south oriented roadway located along the Project's western boundary. Construct Euclid Avenue (SR-83) from Eucalyptus Avenue to Merrill Avenue at its ultimate half-section width as an 8-lane other principal arterial (200-foot ultimate right-of-way) in compliance with the circulation recommendations found in City of Ontario General Plan. Improvements include curb and gutter, a 15-foot parkway including sidewalk, and a 33-foot half-width raised median. This raised median will prohibit left turns into and out of Driveways 1 and 2 on Euclid Avenue (SR-83).

Eucalyptus Avenue – Eucalyptus Avenue is an east-west oriented roadway located along the Project's northern boundary. Construct Eucalyptus Avenue from Euclid Avenue (SR-83) to Sultana Avenue at its ultimate half-section width as a 4-lane collector (108-foot ultimate right-of-way) in compliance with the circulation recommendations found in City of Ontario General Plan. Improvements include curb and gutter and a 12-foot parkway including sidewalk.

Merrill Avenue – Merrill Avenue is an east-west oriented roadway located along the Project's southern boundary. Construct Merrill Avenue from Euclid Avenue (SR-83) to Sultana Avenue at its ultimate half-section width as a 4-lane collector (108-foot ultimate right-of-way) in compliance with the circulation recommendations found in City of Ontario General Plan. Improvements include curb and gutter and a 12-foot parkway including sidewalk.

66

Sultana Avenue – Sultana Avenue is a north-south oriented roadway located along the Project's eastern boundary. Construct Sultana Avenue from Eucalyptus Avenue to Merrill Avenue at its ultimate half-section width as a 2-lane local street (~~84~~-foot ultimate right-of-way) in compliance with the circulation recommendations found in City of Ontario General Plan. Improvements would include ~~48-feet of pavement, 9-foot parkway, 5-foot sidewalk, and 4-feet of curb adjacent landscaping.~~

48-feet of pavement (24-feet on the east and west sides) and a 9-foot parkway (includes 4-feet of landscaping and a 5-foot sidewalk).

1.6.2 SITE ACCESS RECOMMENDATIONS

Euclid Avenue (SR-83) & Driveway 1 (#9) – The following improvements are necessary to accommodate site access:

- Install a stop contro
- Add a northbound ri

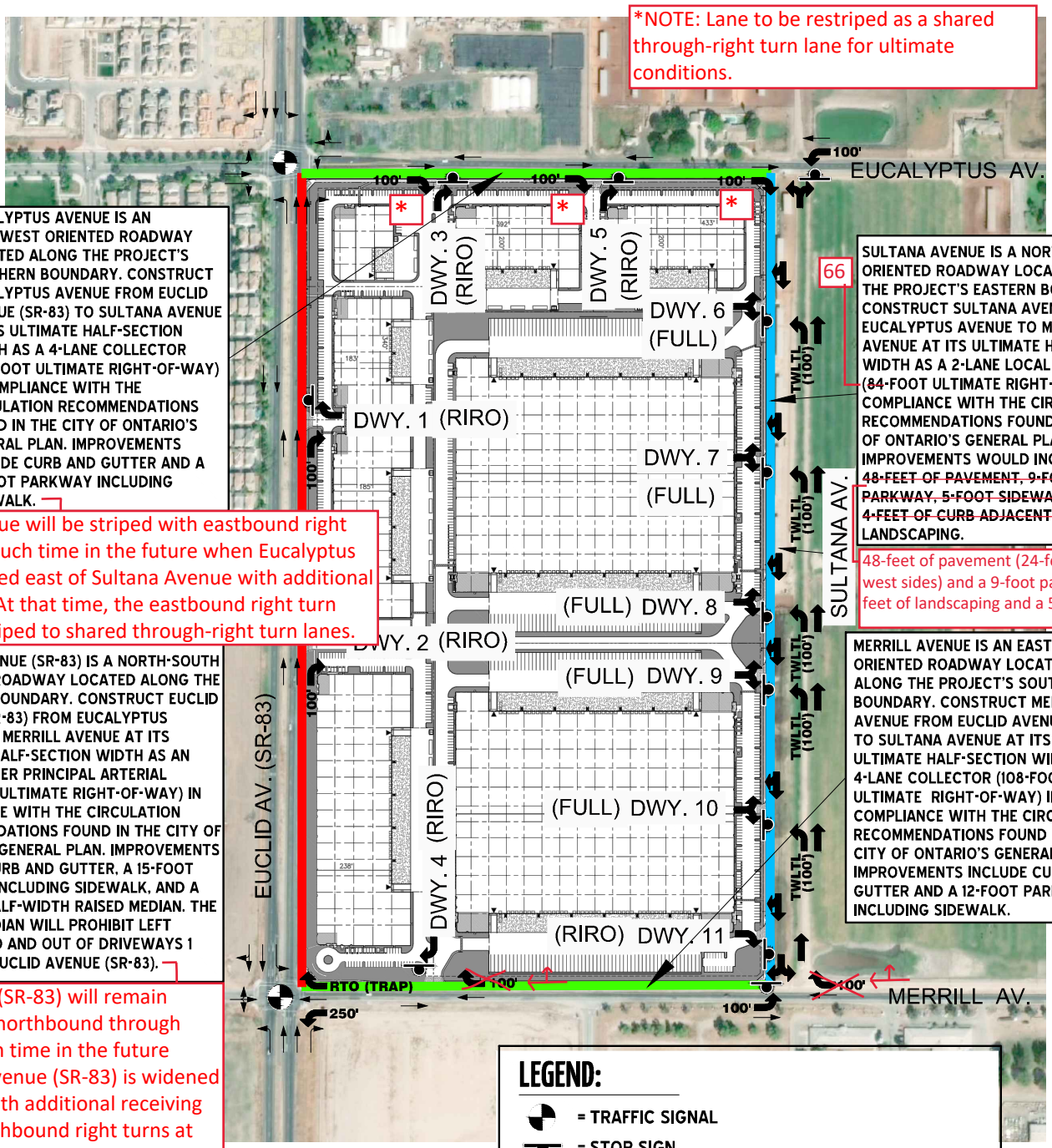
Merrill Avenue will be striped with a westbound right turn lane at Driveway 4 until such time in the future when Merrill Avenue is widened east of Sultana Avenue. At that time, the westbound right turn lane may be striped to a shared through-right turn lane.

Euclid Avenue (SR-83) & accommodate site access:

- Install a stop control on the west
- Add a northbound right turn lan

Eucalyptus Avenue will be striped with eastbound right turn lanes until such time in the future when Eucalyptus Avenue is widened east of Sultana Avenue with additional receiving lanes. At that time, the eastbound right turn lanes may be striped to shared through-right turn lanes.

EXHIBIT 1-4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS



G AND STRIPING SHOULD BE NCTION WITH DETAILED CONSTRUCTION PLANS FOR THE PROJECT SITE.

SIGHT DISTANCE AT EACH PROJECT ACCESS POINT SHOULD BE REVIEWED WITH RESPECT TO STANDARD CALTRANS AND CITY OF ONTARIO SIGHT DISTANCE STANDARDS AT THE TIME OF PREPARATION OF FINAL GRADING, LANDSCAPE AND STREET IMPROVEMENT PLANS.

- Add a northbound left turn lane with a minimum of 100-feet of storage in the two-way-left-turn lane and a northbound through lane.
- Add a southbound shared through-right turn lane.

Sultana Avenue & Driveway 8 (#23) – The following improvements are necessary to accommodate site access:

- Install a stop control on the eastbound approach and an eastbound shared left-right turn lane.
- Add a northbound left turn lane with a minimum of 100-feet of storage in the two-way-left-turn lane and a northbound through lane.
- Add a southbound shared through-right turn lane.

Sultana Avenue & Driveway 9 (#24) – The following improvements are necessary to accommodate site access:

- Install a stop control on the eastbound approach and an eastbound shared left-right turn lane.
- Add a northbound left turn lane with a minimum of 100-feet of storage in the two-way-left-turn lane and a northbound through lane.
- Add a southbound shared through-right turn lane.

Sultana Avenue & Driveway 10 (#25) – The following improvements are necessary to accommodate site access:

- Install a stop control on the eastbound approach and an eastbound shared left-right turn lane.
- Add a northbound left turn lane with a minimum of 100-feet of storage in the two-way-left-turn lane and a northbound through lane.
- Add a southbound shared through-right turn lane.

Sultana Avenue & Driveway 11 (#26) – The following improvements are necessary to accommodate site access:

- Install a stop control on the eastbound approach and an eastbound right turn lane. The intersection should be constructed to prohibit left turns in and out of this driveway.
- Add a northbound through lane.
- Add a southbound shared through-right turn lane.

Sultana Avenue & Merrill Avenue (#27) – The following improvements are necessary to accommodate site access:

- Install a stop control on the southbound approach and a southbound shared left-right turn lane.
- Add an eastbound left turn lane with a minimum of 100-feet of storage.
- ~~Add a westbound right turn lane with a minimum of 100-feet of storage.~~

EXHIBIT 7-1: HORIZON YEAR (2040) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

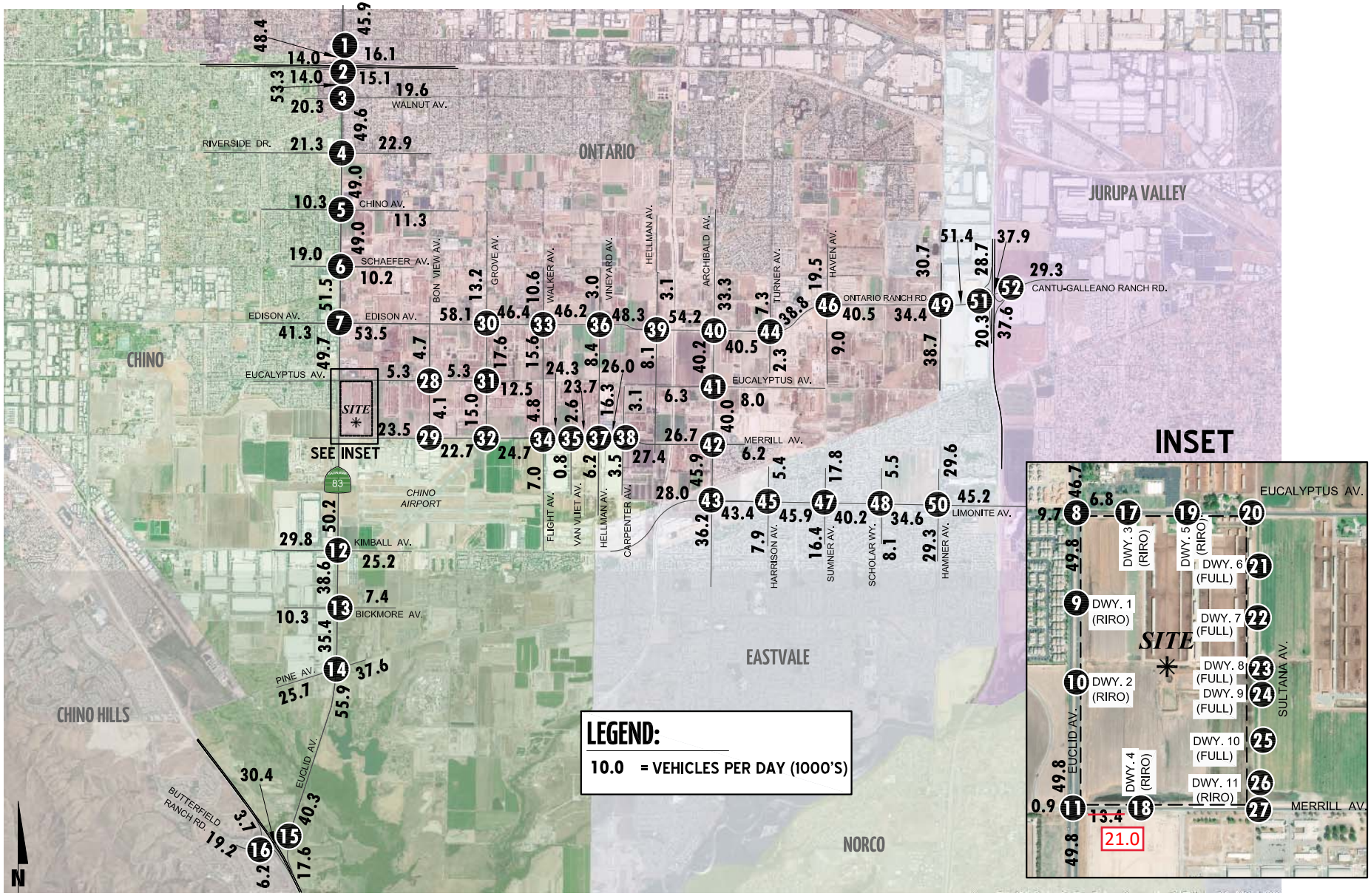


EXHIBIT 7-3: HORIZON YEAR (2040) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

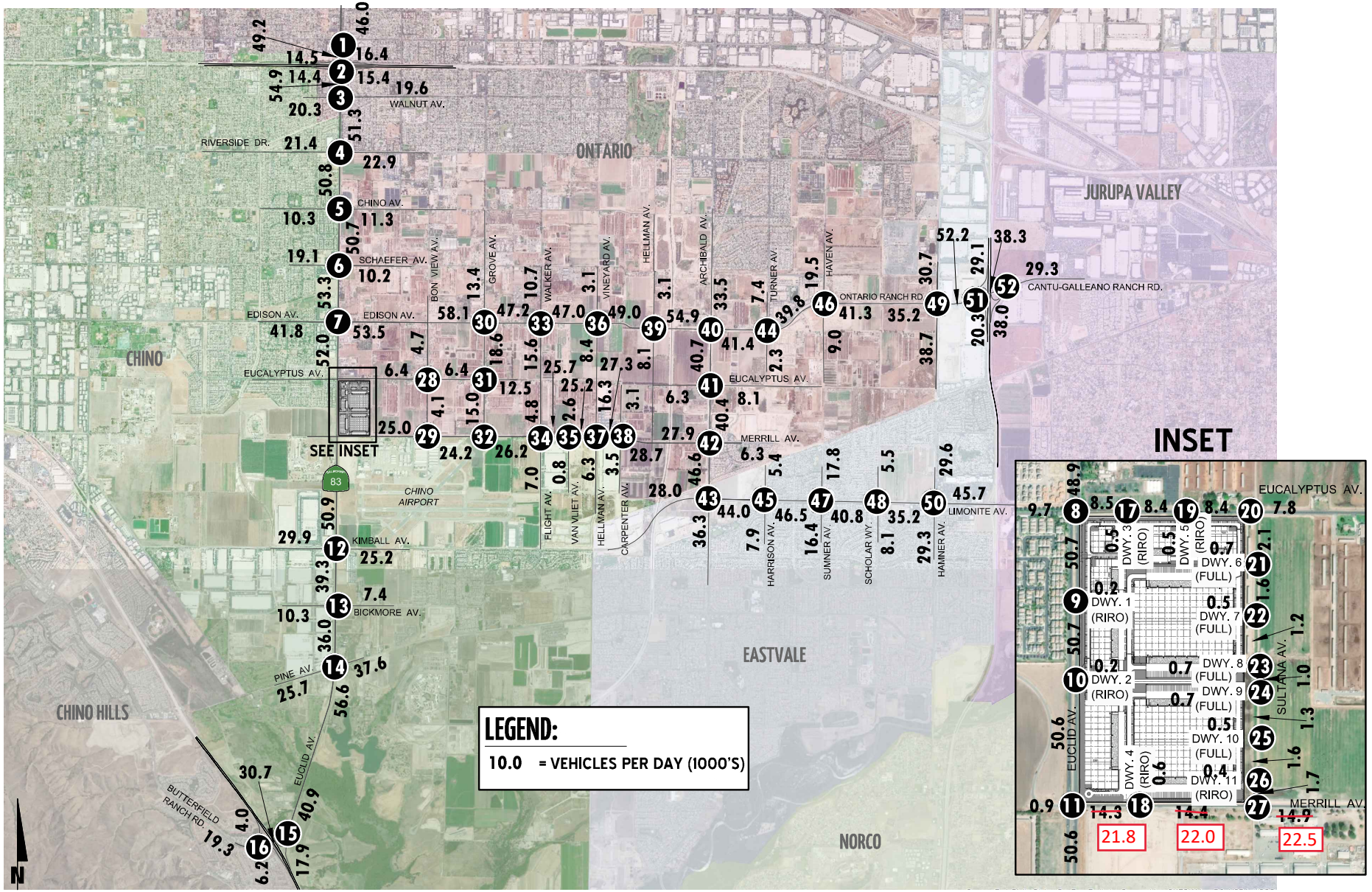


Table 3-3

Freeway Facility Analysis for Existing (2019) Conditions

Freeway	Direction[4]	Ramp or Segment	Lanes on Freeway[1]	AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]
SR-71	SB	Southbound Loop On-Ramp at Euclid Avenue (SR-83)	2	9.7	A	10.4	B
		South of Euclid Avenue (SR-83)	2	12.2	B	12.9	B
	NB	Northbound Off-Ramp at Euclid Avenue (SR-83)	3	13.7	B	21.1	C
		South of Euclid Avenue (SR-83)	3	8.9	A	15.6	B
SR-60	Westbound	West of Euclid Avenue (SR-83)	4	33.9	D	31.5	D
		Westbound On-Ramp at Euclid Avenue (SR-83)	4	28.5	D	27.2	C
		Westbound Off-Ramp at Euclid Avenue (SR-83)	4	~~**32.0**~~	**E**	**35.8**	**E**
		East of Euclid Avenue (SR-83)	4	34.6	D	33.3	D
	Eastbound	West of Euclid Avenue (SR-83)	4	31.2	D	25.7	C
		Eastbound Off-Ramp at Euclid Avenue (SR-83)	4	32.3	D	28.6	D
		Eastbound On-Ramp at Euclid Avenue (SR-83)	4	28.1	D	24.0	C
		East of Euclid Avenue (SR-83)	4	32.9	D	26.4	D
I-15	SB	North of Cantu Galleano Ranch Road	4	18.5	C	14.8	B
		Southbound Off-Ramp at Cantu Galleano Ranch Road	4	27.2	C	22.8	C
	NB	North of Cantu Galleano Ranch Road	5	16.2	B	14.1	B
		Northbound On-Ramp at Cantu Galleano Ranch Road	3	34.5	D	30.8	D

* **BOLD** = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

[4] SB = Southbound; NB = Northbound

36.4

Table 5-3

Freeway Facility Analysis for E+P Conditions

Freeway	Direction[4]	Ramp or Segment	Lanes on Freeway[1]	Existing (2019)				E+P			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]
SR-71	SB	Southbound Loop On-Ramp at Euclid Avenue (SR-83)	2	9.7	A	10.4	B	9.7	A	10.6	B
		South of Euclid Avenue (SR-83)	2	12.2	B	12.9	B	12.3	B	13.1	B
	NB	Northbound Off-Ramp at Euclid Avenue (SR-83)	3	13.7	B	21.1	C	14.0	B	21.2	C
		South of Euclid Avenue (SR-83)	3	8.9	A	15.6	B	9.1	A	15.7	B
SR-60	Westbound	West of Euclid Avenue (SR-83)	4	33.9	D	31.5	D	34.0	D	32.2	D
		Westbound On-Ramp at Euclid Avenue (SR-83)	4	28.5	D	27.2	C	28.7	D	27.6	C
		Westbound Off-Ramp at Euclid Avenue (SR-83)	4	~~32.0~~ 36.4	**E**	**35.8**	**E**	**36.8**	**E**	**35.9**	**E**
		East of Euclid Avenue (SR-83)	4	34.6	D	33.3	D	34.8	D	33.4	D
	Eastbound	West of Euclid Avenue (SR-83)	4	31.2	D	25.7	C	31.4	D	25.8	C
		Eastbound Off-Ramp at Euclid Avenue (SR-83)	4	32.3	D	28.6	D	32.6	D	28.8	D
		Eastbound On-Ramp at Euclid Avenue (SR-83)	4	28.1	D	24.0	C	28.3	D	24.2	C
		East of Euclid Avenue (SR-83)	4	32.9	D	26.4	D	33.0	D	26.6	D
I-15	SB	North of Cantu Galleano Ranch Road	4	18.5	C	14.8	B	18.7	C	14.8	B
		Southbound Off-Ramp at Cantu Galleano Ranch Road	4	27.2	C	22.8	C	27.6	C	22.9	C
	NB	North of Cantu Galleano Ranch Road	5	16.2	B	14.1	B	16.2	B	14.2	B
		Northbound On-Ramp at Cantu Galleano Ranch Road	3	34.5	D	30.8	D	34.5	D	31.1	D

* **BOLD** = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

[4] SB = Southbound; NB = Northbound

Table 5-1

Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[2]	Existing (2019) Delay[1] (secs.) AM	Existing (2019) Delay[1] (secs.) PM	Existing (2019) Level of Service AM	Existing (2019) Level of Service PM	E+P Delay[1] (secs.) AM	E+P Delay[1] (secs.) PM	E+P Level of Service AM	E+P Level of Service PM	Acceptable LOS[3]
1	Euclid Av. (SR-83) & SR-60 WB Ramps	TS	22.3	18.6	C	B	23.4	20.3	C	C	D
2	Euclid Av. (SR-83) & SR-60 EB Ramps	TS	25.9	22.3	C	C	27.0	22.5	C	C	D
3	Euclid Av. (SR-83) & Walnut Av.	TS	30.1	32.5	C	C	30.3	32.8	C	C	E
4	Euclid Av. (SR-83) & Riverside Dr.	TS	47.0	**55.5**	D	**E**	48.7	**65.0**	D	**E**	D
5	Euclid Av. (SR-83) & Chino Av.	TS	21.5	23.2	C	C	21.8	23.9	C	C	D
6	Euclid Av. (SR-83) & Schaefer Av.	TS	23.6	26.2	C	C	25.4	27.9	C	C	D
7	Euclid Av. (SR-83) & Edison Av.	TS	38.1	39.7	D	D	41.9	44.3	D	D	D
8	Euclid Av. (SR-83) & Eucalyptus Av.	TS	13.8	13.2	B	B	17.7	15.4	B	B	D
9	Euclid Av. (SR-83) & Driveway 1	CSS	Future Intersection				14.4	15.4	B	C	D
10	Euclid Av. (SR-83) & Driveway 2	CSS	Future Intersection				14.5	15.2	B	C	D
11	Euclid Av. (SR-83) & Merrill Av.	TS	26.4	29.9	C	C	30.9	46.1	C	D	D
12	Euclid Av. (SR-83) & Kimball Av.	TS	32.4	38.3	C	D	33.8	39.0	C	D	D
13	Euclid Av. (SR-83) & Bickmore Av.	TS	16.3	14.0	B	B	16.4	14.1	B	B	D
14	Euclid Av. (SR-83) & Pine Av.	TS	31.9	39.5	C	D	33.0	41.1	C	D	D
15	SR-71 NB Ramps & Euclid Av. (SR-83)	TS	27.2	43.1	C	D	27.1	42.7	C	D	D
16	SR-71 SB Ramps & Butterfield Ranch Rd.	TS	40.0	39.8	D	D	40.0	39.8	D	D	D
17	Driveway 3 & Eucalyptus Av.	CSS	Future Intersection				9.2	10.0	A	B	D
18	Driveway 4 & Merrill Av.	CSS	Future Intersection				11.9	10.9	B	B	D
19	Driveway 5 & Eucalyptus Av.	CSS	Future Intersection				9.1	10.1	A	B	D
20	Sultana Av. & Eucalyptus Av.	CSS	Future Intersection				10.4	11.0	B	B	E
21	Sultana Av. & Driveway 6	CSS	Future Intersection				9.3	9.3	A	A	D
22	Sultana Av. & Driveway 7	CSS	Future Intersection				9.2	9.2	A	A	D
23	Sultana Av. & Driveway 8	CSS	Future Intersection				8.9	9.0	A	A	D
24	Sultana Av. & Driveway 9	CSS	Future Intersection				8.8	8.9	A	A	D
25	Sultana Av. & Driveway 10	CSS	Future Intersection				8.8	9.1	A	A	D
26	Sultana Av. & Driveway 11	CSS	Future Intersection				8.5	9.0	A	A	D
27	Sultana Av. & Merrill Av.	CSS	Future Intersection				~~13.0~~	~~13.8~~	B	B	D
28	Bon View Av. & Eucalyptus Av.	AWS	8.6	9.1	A	A	9.2	10.1	A	A	E
29	Bon View Av. & Merrill Av.	CSS	13.2	16.4	B	C	14.2	18.0	B	C	D
30	Grove Av. & Edison Av.	AWS	**71.9**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	E
31	Grove Av. & Eucalyptus Av.	CSS	20.0	**>100.0**	C	**F**	23.1	**>100.0**	C	**F**	E
32	Grove Av. & Merrill Av.	AWS	34.6	**43.7**	D	**E**	**57.2**	**70.5**	**F**	**F**	D
33	Walker Av. & Edison Av.	CSS	25.2	**60.1**	D	**F**	27.6	**77.3**	D	**F**	E
34	Walker Av./Flight Av. & Merrill Av.	CSS	27.2	25.0	D	D	32.0	30.3	D	D	D
35	Baker Av./Van Vliet Av. & Merrill Av.	CSS	11.3	13.6	B	B	11.7	14.5	B	B	D
36	Vineyard Av. & Edison Av.		2040 Analysis Location				2040 Analysis Location				E
37	Vineyard Av./Hellman Av. & Merrill Av.	CSS	9.4	10.9	A	B	9.5	11.4	A	B	D
38	Carpenter Av. & Merrill Av.	AWS	**86.2**	**89.5**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
39	Hellman Av. & Edison Av.		2040 Analysis Location				2040 Analysis Location				E
40	Archibald Av. & Ontario Ranch Rd.	TS	31.4	27.0	C	C	34.6	27.9	C	C	E
41	Archibald Av. & Eucalyptus Av.	TS	5.8	3.2	A	A	5.8	3.3	A	A	E
42	Archibald Av. & Merrill Av.	TS	33.6	29.2	C	C	38.0	32.3	D	C	E
43	Archibald Av. & Limonite Av.	TS	48.0	29.6	D	C	54.9	33.7	D	C	D
44	Turner Av. & Ontario Ranch Rd.	TS	16.5	14.5	B	B	16.7	14.9	B	B	E

see Page 2 of 2 for revisions

Table 5-1

Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[2]	Existing (2019) Delay[1] (secs.) AM	Existing (2019) Delay[1] (secs.) PM	Existing (2019) Level of Service AM	Existing (2019) Level of Service PM	E+P Delay[1] (secs.) AM	E+P Delay[1] (secs.) PM	E+P Level of Service AM	E+P Level of Service PM	Acceptable LOS[3]
45	Harrison Av. & Limonite Av.	TS	19.1	17.1	B	B	19.2	17.1	B	B	D
46	Haven Av. & Ontario Ranch Rd.	TS	25.0	22.8	C	C	25.2	22.9	C	C	E
47	Sumner Av. & Limonite Av.	TS	18.4	18.4	B	B	18.6	18.4	B	B	D
48	Scholar Way & Limonite Av.	TS	16.2	14.8	B	B	16.2	14.8	B	B	D
49	Hamner Av. & Ontario Ranch Rd.	TS	42.7	**109.0**	D	**F**	45.0	**111.5**	D	**F**	D
50	Hamner Av. & Limonite Av.	TS	24.2	27.1	C	C	24.3	27.1	C	C	D
51	I-15 SB Ramps & Cantu Galleano Ranch Rd.	TS	14.7	13.1	B	B	15.1	13.2	B	B	D
52	I-15 NB Ramps & Cantu Galleano Ranch Rd.	TS	18.9	12.5	B	B	18.8	12.5	B	B	D

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[3] Minimum acceptable LOS for each applicable jurisdiction.

#	Intersection	Traffic Control[2]	Existing (2019) Delay[1] (secs.) AM	Existing (2019) Delay[1] (secs.) PM	Existing (2019) Level of Service AM	Existing (2019) Level of Service PM	E+P Delay[1] (secs.) AM	E+P Delay[1] (secs.) PM	E+P Level of Service AM	E+P Level of Service PM	Acceptable LOS[3]
27	Sultana Av. & Merrill Av.	CSS	Future Intersection				13.2	13.9	B	B	D

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[3] Minimum acceptable LOS for each applicable jurisdiction.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	263	547	29	21	15
Future Vol, veh/h	22	263	547	29	21	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	286	595	32	23	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	627	0	-	0	945	611
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	334	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	965	-	-	-	293	497
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	730	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	965	-	-	-	286	497
Mov Cap-2 Maneuver	-	-	-	-	466	-
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	730	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	965	-	-	-	478
HCM Lane V/C Ratio	0.025	-	-	-	0.082
HCM Control Delay (s)	8.8	-	-	-	13.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	496	338	11	80	55
Future Vol, veh/h	7	496	338	11	80	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	539	367	12	87	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	379	0	-	0	928	373
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	555	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1191	-	-	-	300	678
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1191	-	-	-	298	678
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1191	-	-	-	552
HCM Lane V/C Ratio	0.006	-	-	-	0.266
HCM Control Delay (s)	8	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.1

Table 6-1

Intersection Analysis for Opening Year Cumulative (2022) Conditions

#	Intersection	Traffic Control[2]	2022 Without Project				2022 With Project				Acceptable LOS[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	Euclid Av. (SR-83) & SR-60 WB Ramps	TS	25.6	21.3	C	C	27.6	23.2	C	C	D
2	Euclid Av. (SR-83) & SR-60 EB Ramps	TS	32.8	24.5	C	C	36.7	25.5	D	C	D
3	Euclid Av. (SR-83) & Walnut Av.	TS	32.2	35.2	C	D	32.5	35.7	C	D	E
4	Euclid Av. (SR-83) & Riverside Dr.	TS	**56.9**	**75.0**	**E**	**E**	**61.0**	**90.1**	**E**	**F**	D
5	Euclid Av. (SR-83) & Chino Av.	TS	23.6	26.4	C	C	24.3	27.9	C	C	D
6	Euclid Av. (SR-83) & Schaefer Av.	TS	28.8	31.5	C	C	31.7	34.7	C	C	D
7	Euclid Av. (SR-83) & Edison Av.	TS	47.0	53.5	D	D	53.7	**57.2**	D	**E**	D
8	Euclid Av. (SR-83) & Eucalyptus Av.	TS	15.8	16.2	B	B	21.0	18.8	C	B	D
9	Euclid Av. (SR-83) & Driveway 1	CSS	Future Intersection				15.6	17.3	C	C	D
10	Euclid Av. (SR-83) & Driveway 2	CSS	Future Intersection				15.7	17.1	C	C	D
11	Euclid Av. (SR-83) & Merrill Av.	TS	39.8	**60.2**	D	**E**	50.6	**78.2**	D	**E**	D
12	Euclid Av. (SR-83) & Kimball Av.	TS	41.0	51.5	D	D	42.8	52.9	D	D	D
13	Euclid Av. (SR-83) & Bickmore Av.	TS	19.2	16.2	B	B	19.4	16.3	B	B	D
14	Euclid Av. (SR-83) & Pine Av.	TS	44.8	**68.5**	D	**E**	46.8	**73.1**	D	**E**	D
15	SR-71 NB Ramps & Euclid Av. (SR-83)	TS	33.7	49.7	C	D	35.1	54.1	D	D	D
16	SR-71 SB Ramps & Butterfield Ranch Rd.	TS	43.6	48.7	D	D	46.8	54.2	D	D	D
17	Driveway 3 & Eucalyptus Av.	CSS	Future Intersection				9.2	10.1	A	B	D
18	Driveway 4 & Merrill Av.	CSS	Future Intersection				12.4	11.6	B	B	D
19	Driveway 5 & Eucalyptus Av.	CSS	Future Intersection				9.1	10.2	A	B	D
20	Sultana Av. & Eucalyptus Av.	CSS	Future Intersection				10.5	11.1	B	B	E
21	Sultana Av. & Driveway 6	CSS	Future Intersection				9.3	9.3	A	A	D
22	Sultana Av. & Driveway 7	CSS	Future Intersection				9.2	9.2	A	A	D
23	Sultana Av. & Driveway 8	CSS	Future Intersection				8.9	9.0	A	A	D
24	Sultana Av. & Driveway 9	CSS	Future Intersection				8.8	8.9	A	A	D
25	Sultana Av. & Driveway 10	CSS	Future Intersection				8.8	9.1	A	A	D
26	Sultana Av. & Driveway 11	CSS	Future Intersection				8.5	9.0	A	A	D
27	Sultana Av. & Merrill Av.	CSS	Future Intersection				~~13.7~~	~~15.1~~	B	C	D
28	Bon View Av. & Eucalyptus Av.	AWS	8.8	9.3	A	A	9.5	10.4	A	B	E
29	Bon View Av. & Merrill Av.	CSS	15.7	19.9	C	C	17.0	22.4	C	C	D
30	Grove Av. & Edison Av.	AWS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	E
31	Grove Av. & Eucalyptus Av.	CSS	29.4	**>100.0**	D	**F**	41.8	**>100.0**	E	**F**	E
32	Grove Av. & Merrill Av.	AWS	**>100.0**	**87.2**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
33	Walker Av. & Edison Av.	CSS	32.3	**>100.0**	D	**F**	36.3	**>100.0**	E	**F**	E
34	Walker Av./Flight Av. & Merrill Av.	CSS	**54.7**	**41.7**	~~E~~	**E**	**71.2**	**55.5**	**F**	**F**	D
35	Baker Av./Van Vliet Av. & Merrill Av.	CSS	17.8	19.6	C	C	19.3	21.7	C	C	D
36	Vineyard Av. & Edison Av.		2040 Analysis Location				2040 Analysis Location				E
37	Vineyard Av./Hellman Av. & Merrill Av.	CSS	**37.9**	27.1	**E**	D	**46.1**	30.7	**E**	D	D
38	Carpenter Av. & Merrill Av.	AWS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
39	Hellman Av. & Edison Av.		2040 Analysis Location				2040 Analysis Location				E
40	Archibald Av. & Ontario Ranch Rd.	TS	44.7	30.9	D	C	54.5	32.2	D	C	E
41	Archibald Av. & Eucalyptus Av.	TS	6.5	3.6	A	A	6.5	3.6	A	A	E
42	Archibald Av. & Merrill Av.	TS	46.9	44.6	D	D	53.6	52.9	D	D	E
43	Archibald Av. & Limonite Av.	TS	**69.6**	53.4	**E**	D	**77.8**	**61.6**	**E**	**E**	D
44	Turner Av. & Ontario Ranch Rd.	TS	17.3	15.4	B	B	17.6	15.8	B	B	E

see Page 2 of 2 for revisions

Intersection Analysis for Opening Year Cumulative (2022) Conditions

#	Intersection	Traffic Control[2]	2022 Without Project				2022 With Project				Acceptable LOS[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
45	Harrison Av. & Limonite Av.	TS	20.0	17.5	B	B	20.1	17.5	C	B	D
46	Haven Av. & Ontario Ranch Rd.	TS	27.1	23.9	C	C	27.6	24.0	C	C	E
47	Sumner Av. & Limonite Av.	TS	19.6	19.8	B	B	19.8	20.0	B	B	D
48	Scholar Way & Limonite Av.	TS	16.9	15.3	B	B	17.0	15.4	B	B	D
49	Hamner Av. & Ontario Ranch Rd.	TS	51.9	**134.5**	D	**F**	54.5	**137.1**	D	**F**	D
50	Hamner Av. & Limonite Av.	TS	25.6	29.2	C	C	26.0	29.6	C	C	D
51	I-15 SB Ramps & Cantu Galleano Ranch Rd.	TS	15.8	13.5	B	B	16.3	13.7	B	B	D
52	I-15 NB Ramps & Cantu Galleano Ranch Rd.	TS	21.2	13.1	C	B	21.2	13.3	C	B	D

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[3] Minimum acceptable LOS for each applicable jurisdiction.

#	Intersection	Traffic Control[2]	2022 Without Project				2022 With Project				Acceptable LOS[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
27	Sultana Av. & Merrill Av.	CSS	Future Intersection				13.9	15.2	B	C	D
34	Walker Av./Flight Av. & Merrill Av.	CSS	**54.7**	**41.7**	F	E	**71.2**	**55.5**	F	F	D

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[3] Minimum acceptable LOS for each applicable jurisdiction.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	335	595	29	21	15
Future Vol, veh/h	22	335	595	29	21	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	364	647	32	23	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	679	0	-	0	1075	663
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	412	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	923	-	-	-	245	465
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	923	-	-	-	239	465
Mov Cap-2 Maneuver	-	-	-	-	431	-
Stage 1	-	-	-	-	503	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	923	-	-	-	445
HCM Lane V/C Ratio	0.026	-	-	-	0.088
HCM Control Delay (s)	9	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	551	416	11	80	55
Future Vol, veh/h	7	551	416	11	80	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	599	452	12	87	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	464	0	-	0	1073	458
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	615	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1108	-	-	-	246	607
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1108	-	-	-	244	607
Mov Cap-2 Maneuver	-	-	-	-	445	-
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	543	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1108	-	-	-	499
HCM Lane V/C Ratio	0.007	-	-	-	0.294
HCM Control Delay (s)	8.3	-	-	-	15.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	335	595	29	21	15
Future Vol, veh/h	22	335	595	29	21	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	364	647	32	23	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	679	0	-	0	1075	663
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	412	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	923	-	-	-	245	465
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	923	-	-	-	239	465
Mov Cap-2 Maneuver	-	-	-	-	431	-
Stage 1	-	-	-	-	503	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	923	-	-	-	445
HCM Lane V/C Ratio	0.026	-	-	-	0.088
HCM Control Delay (s)	9	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	551	416	11	80	55
Future Vol, veh/h	7	551	416	11	80	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	599	452	12	87	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	464	0	-	0	1073	458
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	615	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1108	-	-	-	246	607
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1108	-	-	-	244	607
Mov Cap-2 Maneuver	-	-	-	-	445	-
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	543	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1108	-	-	-	499
HCM Lane V/C Ratio	0.007	-	-	-	0.294
HCM Control Delay (s)	8.3	-	-	-	15.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.2

Table 7-1

Intersection Analysis for Horizon Year (2040) Conditions

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project				Acceptable LOS[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	Euclid Av. (SR-83) & SR-60 WB Ramps	TS	**79.7**	**72.6**	**E**	**E**	**87.7**	**81.0**	**F**	**F**	D
2	Euclid Av. (SR-83) & SR-60 EB Ramps	TS	**81.4**	**58.9**	**F**	**E**	**90.9**	**67.8**	**F**	**E**	D
3	Euclid Av. (SR-83) & Walnut Av.	TS	54.8	54.1	D	D	55.9	55.5	E	E	E
4	Euclid Av. (SR-83) & Riverside Dr.	TS	**108.5**	**182.8**	**F**	**F**	**121.4**	**197.8**	**F**	**F**	D
5	Euclid Av. (SR-83) & Chino Av.	TS	51.4	**107.4**	D	**F**	**61.8**	**122.4**	**E**	**F**	D
6	Euclid Av. (SR-83) & Schaefer Av.	TS	**136.1**	**173.8**	**F**	**F**	**152.4**	**188.0**	**F**	**F**	D
7	Euclid Av. (SR-83) & Edison Av.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	D
8	Euclid Av. (SR-83) & Eucalyptus Av.	TS	52.2	**122.5**	D	**F**	~~**62.9**~~	~~**140.2**~~	**E**	**F**	D
9	Euclid Av. (SR-83) & Driveway 1	**CSS**	Future Intersection				~~20.5~~	~~29.4~~	C	D	D
10	Euclid Av. (SR-83) & Driveway 2	**CSS**	Future Intersection				~~20.7~~	~~29.1~~	C	D	D
11	Euclid Av. (SR-83) & Merrill Av.	TS	**126.7**	**>200.0**	**F**	**F**	~~**137.4**~~	**>200.0**	**F**	**F**	D
12	Euclid Av. (SR-83) & Kimball Av.	TS	**94.9**	**182.5**	**F**	**F**	**98.7**	**187.6**	**F**	**F**	D
13	Euclid Av. (SR-83) & Bickmore Av.	TS	50.9	53.3	D	D	52.0	54.3	D	D	D
14	Euclid Av. (SR-83) & Pine Av.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	D
15	SR-71 NB Ramps & Euclid Av. (SR-83)	TS	42.6	12.5	D	B	42.4	12.5	D	B	D
16	SR-71 SB Ramps & Butterfield Ranch Rd.	TS	**57.9**	**78.0**	**E**	**E**	**58.2**	**78.1**	**E**	**E**	D
17	Driveway 3 & Eucalyptus Av.	**CSS**	Future Intersection				~~9.8~~	~~16.8~~	A	~~C~~	D
18	Driveway 4 & Merrill Av.	**CSS**	Future Intersection				~~17.1~~	~~21.3~~	~~C~~	~~C~~	D
19	Driveway 5 & Eucalyptus Av.	**CSS**	Future Intersection				~~9.6~~	~~17.2~~	A	~~C~~	D
20	Sultana Av. & Eucalyptus Av.	**CSS**	Future Intersection				14.3	~~24.6~~	B	C	E
21	Sultana Av. & Driveway 6	**CSS**	Future Intersection				7.6	9.4	A	A	D
22	Sultana Av. & Driveway 7	**CSS**	Future Intersection				9.3	9.4	A	A	D
23	Sultana Av. & Driveway 8	**CSS**	Future Intersection				9.1	9.1	A	A	D
24	Sultana Av. & Driveway 9	**CSS**	Future Intersection				8.8	9.0	A	A	D
25	Sultana Av. & Driveway 10	**CSS**	Future Intersection				8.5	8.9	A	A	D
26	Sultana Av. & Driveway 11	**CSS**	Future Intersection				8.5	9.0	A	A	D
27	Sultana Av. & Merrill Av.	**CSS**	Future Intersection				~~21.1~~	~~**59.9**~~	C	**F**	D
28	Bon View Av. & Eucalyptus Av.	AWS	22.3	**>100.0**	C	**F**	37.0	**>100.0**	E	**F**	E
29	Bon View Av. & Merrill Av.	CSS	**70.5**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
30	Grove Av. & Edison Av.	AWS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	E
31	Grove Av. & Eucalyptus Av.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	E
32	Grove Av. & Merrill Av.	AWS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
33	Walker Av. & Edison Av.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	E
34	Walker Av./Flight Av. & Merrill Av.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
35	Baker Av./Van Vliet Av. & Merrill Av.	CSS	**48.4**	**68.9**	**E**	**F**	**59.1**	**88.3**	**F**	**F**	D
36	Vineyard Av. & Edison Av.	**CSS**	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	E
37	Vineyard Av./Hellman Av. & Merrill Av.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
38	Carpenter Av. & Merrill Av.	AWS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
39	Hellman Av. & Edison Av.	**CSS**	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	E
40	Archibald Av. & Ontario Ranch Rd.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	E
41	Archibald Av. & Eucalyptus Av.	TS	**111.2**	**181.5**	**F**	**F**	**112.0**	**183.9**	**F**	**F**	E
42	Archibald Av. & Merrill Av.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	E
43	Archibald Av. & Limonite Av.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	D
44	Turner Av. & Ontario Ranch Rd.	TS	**155.4**	**122.7**	**F**	**F**	**166.8**	**132.6**	**F**	**F**	E

see Page 2 of 2 for revisions

Table 7-1

Intersection Analysis for Horizon Year (2040) Conditions

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project				Acceptable LOS[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
45	Harrison Av. & Limonite Av.	TS	29.9	26.3	C	C	30.3	27.8	C	C	D
46	Haven Av. & Ontario Ranch Rd.	TS	**185.8**	**83.7**	**F**	**F**	**195.3**	**86.0**	**F**	**F**	E
47	Sumner Av. & Limonite Av.	TS	30.5	39.5	C	D	31.1	40.7	C	D	D
48	Scholar Way & Limonite Av.	TS	22.2	30.3	C	C	22.6	30.8	C	C	D
49	Hamner Av. & Ontario Ranch Rd.	TS	**152.5**	**>200.0**	**F**	**F**	**156.8**	**>200.0**	**F**	**F**	D
50	Hamner Av. & Limonite Av.	TS	42.6	53.3	D	D	43.2	53.8	D	D	D
51	I-15 SB Ramps & Cantu Galleano Ranch Rd.	TS	18.7	15.6	B	B	19.7	15.9	B	B	D
52	I-15 NB Ramps & Cantu Galleano Ranch Rd.	TS	36.0	43.4	D	D	37.4	50.7	D	D	D

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[3] Minimum acceptable LOS for each applicable jurisdiction.

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project				Acceptable LOS[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
8	Euclid Av. (SR-83) & Eucalyptus Av.	TS	52.2	**122.5**	D	F	**56.1**	**114.9**	**E**	**F**	D
9	Euclid Av. (SR-83) & Driveway 1	CSS	Future Intersection				23.2	34.2	C	D	D
10	Euclid Av. (SR-83) & Driveway 2	CSS	Future Intersection				23.3	33.7	C	D	D
11	Euclid Av. (SR-83) & Merrill Av.	TS	**126.7**	**>200.0**	**F**	**F**	**90.2**	**>200.0**	**F**	**F**	D
17	Driveway 3 & Eucalyptus Av.	CSS	Future Intersection				9.2	11.9	A	B	D
18	Driveway 4 & Merrill Av.	CSS	Future Intersection				12.2	13.2	B	B	D
19	Driveway 5 & Eucalyptus Av.	CSS	Future Intersection				9.1	12.0	A	B	D
20	Sultana Av. & Eucalyptus Av.	CSS	Future Intersection				14.3	23.0	B	C	E
27	Sultana Av. & Merrill Av.	CSS	Future Intersection				21.4	**61.4**	C	**F**	D

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

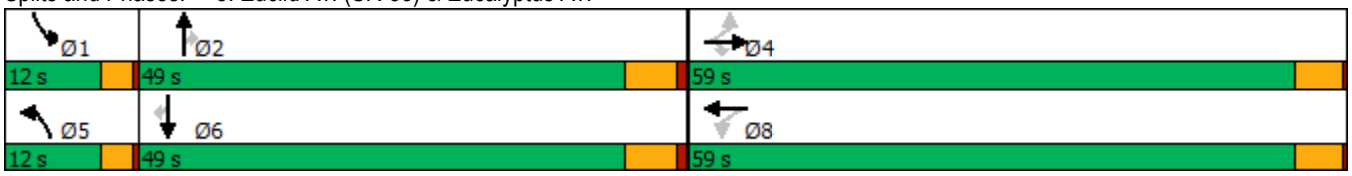
[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

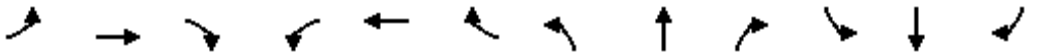
[3] Minimum acceptable LOS for each applicable jurisdiction.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	84	42	205	385	194	221	1533	133	114	1587	51
Future Volume (vph)	84	42	205	385	194	221	1533	133	114	1587	51
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	46.8	46.8	46.8	46.8	46.8	8.5	30.7	30.7	8.5	37.7	37.7
Total Split (s)	59.0	59.0	59.0	59.0	59.0	12.0	49.0	49.0	12.0	49.0	49.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	49.2%	10.0%	40.8%	40.8%	10.0%	40.8%	40.8%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	3.0	4.7	4.7	3.0	4.7	4.7
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	-0.8	-0.8	-0.8	-0.8	-0.8	0.5	-1.7	-1.7	0.5	-1.7	-1.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	36.6	36.6	36.6	36.6	36.6	8.1	45.6	45.6	8.1	45.6	45.6
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36	0.08	0.45	0.45	0.08	0.45	0.45
v/c Ratio	0.41	0.06	0.30	0.84	0.59	1.67	0.68	0.18	0.86	1.01	0.07
Control Delay	29.9	20.1	5.6	46.0	25.8	364.9	26.2	14.2	97.2	54.8	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	20.1	5.6	46.0	25.8	364.9	26.2	14.2	97.2	54.8	7.5
LOS	C	C	A	D	C	F	C	B	F	D	A
Approach Delay		13.6			36.0		65.1			56.2	
Approach LOS		B			D		E			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay: 53.5	Intersection LOS: D
Intersection Capacity Utilization 96.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. (SR-83) & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	42	205	385	194	187	221	1533	133	114	1587	51
Future Volume (veh/h)	84	42	205	385	194	187	221	1533	133	114	1587	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	86	43	123	393	198	183	226	1564	135	116	1619	41
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	266	701	594	509	335	310	133	2267	704	133	1578	703
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.36	0.08	0.44	0.44	0.08	0.44	0.44
Sat Flow, veh/h	1018	1900	1610	1239	909	840	1714	5187	1610	1714	3610	1608
Grp Volume(v), veh/h	86	43	123	393	0	381	226	1564	135	116	1619	41
Grp Sat Flow(s),veh/h/ln	1018	1900	1610	1239	0	1749	1714	1729	1610	1714	1805	1608
Q Serve(g_s), s	7.7	1.5	5.4	30.9	0.0	18.2	8.0	25.0	5.3	6.9	45.0	1.5
Cycle Q Clear(g_c), s	25.8	1.5	5.4	32.4	0.0	18.2	8.0	25.0	5.3	6.9	45.0	1.5
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	701	594	509	0	645	133	2267	704	133	1578	703
V/C Ratio(X)	0.32	0.06	0.21	0.77	0.00	0.59	1.70	0.69	0.19	0.87	1.03	0.06
Avail Cap(c_a), veh/h	434	1015	860	714	0	934	133	2267	704	133	1578	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	21.0	22.2	31.5	0.0	26.4	47.5	23.4	17.8	47.0	29.0	16.7
Incr Delay (d2), s/veh	0.5	0.0	0.1	2.9	0.0	0.6	343.6	0.9	0.1	41.6	29.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.7	2.0	9.0	0.0	7.2	15.9	9.2	1.8	4.3	23.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	21.0	22.3	34.3	0.0	27.0	391.1	24.3	17.9	88.6	58.6	16.8
LnGrp LOS	D	C	C	C	A	C	F	C	B	F	F	B
Approach Vol, veh/h		252			774			1925			1776	
Approach Delay, s/veh		27.2			30.7			66.9			59.6	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	49.0		42.0	12.0	49.0		42.0				
Change Period (Y+Rc), s	3.5	5.7		4.8	3.5	5.7		4.8				
Max Green Setting (Gmax), s	8.5	43.3		54.2	8.5	43.3		54.2				
Max Q Clear Time (g_c+I1), s	8.9	27.0		27.8	10.0	47.0		34.4				
Green Ext Time (p_c), s	0.0	9.4		0.7	0.0	0.0		2.8				

Intersection Summary			
HCM 6th Ctrl Delay		56.1	
HCM 6th LOS		E	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	1882	11	0	2177
Future Vol, veh/h	0	5	1882	11	0	2177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	100	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	2046	12	0	2366

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1023	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	203	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	203	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	203	-
HCM Lane V/C Ratio	-	-	0.027	-
HCM Control Delay (s)	-	-	23.2	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	1889	9	0	2177
Future Vol, veh/h	0	5	1889	9	0	2177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	100	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	2053	10	0	2366

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1027	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	202	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	202	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

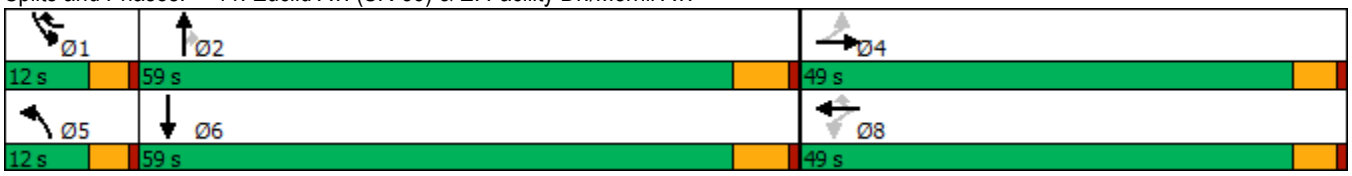
Approach	WB	NB	SB
HCM Control Delay, s	23.3	0	0
HCM LOS	C		

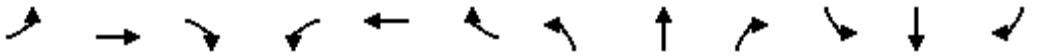
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	202	-
HCM Lane V/C Ratio	-	-	0.027	-
HCM Control Delay (s)	-	-	23.3	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	10	10	388	60	458	13	1428	443	364	1764
Future Volume (vph)	10	10	388	60	458	13	1428	443	364	1764
Turn Type	Perm	NA	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases		4		8	1	5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	46.0	46.0	9.5	9.5	28.0	28.0	9.5	28.0
Total Split (s)	49.0	49.0	49.0	49.0	12.0	12.0	59.0	59.0	12.0	59.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	10.0%	10.0%	49.2%	49.2%	10.0%	49.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	0.0	-0.5	-2.0	-2.0	-0.5	-2.0
Total Lost Time (s)		4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)		37.8	37.8	37.8	49.5	6.2	52.4	52.4	8.1	60.5
Actuated g/C Ratio		0.34	0.34	0.34	0.45	0.06	0.47	0.47	0.07	0.55
v/c Ratio		0.07	0.89	0.10	0.64	0.14	0.86	0.54	3.00	0.95
Control Delay		14.5	57.8	25.2	27.0	56.6	33.0	17.1	937.9	37.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		14.5	57.8	25.2	27.0	56.6	33.0	17.1	937.9	37.4
LOS		B	E	C	C	E	C	B	F	D
Approach Delay		14.5		40.0			29.4			187.8
Approach LOS		B		D			C			F

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 110.5			
Natural Cycle: 115			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 3.00			
Intersection Signal Delay: 100.1		Intersection LOS: F	
Intersection Capacity Utilization 100.1%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 11: Euclid Av. (SR-83) & E. Facility Dr./Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	21	388	60	458	13	1428	443	364	1764	49
Future Volume (veh/h)	10	10	21	388	60	458	13	1428	443	364	1764	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	10	10	21	400	62	445	13	1472	414	375	1819	37
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	132	139	238	515	595	608	34	1763	786	136	1980	40
Arrive On Green	0.31	0.31	0.30	0.31	0.31	0.30	0.02	0.49	0.49	0.08	0.55	0.53
Sat Flow, veh/h	280	445	761	1400	1900	1610	1714	3610	1610	1714	3617	73
Grp Volume(v), veh/h	41	0	0	400	62	445	13	1472	414	375	905	951
Grp Sat Flow(s),veh/h/ln	1487	0	0	1400	1900	1610	1714	1805	1610	1714	1805	1885
Q Serve(g_s), s	0.0	0.0	0.0	25.4	2.3	23.9	0.8	35.5	17.8	8.0	45.8	46.4
Cycle Q Clear(g_c), s	1.7	0.0	0.0	27.1	2.3	23.9	0.8	35.5	17.8	8.0	45.8	46.4
Prop In Lane	0.24		0.51	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	510	0	0	515	595	608	34	1763	786	136	988	1032
V/C Ratio(X)	0.08	0.00	0.00	0.78	0.10	0.73	0.38	0.84	0.53	2.75	0.92	0.92
Avail Cap(c_a), veh/h	701	0	0	703	849	824	136	1972	880	136	988	1032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	0.0	32.9	24.6	26.9	48.7	22.3	17.7	46.3	20.7	20.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.5	0.0	1.2	2.5	3.0	0.5	809.0	12.8	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	8.9	1.0	8.6	0.3	13.6	5.9	33.8	19.2	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	0.0	0.0	35.4	24.6	28.2	51.2	25.3	18.3	855.3	33.5	33.9
LnGrp LOS	C	A	A	D	C	C	D	C	B	F	C	C
Approach Vol, veh/h		41			907			1899			2231	
Approach Delay, s/veh		24.5			31.1			23.9			171.8	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	53.2		35.5	6.0	59.1		35.5				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	7.5	53.0		44.0	7.5	53.0		44.0				
Max Q Clear Time (g_c+I1), s	10.0	37.5		3.7	2.8	48.4		29.1				
Green Ext Time (p_c), s	0.0	9.7		0.2	0.0	3.8		1.4				

Intersection Summary												
HCM 6th Ctrl Delay			90.2									
HCM 6th LOS			F									

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	256	34	0	765	0	8
Future Vol, veh/h	256	34	0	765	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	278	37	0	832	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	158
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	866
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	866
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	866	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	9.2	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↱			↱
Traffic Vol, veh/h	0	817	898	47	0	8
Future Vol, veh/h	0	817	898	47	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	888	976	51	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	514
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	511
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	511
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	511
HCM Lane V/C Ratio	-	-	-	0.017
HCM Control Delay (s)	-	-	-	12.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	231	33	0	765	0	8
Future Vol, veh/h	231	33	0	765	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	251	36	0	832	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	144
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	884
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	884
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	884	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	9.1	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	164	75	67	747	18	9
Future Vol, veh/h	164	75	67	747	18	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	178	82	73	812	20	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	260	0	1177	130
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	958	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1316	-	200	902
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	376	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1316	-	189	902
Mov Cap-2 Maneuver	-	-	-	-	328	-
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	355	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	1316	-
HCM Lane V/C Ratio	0.071	-	-	0.055	-
HCM Control Delay (s)	14.3	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	795	932	42	25	13
Future Vol, veh/h	22	795	932	42	25	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	864	1013	46	27	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1059	0	-	0	1948	1036
Stage 1	-	-	-	-	1036	-
Stage 2	-	-	-	-	912	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	665	-	-	-	72	284
Stage 1	-	-	-	-	345	-
Stage 2	-	-	-	-	395	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	665	-	-	-	69	284
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	395	-

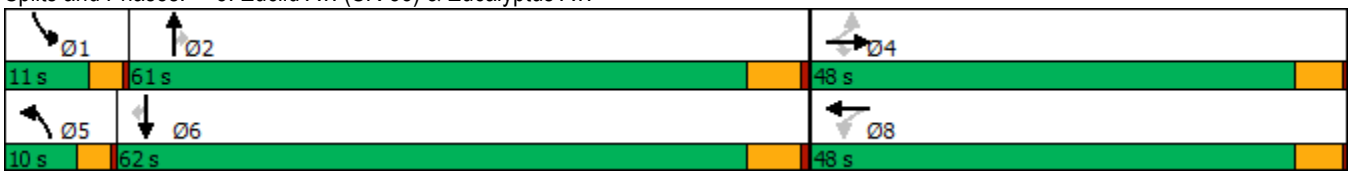
Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	21.4
HCM LOS			C

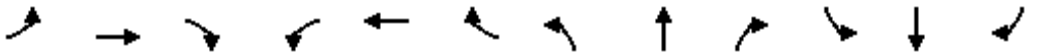
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	665	-	-	-	260
HCM Lane V/C Ratio	0.036	-	-	-	0.159
HCM Control Delay (s)	10.6	-	-	-	21.4
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	47	202	266	413	157	148	1772	383	260	1794	78
Future Volume (vph)	47	202	266	413	157	148	1772	383	260	1794	78
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	46.8	46.8	46.8	46.8	46.8	8.5	30.7	30.7	8.5	37.7	37.7
Total Split (s)	48.0	48.0	48.0	48.0	48.0	10.0	61.0	61.0	11.0	62.0	62.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	8.3%	50.8%	50.8%	9.2%	51.7%	51.7%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	3.0	4.7	4.7	3.0	4.7	4.7
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	4.8	3.5	5.7	5.7	3.5	5.7	5.7
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	43.2	43.2	43.2	43.2	43.2	6.5	55.3	55.3	7.5	56.3	56.3
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36	0.05	0.46	0.46	0.06	0.47	0.47
v/c Ratio	0.28	0.32	0.44	1.29	0.64	1.75	0.81	0.51	2.67	1.15	0.11
Control Delay	32.6	29.4	19.1	185.6	31.6	411.5	31.1	17.1	799.6	106.5	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	29.4	19.1	185.6	31.6	411.5	31.1	17.1	799.6	106.5	9.2
LOS	C	C	B	F	C	F	C	B	F	F	A
Approach Delay		24.4			110.4		53.2			187.5	
Approach LOS		C			F		D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.67	
Intersection Signal Delay: 108.4	Intersection LOS: F
Intersection Capacity Utilization 109.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. (SR-83) & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	202	266	413	157	237	148	1772	383	260	1794	78
Future Volume (veh/h)	47	202	266	413	157	237	148	1772	383	260	1794	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	51	220	177	449	171	255	161	1926	415	283	1950	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	205	684	580	337	248	370	93	2390	742	107	1694	740
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.05	0.46	0.46	0.06	0.47	0.47
Sat Flow, veh/h	977	1900	1610	1003	688	1027	1714	5187	1610	1714	3610	1577
Grp Volume(v), veh/h	51	220	177	449	0	426	161	1926	415	283	1950	73
Grp Sat Flow(s),veh/h/ln	977	1900	1610	1003	0	1715	1714	1729	1610	1714	1805	1577
Q Serve(g_s), s	5.6	10.1	9.5	33.1	0.0	25.4	6.5	38.2	22.5	7.5	56.3	3.1
Cycle Q Clear(g_c), s	31.0	10.1	9.5	43.2	0.0	25.4	6.5	38.2	22.5	7.5	56.3	3.1
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	684	580	337	0	617	93	2390	742	107	1694	740
V/C Ratio(X)	0.25	0.32	0.31	1.33	0.00	0.69	1.73	0.81	0.56	2.64	1.15	0.10
Avail Cap(c_a), veh/h	205	684	580	337	0	617	93	2390	742	107	1694	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.9	27.8	27.6	46.4	0.0	32.7	56.8	27.7	23.5	56.3	31.9	17.7
Incr Delay (d2), s/veh	0.5	0.2	0.2	168.5	0.0	3.0	371.0	2.1	0.9	764.7	75.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.5	3.6	25.8	0.0	10.6	12.3	14.7	8.0	25.9	39.5	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	28.0	27.8	214.9	0.0	35.7	427.7	29.9	24.4	821.0	107.3	17.8
LnGrp LOS	D	C	C	F	A	D	F	C	C	F	F	B
Approach Vol, veh/h		448			875			2502			2306	
Approach Delay, s/veh		30.0			127.7			54.6			192.0	
Approach LOS		C			F			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	61.0		48.0	10.0	62.0		48.0				
Change Period (Y+Rc), s	3.5	5.7		4.8	3.5	5.7		4.8				
Max Green Setting (Gmax), s	7.5	55.3		43.2	6.5	56.3		43.2				
Max Q Clear Time (g_c+I1), s	9.5	40.2		33.0	8.5	58.3		45.2				
Green Ext Time (p_c), s	0.0	11.4		1.2	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			114.9									
HCM 6th LOS			F									

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	20	2284	4	0	2473
Future Vol, veh/h	0	20	2284	4	0	2473
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	100	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	22	2483	4	0	2688

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1242	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	145	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	145	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.2	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	145	-
HCM Lane V/C Ratio	-	-	0.15	-
HCM Control Delay (s)	-	-	34.2	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q(veh)	-	-	0.5	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	20	2268	3	0	2473
Future Vol, veh/h	0	20	2268	3	0	2473
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	100	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	22	2465	3	0	2688

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1233	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	147	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	147	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

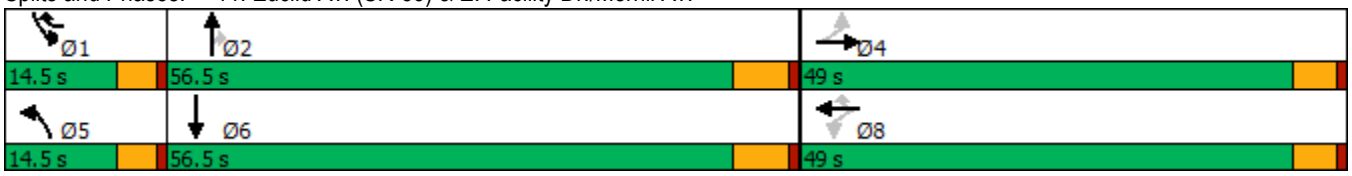
Approach	WB	NB	SB
HCM Control Delay, s	33.7	0	0
HCM LOS	D		

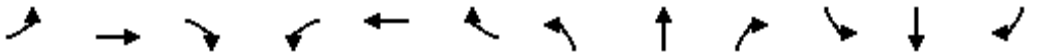
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	147	-
HCM Lane V/C Ratio	-	-	0.148	-
HCM Control Delay (s)	-	-	33.7	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q(veh)	-	-	0.5	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	14	37	633	3	421	5	1838	801	392	2080
Future Volume (vph)	14	37	633	3	421	5	1838	801	392	2080
Turn Type	Perm	NA	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases		4		8	1	5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	15.0	15.0	10.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.0	10.0	46.0	46.0	14.5	14.5	28.0	28.0	14.5	28.0
Total Split (s)	49.0	49.0	49.0	49.0	14.5	14.5	56.5	56.5	14.5	56.5
Total Split (%)	40.8%	40.8%	40.8%	40.8%	12.1%	12.1%	47.1%	47.1%	12.1%	47.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.5	4.5	6.0	6.0	4.5	6.0
Lead/Lag					Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)		44.0	44.0	44.0	59.0	10.0	50.5	50.5	10.0	62.1
Actuated g/C Ratio		0.37	0.37	0.37	0.49	0.08	0.42	0.42	0.08	0.52
v/c Ratio		0.11	1.42	0.00	0.57	0.04	1.32	1.10	3.00	1.21
Control Delay		20.8	231.5	24.3	23.5	51.4	177.7	91.4	938.1	128.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.8	231.5	24.3	23.5	51.4	177.7	91.4	938.1	128.4
LOS		C	F	C	C	D	F	F	F	F
Approach Delay		20.8		148.1			151.3			256.7
Approach LOS		C		F			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.00	
Intersection Signal Delay: 191.2	Intersection LOS: F
Intersection Capacity Utilization 130.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. (SR-83) & E. Facility Dr./Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	37	15	633	3	421	5	1838	801	392	2080	1
Future Volume (veh/h)	14	37	15	633	3	421	5	1838	801	392	2080	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	15	40	15	688	3	448	5	1998	807	426	2261	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	138	358	125	571	697	725	22	1519	678	143	1774	0
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.01	0.42	0.42	0.08	0.49	0.00
Sat Flow, veh/h	276	976	341	1370	1900	1610	1714	3610	1610	1714	3705	0
Grp Volume(v), veh/h	70	0	0	688	3	448	5	1998	807	426	2261	0
Grp Sat Flow(s),veh/h/ln	1594	0	0	1370	1900	1610	1714	1805	1610	1714	1805	0
Q Serve(g_s), s	0.0	0.0	0.0	41.0	0.1	25.4	0.3	50.5	50.5	10.0	59.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	44.0	0.1	25.4	0.3	50.5	50.5	10.0	59.0	0.0
Prop In Lane	0.21		0.21	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	621	0	0	571	697	725	22	1519	678	143	1774	0
V/C Ratio(X)	0.11	0.00	0.00	1.20	0.00	0.62	0.23	1.32	1.19	2.98	1.27	0.00
Avail Cap(c_a), veh/h	621	0	0	571	697	725	143	1519	678	143	1774	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.0	0.0	0.0	40.0	24.1	25.1	58.6	34.8	34.8	55.0	30.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	108.0	0.0	1.2	1.9	146.6	100.1	910.5	128.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	33.9	0.1	9.3	0.2	51.0	36.7	40.3	54.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	0.0	148.0	24.1	26.3	60.6	181.4	134.9	965.5	158.6	0.0
LnGrp LOS	C	A	A	F	C	C	E	F	F	F	F	A
Approach Vol, veh/h		70			1139			2810			2687	
Approach Delay, s/veh		25.1			99.8			167.8			286.6	
Approach LOS		C			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.5	56.5		49.0	6.0	65.0		49.0				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	10.0	50.5		44.0	10.0	50.5		44.0				
Max Q Clear Time (g_c+I1), s	12.0	52.5		5.0	2.3	61.0		46.0				
Green Ext Time (p_c), s	0.0	0.0		0.3	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		202.3	
HCM 6th LOS		F	

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	833	12	0	806	0	31
Future Vol, veh/h	833	12	0	806	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	905	13	0	876	0	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	459
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	554
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	554
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	554	-	-	-
HCM Lane V/C Ratio	0.061	-	-	-
HCM Control Delay (s)	11.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↱
Traffic Vol, veh/h	0	1230	1026	17	0	31
Future Vol, veh/h	0	1230	1026	17	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1337	1115	18	0	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	567
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	472
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	472
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	472
HCM Lane V/C Ratio	-	-	-	0.071
HCM Control Delay (s)	-	-	-	13.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	851	12	0	806	0	31
Future Vol, veh/h	851	12	0	806	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	925	13	0	876	0	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	469
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	546
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	546
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	546	-	-	-
HCM Lane V/C Ratio	0.062	-	-	-
HCM Control Delay (s)	12	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	836	46	26	735	71	35
Future Vol, veh/h	836	46	26	735	71	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	909	50	28	799	77	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	959	0	1789	480
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	855	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	725	-	82	537
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	420	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	725	-	79	537
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	404	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	23
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	314	-	-	725	-
HCM Lane V/C Ratio	0.367	-	-	0.039	-
HCM Control Delay (s)	23	-	-	10.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1223	998	16	95	45
Future Vol, veh/h	7	1223	998	16	95	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	1329	1085	17	103	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1102	0	-	0	2439	1094
Stage 1	-	-	-	-	1094	-
Stage 2	-	-	-	-	1345	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	641	-	-	-	~ 35	263
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	245	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	641	-	-	-	~ 35	263
Mov Cap-2 Maneuver	-	-	-	-	185	-
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	245	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	61.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	641	-	-	-	204
HCM Lane V/C Ratio	0.012	-	-	-	0.746
HCM Control Delay (s)	10.7	-	-	-	61.4
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Table 7-4

Intersection Analysis for Horizon Year (2040) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Euclid Av. (SR-83) & SR-60 WB Ramps																	
	Without Project	TS	**2**	2	0	0	2	1	0	0	0	1	1	1	32.4	28.9	C	C
	With Project	TS	**2**	2	0	0	2	1	0	0	0	1	1	1	36.2	32.9	D	C
2	Euclid Av. (SR-83) & SR-60 EB Ramps																	
	Without Project	TS	0	2	1	**2**	2	0	1	1	**1**	0	0	0	28.1	21.9	C	C
	With Project	TS	0	2	1	**2**	2	0	1	1	**1**	0	0	0	30.7	22.1	C	C
4	Euclid Av. (SR-83) & Riverside Dr.																	
	Without Project	TS	**2**	**3**	**1**	**2**	**3**	1>	1	**2**	**1**	1	2	d	36.8	45.4	D	D
	With Project	TS	**2**	**3**	**1**	**2**	**3**	1>	1	**2**	**1**	1	2	d	37.2	46.4	D	D
5	Euclid Av. (SR-83) & Chino Av.																	
	Without Project	TS	1	**3**	1	1	**3**	1	1	1	1	**1**	1	0	25.6	35.3	C	D
	With Project	TS	1	**3**	1	1	**3**	1	1	1	1	**1**	1	0	26.1	37.7	C	D
6	Euclid Av. (SR-83) & Schaefer Av.																	
	Without Project	TS	**2**	**3**	1	**2**	**3**	1	**2**	1	1	1	1	0	50.1	40.4	D	D
	With Project	TS	**2**	**3**	1	**2**	**3**	1	**2**	1	1	1	1	0	54.9	42.9	D	D
7	Euclid Av. (SR-83) & Edison Av.																	
	Without Project	TS	**2**	**3**	1	**2**	**3**	**1>**	**2**	**3**	1	**2**	**2**	**1>**	41.0	42.3	D	D
	With Project	TS	**2**	**3**	1	**2**	**3**	**1>**	**2**	**3**	1	**2**	**2**	**1>**	42.7	44.1	D	D
8	Euclid Av. (SR-83) & Eucalyptus Av.																	
	Without Project	TS	1	**3**	1	1	**3**	1	1	1	1	**2**	1	**1**	24.2	41.9	C	D
	With Project	TS	1	**3**	1	1	**3**	1	1	1	1	**2**	1	**1**	26.6	47.3	C	D
11	Euclid Av. (SR-83) & Merrill Av.																	
	Without Project	TS	1	**3**	**1>**	1	**3**	0	**1**	1	0	**2**	1	**1>**	25.3	50.4	C	D
	With Project	TS	1	**3**	**1>**	1	**3**	0	**1**	1	0	**2**	1	**1>**	27.0	54.6	C	D
12	Euclid Av. (SR-83) & Kimball Av.																	
	Without Project	TS	1	**3**	1>	2	**3**	1>	2	2	**1**	**2**	2	**1>**	35.7	54.3	D	D
	With Project	TS	1	**3**	1>	2	**3**	1>	2	2	**1**	**2**	2	**1>**	35.9	54.9	D	D
14	Euclid Av. (SR-83) & Pine Av.																	
	Without Project	TS	**2**	**3**	**1>>**	**2**	**3**	**1**	1	**2**	1	2	**2**	**1**	38.3	39.9	D	D
	With Project	TS	**2**	**3**	**1>>**	**2**	**3**	**1**	1	**2**	1	2	**2**	**1**	38.6	40.5	D	D
27	Sultana Av. & Merrill Av.																	
	Without Project		Not Applicable											0	17.9	29.8		
	With Project	CSS	0	0	0	0	1	0	1	**2**	0	0	**2**	~~1~~	~~17.5~~	~~29.3~~	C	D
28	Bon View Av. & Eucalyptus Av.																	
	Without Project	**TS**	0	1	0	0	1	0	**1**	1	0	**1**	1	0	10.8	10.7	B	B
	With Project	**TS**	0	1	0	0	1	0	**1**	1	0	**1**	1	0	11.3	11.3	B	B
29	Bon View Av. & Merrill Av.																	
	Without Project	**TS**	0	0	0	0	1	0	**1**	**2**	0	0	**2**	0	12.3	13.4	B	B
	With Project	**TS**	0	0	0	0	1	0	**1**	**2**	0	0	**2**	0	13.2	13.5	B	B

Table 7-4

Intersection Analysis for Horizon Year (2040) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
30	Grove Av. & Edison Av.																	
	Without Project	**TS**	**1**	**2**	**1**	**1**	**2**	0	**1**	**3**	0	**1**	**3**	0	41.9	67.1	D	E
	With Project	**TS**	**1**	**2**	**1**	**1**	**2**	0	**1**	**3**	0	**1**	**3**	0	44.4	75.4	D	E
31	Grove Av. & Eucalyptus Av.																	
	Without Project	**TS**	**1**	**2**	0	**1**	**2**	0	**1**	1	0	**1**	1	0	28.9	37.8	C	D
	With Project	**TS**	**1**	**2**	0	**1**	**2**	0	**1**	1	0	**1**	1	0	29.3	43.5	C	D
32	Grove Av. & Merrill Av.																	
	Without Project	**TS**	0	0	0	**1**	**0**	**1**	**1**	**2**	0	0	**2**	0	37.0	40.2	D	D
	With Project	**TS**	0	0	0	**1**	**0**	**1**	**1**	**2**	0	0	**2**	0	39.1	40.2	D	D
33	Walker Av. & Edison Av.																	
	Without Project	**TS**	**1**	1	0	**1**	1	0	**1**	**3**	0	**1**	**3**	0	27.3	40.8	C	D
	With Project	**TS**	**1**	1	0	**1**	1	0	**1**	**3**	0	**1**	**3**	0	27.4	42.5	C	D
34	Walker Av./Flight Av. & Merrill Av.																	
	Without Project	**TS**	**1**	**1**	**0**	**1**	**1**	0	**1**	**2**	**0**	1	**2**	0	26.3	26.8	C	C
	With Project	**TS**	**1**	**1**	**0**	**1**	**1**	0	**1**	**2**	**0**	1	**2**	0	26.9	27.6	C	C
35	Baker Av./Van Vliet Av. & Merrill Av.																	
	Without Project	**TS**	0	1	0	0	**1**	0	**1**	2	0	1	**2**	0	12.6	11.4	B	B
	With Project	**TS**	0	1	0	0	**1**	0	**1**	2	0	1	**2**	0	12.8	11.5	B	B
36	Vineyard Av. & Edison Av.																	
	Without Project	**TS**	**1**	**1**	**1**	**1**	**1**	0	**1**	**3**	0	**1**	**3**	0	18.4	55.8	B	E
	With Project	**TS**	**1**	**1**	**1**	**1**	**1**	0	**1**	**3**	0	**1**	**3**	0	18.7	59.2	B	E
37	Vineyard Av./Hellman Av. & Merrill Av.																	
	Without Project	**TS**	1	**1**	1	**1**	**1**	**1**	**1**	2	0	1	**2**	**1**	42.1	48.6	D	D
	With Project	**TS**	1	**1**	1	**1**	**1**	**1**	**1**	2	0	1	**2**	**1**	43.3	50.8	D	D
38	Carpenter Av. & Merrill Av.																	
	Without Project	**TS**	0	1	0	0	1	0	1	**2**	1	1	**2**	0	17.9	13.7	B	B
	With Project	**TS**	0	1	0	0	1	0	1	**2**	1	1	**2**	0	18.0	13.8	B	B
39	Hellman Av. & Edison Av.																	
	Without Project	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**3**	0	**1**	**3**	0	19.7	48.5	B	D
	With Project	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**3**	0	**1**	**3**	0	20.1	51.5	C	D
40	Archibald Av. & Ontario Ranch Rd.																	
	Without Project	TS	**2**	**3**	1>>	**2**	**3**	**1>**	2	**4**	1>>	2	**4**	1	64.1	74.6	E	E
	With Project	TS	**2**	**3**	1>>	**2**	**3**	**1>**	2	**4**	1>>	2	**4**	1	64.8	77.3	E	E
42	Archibald Av. & Merrill Av.																	
	Without Project	TS	1	**3**	1	2	**3**	**1>**	**2**	1	**1>>**	1	1	1	58.9	55.9	E	E
	With Project	TS	1	**3**	1	2	**3**	**1>**	**2**	1	**1>>**	1	1	1	68.6	62.1	E	E
43	Archibald Av. & Limonite Av.																	
	Without Project	TS	**1**	**3**	1>	**2**	**3**	0	**2**	**2**	0	**2**	**2**	1>	40.5	51.9	D	D
	With Project	TS	**1**	**3**	1>	**2**	**3**	0	**2**	**2**	0	**2**	**2**	1>	41.0	54.0	D	D

Table 7-4

Intersection Analysis for Horizon Year (2040) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
44	Turner Av. & Ontario Ranch Rd.																	
	Without Project	TS	1	1	0	1	1	0	1	**3**	1	1	**3**	1	31.8	28.1	C	C
	With Project	TS	1	1	0	1	1	0	1	**3**	1	1	**3**	1	34.5	29.5	C	C
46	Haven Av. & Ontario Ranch Rd.																	
	Without Project	TS	1	**2**	1	1	**2**	1	1	3	1	1	**3**	1	59.5	43.5	E	D
	With Project	TS	1	**2**	1	1	**2**	1	1	3	1	1	**3**	1	61.6	44.3	E	D
49	Hamner Av. & Ontario Ranch Rd.																	
	Without Project[4]	TS	2	3	**1>**	2	**3**	**0**	2	4	**1>**	2	**3**	1	38.8	54.4	D	D
	With Project[4]	TS	2	3	**1>**	2	**3**	**0**	2	4	**1>**	2	**3**	1	38.9	54.9	D	D

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free Right Turn Lane; d = Defacto Right Turn Lane; **1** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop; TS = Traffic Signal; **TS** = Improvement

[4] Improvement consists of modifying the traffic signal to extend the cycle length to 130 seconds.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	796	930	40	23	13
Future Vol, veh/h	21	796	930	40	23	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	23	865	1011	43	25	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1054	0	-	0	1512	527
Stage 1	-	-	-	-	1033	-
Stage 2	-	-	-	-	479	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	668	-	-	-	113	501
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	668	-	-	-	109	501
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	595	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	668	-	-	-	319
HCM Lane V/C Ratio	0.034	-	-	-	0.123
HCM Control Delay (s)	10.6	-	-	-	17.9
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1223	1000	15	89	43
Future Vol, veh/h	7	1223	1000	15	89	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	1329	1087	16	97	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1103	0	-	0	1776	552
Stage 1	-	-	-	-	1095	-
Stage 2	-	-	-	-	681	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	640	-	-	-	~ 75	483
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	469	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	640	-	-	-	~ 74	483
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	283	-
Stage 2	-	-	-	-	469	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	29.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	640	-	-	-	285
HCM Lane V/C Ratio	0.012	-	-	-	0.503
HCM Control Delay (s)	10.7	-	-	-	29.8
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	2.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon