Addendum to the
Lyons Avenue/Dockweiler Drive Extension Project
Final Environmental Impact Report
(SCH No. 2013082016)

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1.0 INTRODUCTION

1.1 INTRODUCTION

The purpose of this Addendum to the Lyons Avenue/Dockweiler Drive Extension Project Final EIR (SCH No. 2013082016) (herein referred to as "EIR" or "Final EIR") is to inform decision makers and the general public of the potential environmental impacts resulting from the proposed modifications to the approved Dockweiler Drive Extension Project.

Modifications to the Lyons Avenue/Dockweiler Drive Extension Project will require approval of certain discretionary actions by the City of Santa Clarita, and therefore, is subject to environmental review requirements under the California Environmental Quality Act (CEQA). For purposes of complying with CEQA, the City of Santa Clarita, located at 23920 Valencia Boulevard, CA 91355, is identified as the Lead Agency for the Project.

The analysis presented below conservatively evaluates the comparison of environmental impacts associated with the Lyons Avenue/Dockweiler Drive Extension Project (herein referred to as "Original Project"), the approved Alternative 2 Project (herein referred to as "Approved Project") and the Modified Project, and provides substantial evidence to demonstrate that any potential environmental impacts associated with the Modified Project would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects. This section contains an assessment and discussion of impacts associated with the environmental issues and subject areas identified in the Initial Study Checklist (Appendix G to the State CEQA Guidelines, (C.C.R. Title 14, Chapter 3, 15000-15387), as amended on January 1, 2019.

1.2 ADDENDUM TO AN EIR

Pursuant to Section 15164 of the State CEQA Guidelines (a) and (d), the lead agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred. The decision-making body shall consider the addendum with the final EIR prior to making a decision on the project.

Pursuant to Section 15162 of the State CEQA Guidelines, the requirement to prepare a Supplemental or Subsequent EIR is only triggered when an EIR has been certified for a project, and one or more of the following occur:

a) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

b) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

c) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:

   i. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

   ii. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

   iii. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

   iv. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The following information provides substantial evidence to support the conclusion that none of the conditions described in Section 15162 calling for preparation of a Supplemental or Subsequent EIR have occurred. Provided below is a discussion of each environmental category and CEQA checklist questions with respect to the changes between the Approved Project and the Modified Project, and where applicable, the Original Project and the Modified Project. The analysis presented below provides substantial evidence to demonstrate that any potential environmental impacts associated with the Modified Project would not be substantially greater than the impacts that were previously identified in the adopted Final EIR, and that no new significant impacts would result. Based on the findings presented below, the proposed modifications would not rise to the level warranting re-circulation of the Final EIR. A summary of the Original Project, and Approved Project, and details of the Modified Project, are provided below in Section 2, Project Description, of this Addendum.

1.3 OVERVIEW OF THE LYONS AVENUE/DOCKWEILER DRIVE EXTENSION PROJECT

The Original Project was analyzed in the Final EIR as a multi-phased capital improvement project being coordinated by the City of Santa Clarita and The Master's University to improve circulation and access to the Placerita Canyon and Newhall Communities. The proposed connection and extension of Lyons Avenue to Dockweiler Drive is identified in the Circulation Element of the City's General Plan as one of the primary

east-west arterials through the City of Santa Clarita that would provide a through connection from Sierra Highway to Railroad Avenue.

CEQA Findings

Based on the analysis of the Final EIR (see Section 4.0 Environmental Analysis of the EIR), implementation of the Original Project would result in significant and unavoidable environmental impacts associated with the following environmental issues:

- Construction air quality (localized PM_{10} and $PM_{2.5}$ emissions)
- Construction related noise impacts

As discussed in Section 4.2 Air Quality, of the EIR, the Original Project would result in significant localized air emissions in close proximity to residential land uses within 100 meters of the Project Site on a temporary and intermittent basis during construction. Localized NO_x and CO emissions would be below the significance thresholds at all sensitive receptor locations. However, localized thresholds would be exceeded for PM_{10} and $PM_{2.5}$ emissions at two locations: (1) the single-family residential land uses located immediately north of the Project Site (within a proximity of 100 meters) and (2) the residential land uses within 100 meters south of the Project Site in the vicinity of Market Street and Race Street. Localized emissions would be below the stated thresholds for any land use located further than 100 meters from the Project Site. Therefore, localized air quality impacts resulting from construction activities would be considered significant and unavoidable.

As discussed in Section 4.8 Noise, of the EIR, the Original Project's construction noise impacts would exceed the maximum allowable exterior noise levels. Thus, the Original Project's construction noise impacts would be considered a significant impact on a short term and intermittent basis during the construction period.

As summarized in Section 1.0 Executive Summary, Table 1-1 Summary of Environmental Impacts and Mitigation Measures, of the EIR, all other environmental impacts were mitigated to less than significant levels with mitigation.

Project Alternatives

The Final EIR analyzed four alternatives to the Original Project: No Project, Alternative 1 Project (Proposed Alignment with the 13th Street Rail Crossing), Alternative 2 Project (Proposed Alignment to Arch Street without Lyons at Grade Crossing) and the Market Street Alignment.

Based on a review of the alternatives identified in the EIR, none of the Alternatives would be effective in eliminating the Original Project's significant and unavoidable impacts. A summary of the impact conclusions for each alternative relative to the impact statements for each impact areas evaluated in the EIR

for the Original Project is presented in Section 6.5 Environmentally Superior Alternative, Table 6.5-1, Environmentally Superior Alternative Matrix.

Of the alternatives evaluated, the Alternative 2 Project (Approved Project) would reduce the footprint of the Project Site, as it excludes the Lyons Avenue Extension to Dockweiler Drive and maintains the at-grade crossing at 13th Street. The Approved Project would involve the development of the proposed roadway alignment and associated infrastructure for Dockweiler Drive, which would extend Dockweiler Drive to Arch Street. The route would continue along Arch Street to 13th Street to link to Railroad Avenue. Unlike the Original Project, the Approved Project does not include the roadway segment between the Dockweiler extension and Lyons Avenue, which spans a portion of the Newhall Creek. Additionally, the Approved Project proposes to maintain and improve the 13th Street rail crossing.

As evaluated in Section 6.5 Environmentally Superior Alternative, of the EIR, the Approved Project was identified as the environmentally superior alternative as it would feasibly attain most of the basic objectives of the Original Project to provide an additional connection from the Old Town Newhall community to Dockweiler Drive as contemplated under the Circulation Element of the General Plan, and although it would not reduce or eliminate the Original Project's significant and unavoidable short-term localized construction air quality and construction noise impacts, it would reduce impacts associated with air quality, biological resources, cultural resources, geology/soils, hydrology, construction noise, aesthetics and traffic. Specifically, the Approved Project would retain the existing aesthetic conditions and views at the Lyons Avenue and Railroad Avenue intersection, would avoid ground disturbance within Newhall Creek, and would reduce the total combined number of railroad crossing events at 13th Street, Market Street, Newhall Avenue and Lyons Avenue.

Adoption of the Final EIR

The City Council considered the environmental information contained in the Final EIR, Statement of Facts and Findings and Statement of Overriding Considerations Regarding Environmental Effects for the Original Project and determined that it is adequate pursuant to CEQA. The City Council found there is substantial evidence that supports the conclusion that the environmentally superior alternative (Alternative 2/Approved Project) would result in community benefits, including specific ecological, economic, legal, social, technical, and other benefits, that outweigh the significant effects of the project on the environment that cannot be mitigated to a level less than significant. The City Council certified the Final EIR and associated documents and adopted the MMRP and Statement of Overriding Considerations[1].

[1] *City of Santa Clarita, Resolution No. 18-11.*

1.4 OVERVIEW OF THE ENVIRONMENTAL REVIEW PROCESS

The Notice of Preparation (NOP) and Notice of a Public Scoping Meeting was circulated for public review and comments for a 30-day period beginning on August 5, 2013 and ending on September 3, 2013. The public scoping meeting was held on August 21, 2013, to obtain the public's initial views about environmental issues that should be evaluated in the EIR.

The EIR was published on August 16, 2017 and circulated for review and comment for a period of 60 days. The public review period ended on October 16, 2017. The Notice of Completion/Notice of Availability (NOC/NOA) was published in The Signal and was posted with the Los Angeles County Clerk's office on August 16, 2017. Additionally, two public outreach meeting were held on September 14, 2017 and September 28, 2017 at The Master's University. City staff and representative technical consultants involved in the preparation of the EIR attended the outreach meetings to provide the public with a summary of the EIR and obtain questions and comments on the EIR from the public.

On February 27, 2018 the City conducted a Public Hearing and received the staff report, presentation and public comments for the Dockweiler Drive Extension Project. On April 10, 2018 the City Council continued the Public Hearing, certified the Final EIR and adopted a resolution approving the alignment of the Dockweiler Drive Extension as described in the Final EIR as the Alternative 2 Project.

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2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The Project Site is located in the City of Santa Clarita, California, about 35 miles north of Downtown Los Angeles. The Project Site is located in the Newhall community of the City of Santa Clarita at the intersection of 13th Street and Railroad Avenue and extends eastward towards the General Plan alignment for Dockweiler Drive towards The Master's University and northwest towards the intersection of 12th Street and Arch Street. The limits for the Dockweiler Drive extension ("Project Site") are generally from Railroad Avenue and 13th Street on the west to the future The Master's University Master Plan Dockweiler extension to the east (see Figure 2-1).

2.2 PROJECT SETTING

The Project Site consists of segments of Railroad Avenue, 13th Street, Arch Street, 12th Street, and Placerita Canyon Road roadways, the UP/Metrolink Railroad line, which runs parallel to Railroad Avenue between 13th Street and 15th Street, and undeveloped land to the east extending towards Arch Street and The Master's University. The west end of the Project Site traverses a storage yard, utilized by Los Angeles County Department of Public Works, and private properties. The portion of the Project Site that includes the intersection of Railroad Avenue and 13th Street is developed with existing road surface and an at-grade crossing. The UP/Metrolink railroad line crosses the Project Site at the intersection of Railroad Avenue and 13th Street and extends north along Railroad Avenue to approximately 15th Street. The conditions of the Project Site are depicted in Figure 2-2.

2.3 SURROUNDING LAND USES

The Project Site is located immediately southwest of the Placerita Canyon community and east of the Old Town Newhall community. The portion of the Project Site to the east of the intersection of Railroad Avenue and Lyons Avenue is bounded by commercial and industrial uses to the north, a landscape nursery to the southeast, the Newhall Metrolink Station to the south and the Old Town Newhall Library and commercial uses to the west, across Railroad Avenue. A portion of the Project Site to the east of the intersection of Railroad Avenue is bounded by undeveloped land to the north, commercial and industrial uses to the east, Newhall Creek to the south and commercial buildings to the west, across Railroad Avenue. Subsequent to the adoption of the EIR, a five-story parking garage and five-story mixed-use apartment complex (Newhall Crossings) were constructed at the southwest corner of Railroad Avenue and Lyons Avenue.

Source: Google Earth, August 19, 2019.

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Figure 2-1
Project Location Map

View 1: From the northwest corner of the Newhall Metrolink Station parking lot, looking north towards the Project Site.

View 2: From the west side of Railroad Avenue looking east towards the Project Site at 13th Street.

View 3: From 13th Street looking west towards the Project Site.

View 4: From the north side of Market Street looking north towards the proposed roadway alignment (Photo 2014).

View 5: From Newhall Creek within the proposed alignment looking southeast.

Source: Parker Environmental Consultants, 2016.

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Figure 2-2
Photographs of the Project Site

Additionally, as discussed further below under Section 2.6, Modified Project, and shown in Figure 2-6 Modified Project Site Plan, the Project Site would include modified grading limits as compared to the Approved Project. The Modified Project would include roadway and grading improvements along Placerita Canyon Road to connect to the proposed Arch Street, Dockweiler Drive and 12th Street roundabout. The Modified Project would also include the reprofiling of the UP/Metrolink railroad line between approximately 13th Street to approximately 15th Street to meet grade and the improved 13th Street and Railroad Avenue intersection. As such, land uses within the Project Site vicinity would include additional single-family residential uses located near the intersection of Placerita Canyon Road and Aden Avenue, and additional single- and multi -family residential uses located between Railroad Avenue and Walnut Street between 13th Street to 15th Street. Surrounding land uses are depicted in Figure 2-3.

2.4 ZONING AND GENERAL PLAN LAND USE DESIGNATIONS

The Project Site is currently zoned for MXN (Mixed Use Neighborhood). The portion of the Project Site that crosses the UP/Metrolink Railroad line is zoned for PI (Public Institutional). The General Plan land use designation of the Project Site is Mixed Use Neighborhood (MXN). The Project Site is also located in the Placerita Canyon Special Standards District (PCSSD) and is part of the North Newhall Area (NNA), which includes a Planned Development Overlay Zone. Properties to the north of the Project Site are zoned MXN. Properties to the south of the Project Site are zoned Specific Plan (SP). Properties to the east of the Project Site are zoned Urban Residential 1 (UR1), Urban Residential 3 (UR3) and Public Institutional (PI). Properties to the west, across Railroad Avenue are zoned SP (see Section 2.0 Project Description, Figure 2-5, Zoning and Land Use Map of Project Site and Surrounding Area, of the EIR).

2.5 APPROVED PROJECT

Lyons Avenue/Dockweiler Drive Extension Project (Original Project)

The Original Project included the extension of Lyons Avenue from Railroad Avenue southeast to the proposed connection with Dockweiler Drive, the addition of a new at-grade railroad crossing east of the Railroad Avenue and Lyons Avenue intersection, a roadway bridge overcrossing above Newhall Creek, and the extension of Dockweiler Drive from the approved alignment of Dockweiler Drive at The Master's University site, and northwest to connect with the intersection of Arch Street and 12th Street. The Original Project would have extended Lyons Avenue from its existing terminus at Railroad Avenue, eastward to Dockweiler Drive to provide a T-intersection at Dockweiler Drive (see Figure 2-3 Photographs of Surrounding Land Uses and Figure 2-4 Lyons Avenue/Dockweiler Drive Extension Project Site Plan).

In coordination with the proposed Railroad Bike Path project, the extension of Dockweiler Drive would result in creating a vital Complete Street link between the communities to the east of the railroad/ Newhall Creek (including The Master's University) and Old Town Newhall and Metrolink station. The Original Project also included the closure of an at-grade railroad crossing at the intersection of 13th Street and Railroad Avenue. The intersection at 13th Street would be modified by removing the northbound right turn lane and southbound left turn lane and restricting the eastbound through movement.

Alternative 2 Project (Approved Project)

Similar to the Original Project, the Approved Project would involve the development of the proposed roadway alignment and associated infrastructure for Dockweiler Drive, which would extend Dockweiler Drive to Arch Street. The route would continue along Arch Street to 13th Street to link to Railroad Avenue. Unlike the Original Project, the Approved Project does not include the roadway segment between the extension of Dockweiler Drive and Lyons Avenue, which spans a portion of the Newhall Creek. Additionally, the Approved Project avoids the addition of a new at-grade railroad crossing and instead proposes to maintain and improve the 13th Street rail crossing (see Figure 2-5 Alternative 2 Project Site Plan).

Under the Approved Project, the existing westbound travel lanes on 13th Street approaching Railroad Avenue would be improved by adding two westbound lanes and a median, with one dedicated left turn lane, one shared through lane and left turn lane, and one dedicated right turn lane. The eastbound traffic lanes on 13th Street would be improved to provide two through travel lanes. The existing median nose on Railroad Avenue would be removed to reconfigure the four southbound lanes to provide two protected left turn lanes, one dedicated through lane and one shared right turn lane and through lane. The northbound lanes on Railroad Avenue would provide two through lanes, one protected left turn lane and one protected right turn lane.

Similar to the Original Project, the intersection of Arch Street, 12th Street, Placerita Canyon and Dockweiler Drive would be improved with one of three intersection design configurations. The Approved Project would require improvements to Arch Street and 13th Street to accommodate traffic from the extension of Dockweiler Drive to Arch Street. Roadway improvements would require increasing the width of Arch Street and 13th Street, which would affect several surrounding properties.

As discussed above in Section 1.3, and evaluated in Section 6.5 Environmentally Superior Alternative, of the EIR, the Approved Project was identified as the environmentally superior alternative as it would feasibly attain most of the basic objectives of the Original Project. Although it would not reduce or eliminate the Original Project's significant and unavoidable short-term localized construction air quality and construction noise impacts, it would reduce impacts associated with air quality, biological resources, cultural resources, geology/soils, hydrology, construction noise, aesthetics and traffic.

View 6: From the east side of Railroad Avenue looking north-west.

View 7: From the west side of Railroad Avenue looking east.

View 8: From the Project Site looking south towards the Newhall Metrolink Station (Photo: 2014).

View 9: From the north side of 13th Street looking southeast.

View 10: From the east side of Railroad Avenue looking east.

Project Site Boundary # Photograph Locations

Source: Parker Environmental Consultants, 2016.

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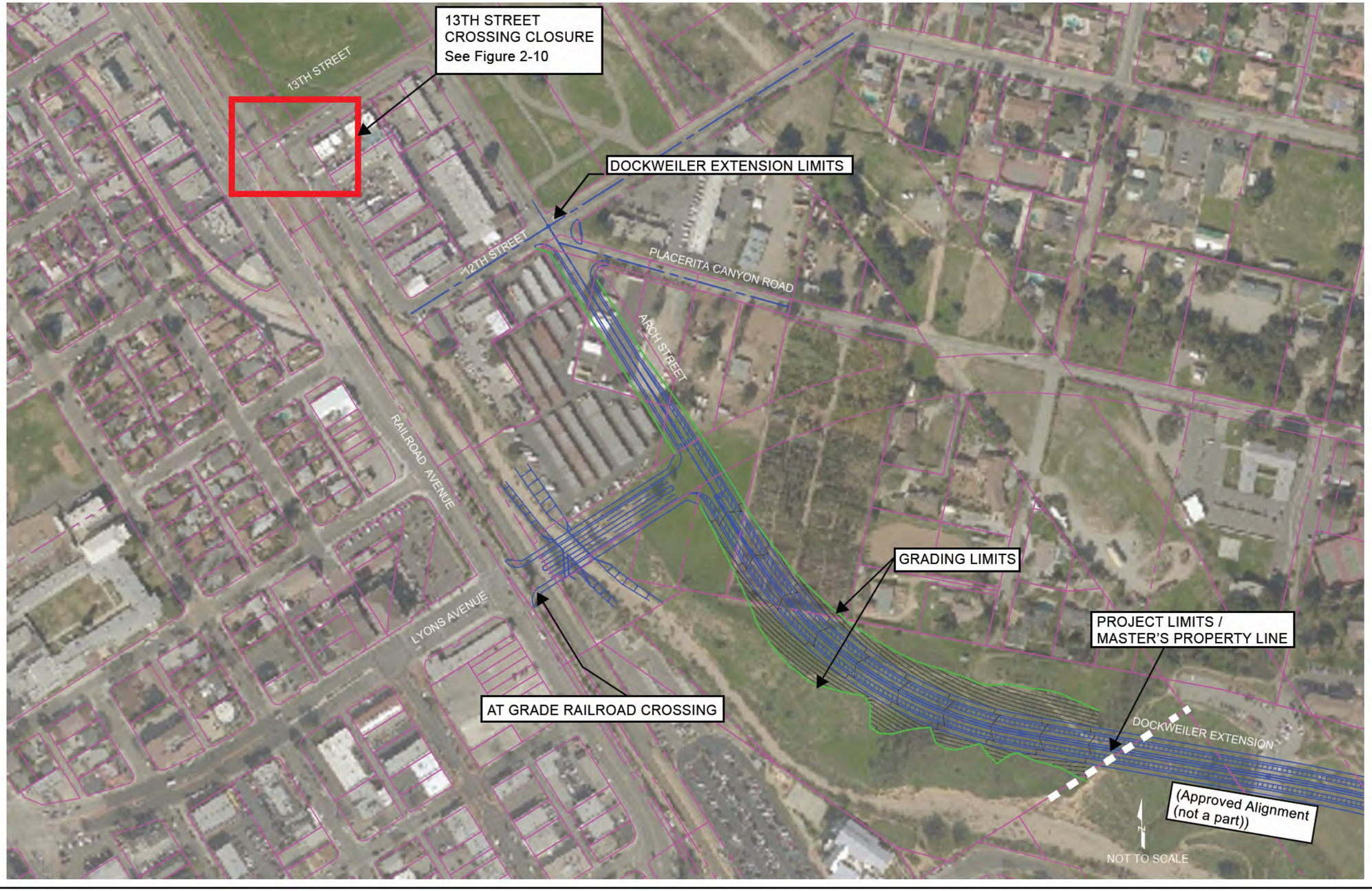
Figure 2-3
Photographs of the Surrounding Land Uses



Source: David Evans & Associates, May 2017.

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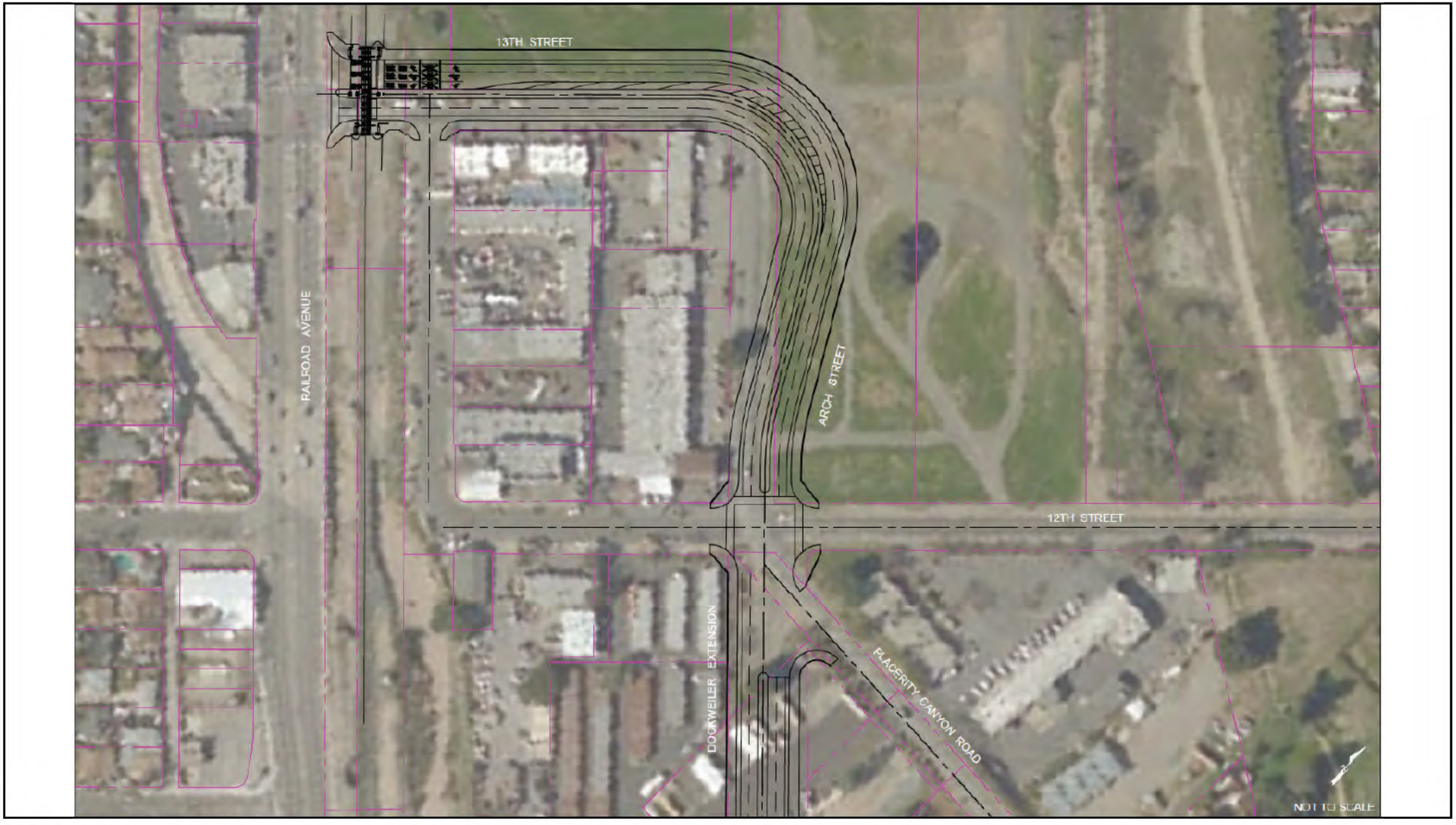
Figure 2-4
Lyons Avenue/Dockweiler Drive Extension Project Site Plan



Source: David Evans & Associates Inc., May 2017.

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Figure 2-5
Alternative 2 Project Site Plan

2.6 MODIFIED PROJECT

Similar to the Approved Project, the Modified Project would extend Dockweiler Drive from its existing terminus, westward to intersect with Arch Street and 13th Street, providing a 4-legged roundabout with a signalized offset T-intersection with Placerita Canyon Road, as depicted in Figure 2-6 Modified Project Site Plan. A proposed pedestrian and bicycle bridge would cross over Newhall Creek to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive roadway extension.

Railroad Avenue and 13th Street Improvements

Like the Approved Project, the existing westbound travel lanes on 13th Street approaching Railroad Avenue would be improved by adding two westbound lanes and a median, with one dedicated left turn lane, one shared through lane and left turn lane, and one dedicated right turn lane. The eastbound traffic lanes on 13th Street would be improved to provide two through travel lanes. The existing median nose on Railroad Avenue would be removed to reconfigure the four southbound lanes to provide two protected left turn lanes, one dedicated through lane and one shared right turn lane and through lane. The northbound lanes on Railroad Avenue would provide two through lanes, one protected left turn lane and one protected right turn lane (see Figure 2-7).

Arch Street, Dockweiler Drive and 12th Street Roundabout

As depicted in Figure 2-8, the roundabout will have one main lane in the circle with one lane approach from Arch Street, Dockweiler Drive and 12th Street. At the roundabout, Arch Street will accommodate right turning movements to the east and west legs of 12th Street and through access to Dockweiler Drive. Dockweiler Drive will accommodate left (southbound) and right (northbound) turning movements to Placerita Canyon Road at the offset signalized T-intersection. Placerita Canyon Road (westbound) will accommodate right turning movements to Dockweiler Drive.

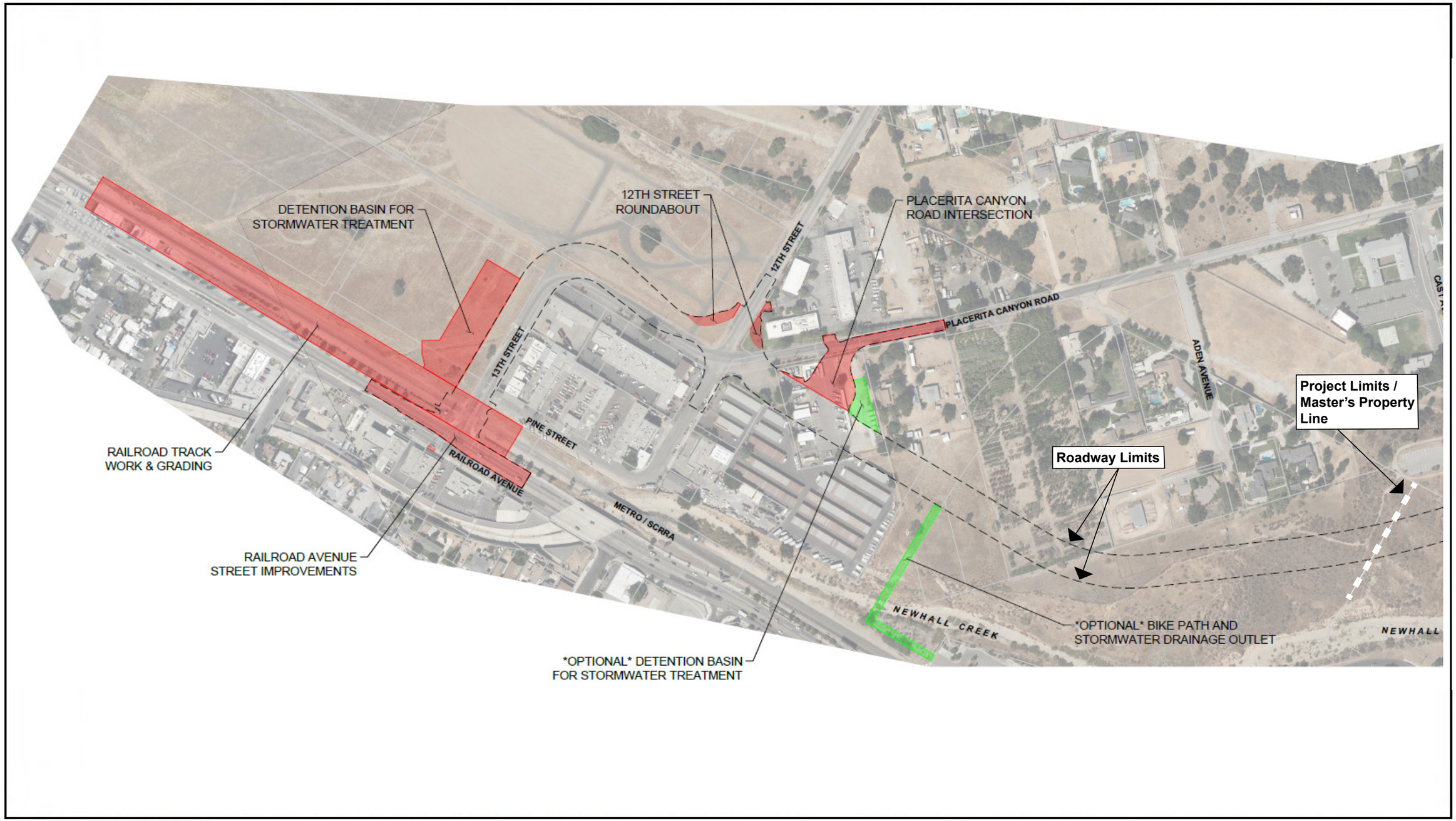
Dockweiler Drive Extension

The Modified Project would also include the extension of the Dockweiler Drive roadway. The extension would be constructed to full Secondary Highway Pavement width (92 feet), from Aden Avenue to west of Valle Del Oro, and would provide two lanes eastbound (uphill) and two lanes westbound (downhill). The extension will be striped for one lane westbound with a buffered bike lane in interim condition. Class II bike lanes, multiuse path and pedestrian sidewalks would be provided to enhance non-auto travel safety and promote connectivity between The Master's University, the Newhall Metrolink Station and Old Town Newhall (see Figure 2-9). Additionally, as shown in Figure 2-10, the Modified Project would include a bicycle and pedestrian pathway and bridge south of Dockweiler Drive, that spans Newhall Creek, to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive extension.

Infrastructure Improvements

As shown in Figure 2-6 Modified Project Site Plan, the Modified Project would include the addition of two basins for stormwater capture and treatment; one interim detention basin would be located to the north of 13th Street and east of Railroad Avenue (see Figure 2-7) and one infiltration basin would be located south of the improvements at Placerita Canyon Road and east of the proposed Dockweiler Drive Alignment (see Figure 2-8). The stormwater basins would capture and treat stormwater runoff associated with the roadway improvements in accordance with the National Pollutant Discharge Elimination System (NPDES) requirements and City grading regulations.

Additionally, as shown in Figure 2-11 and Figure 2-12, the Modified Project would include the reprofiling of the UP/Metrolink railroad line, which runs parallel to Railroad Avenue and extends north (approximately 0.25 mile) from 13th Street to approximately 15th Street. This portion of the railroad track would include regrading within the existing UP/Metrolink track right-of-way to connect to the profile and intersection improvements at 13th Street and Railroad Avenue.



Source: MNS Engineers Inc., September 25, 2020.

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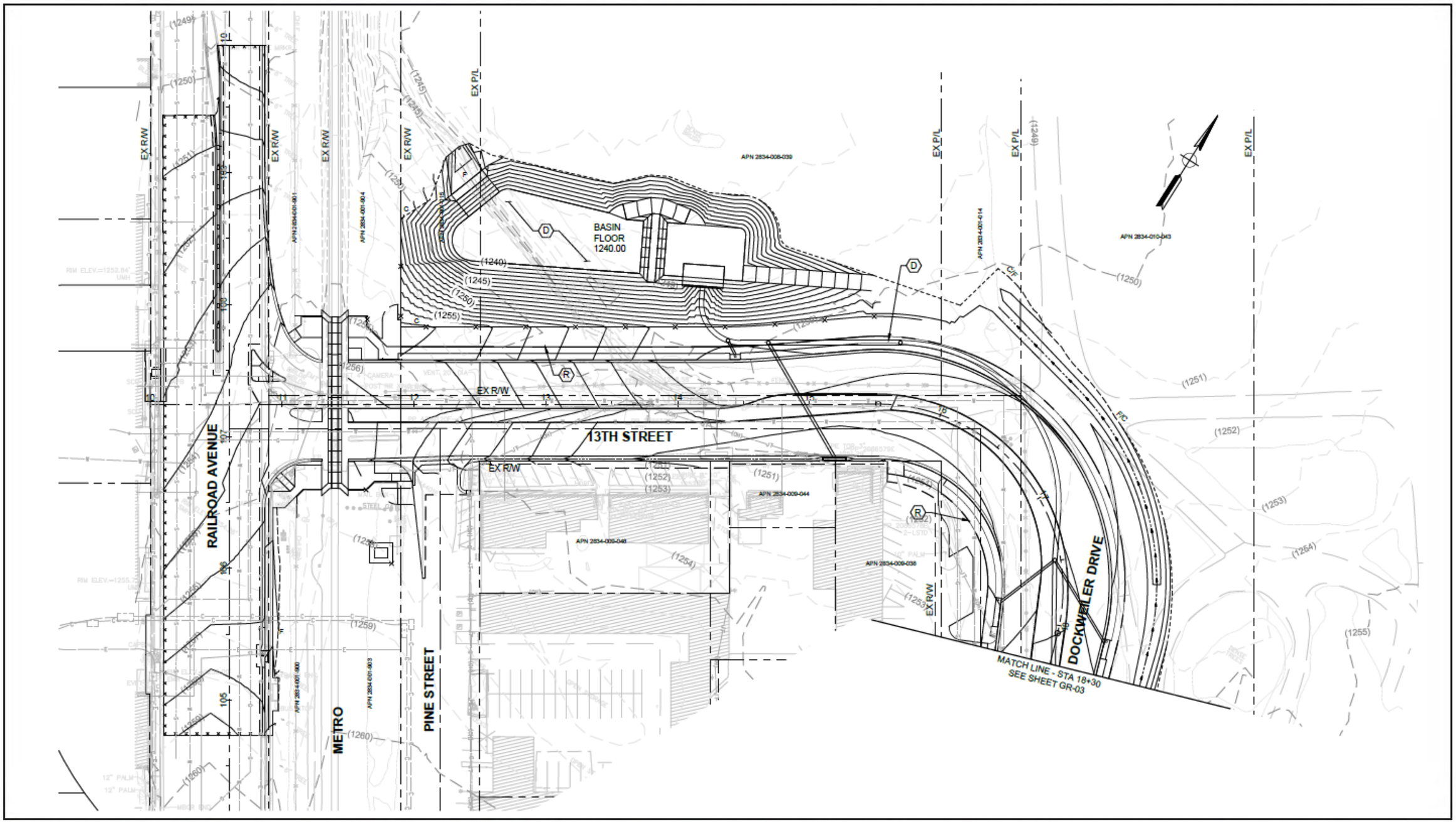
Figure 2-6
Modified Project Site Plan



Source: MNS Engineers Inc., September 25, 2020

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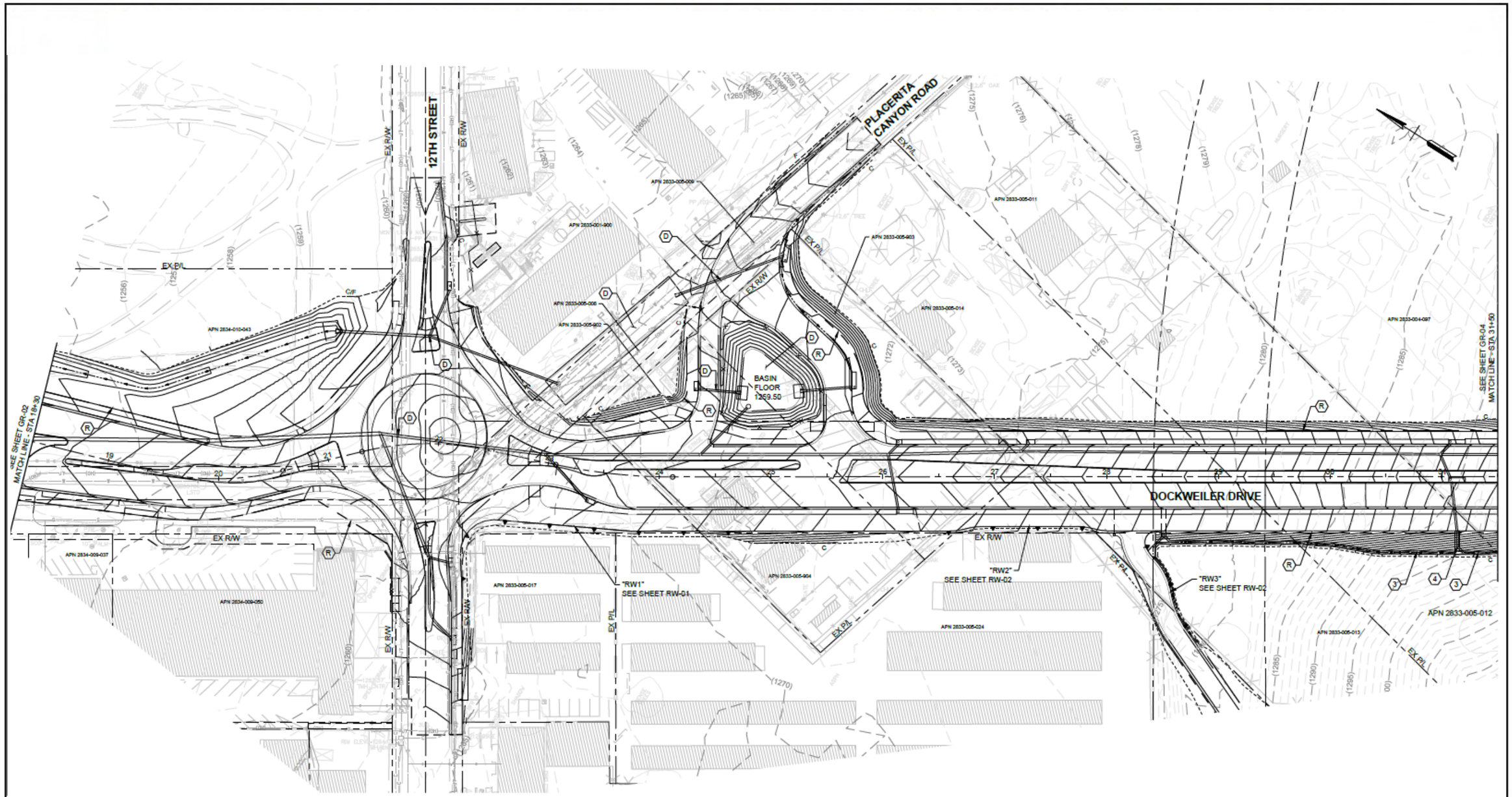
Figure 2-7
Modified Project Grading Plan at Railroad Avenue and 13th Street



Source: MNS Engineers Inc., September 25, 2020

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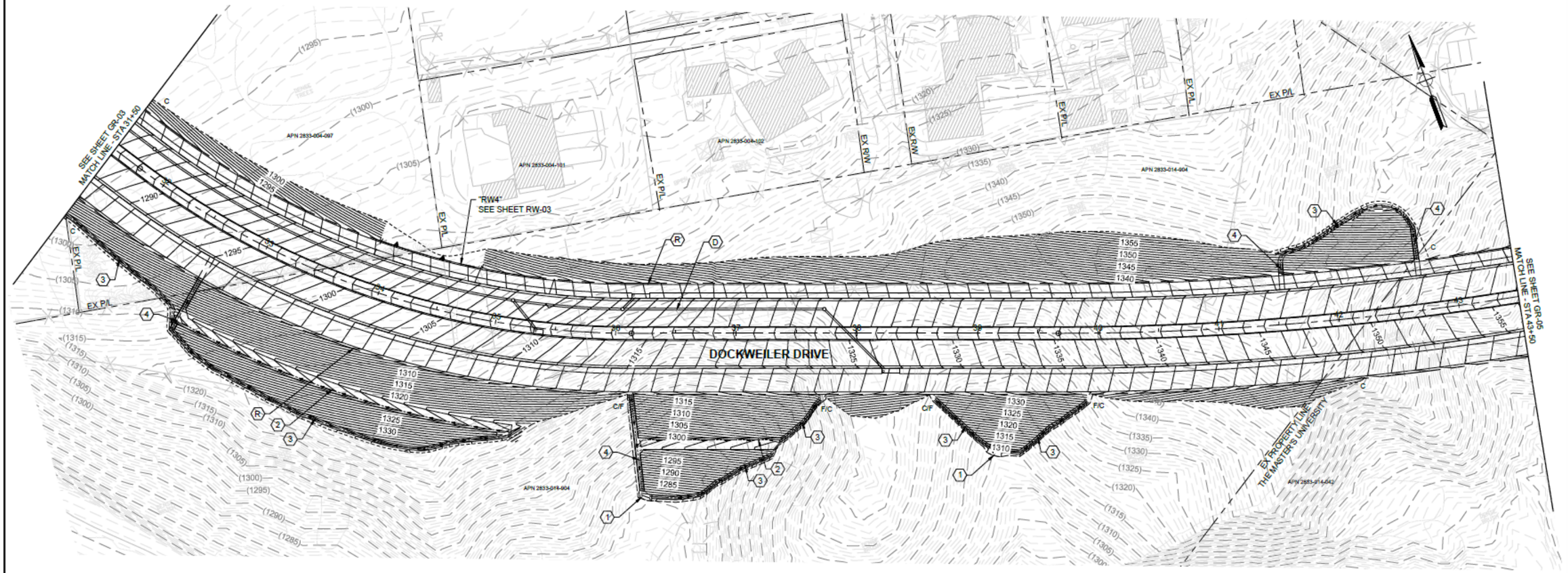
Figure 2-8
Modified Project Grading Plan at Arch Street / 12th Street / Placerita Canyon Road / Dockweiler Drive Extension Intersection



Source: MNS Engineers Inc., September 25, 2020

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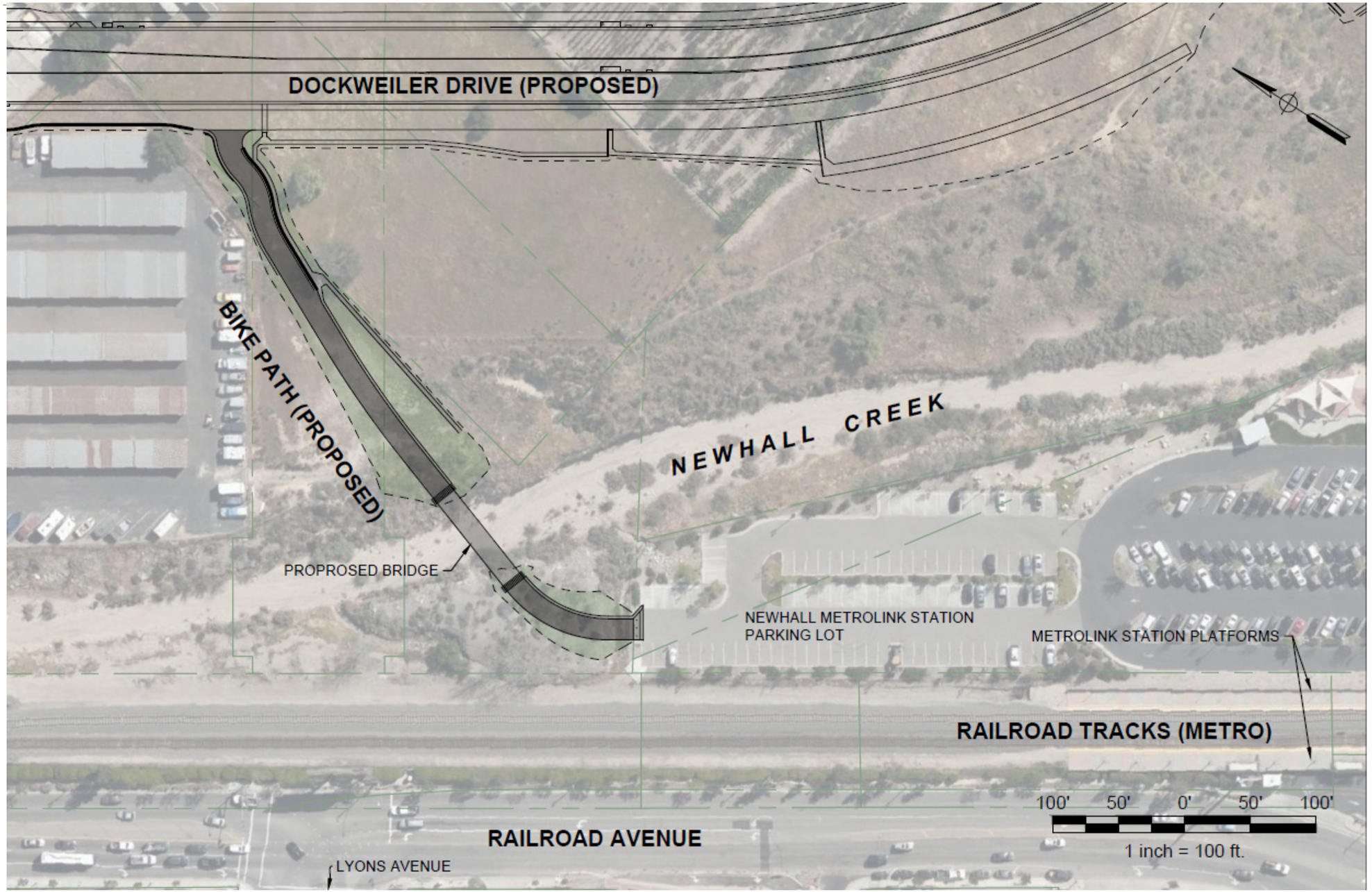
Figure 2-9
Modified Project Grading Plan at Dockweiler Drive Extension



Source: MNS Engineers Inc., September 25, 2020

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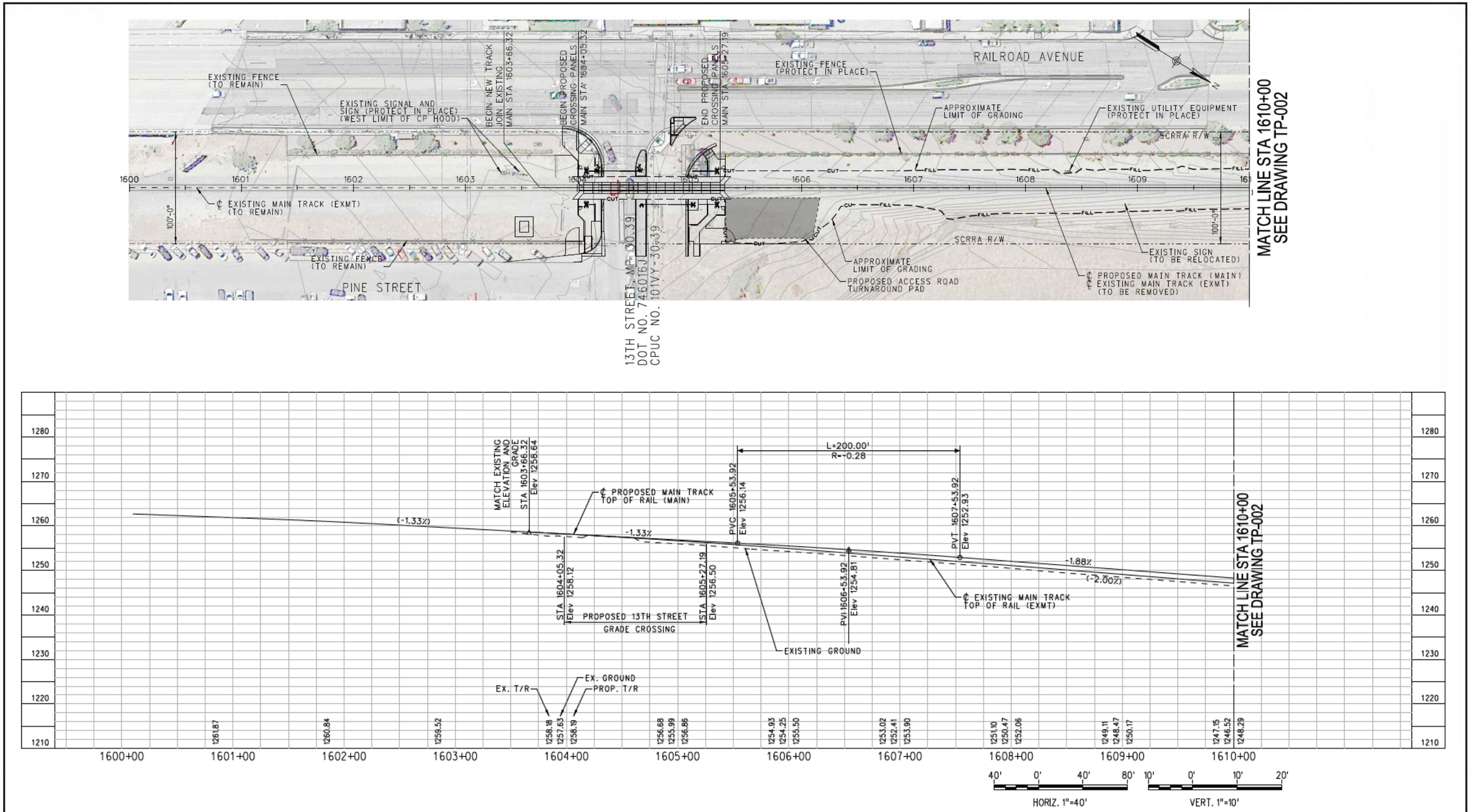
Figure 2-10
Modified Project Bike Path Plan



Source: MNS Engineers Inc., September 25, 2020

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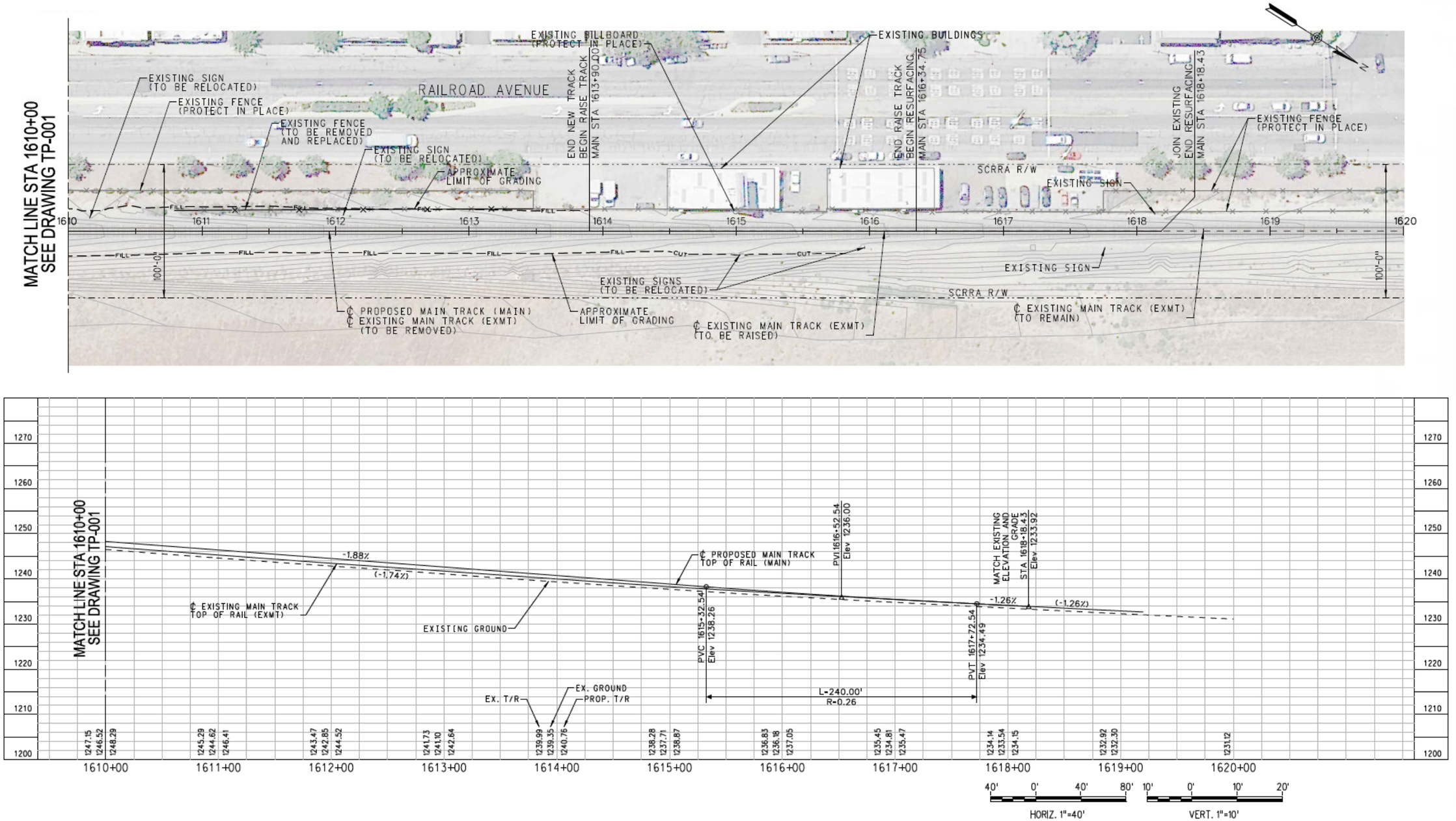
Figure 2-11
Track Plan and Profile at 13th Street and Railroad Avenue



Source: MNS Engineers Inc., September 25, 2020

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Figure 2-12
Track Plan and Profile North of 13th Street and Railroad Avenue

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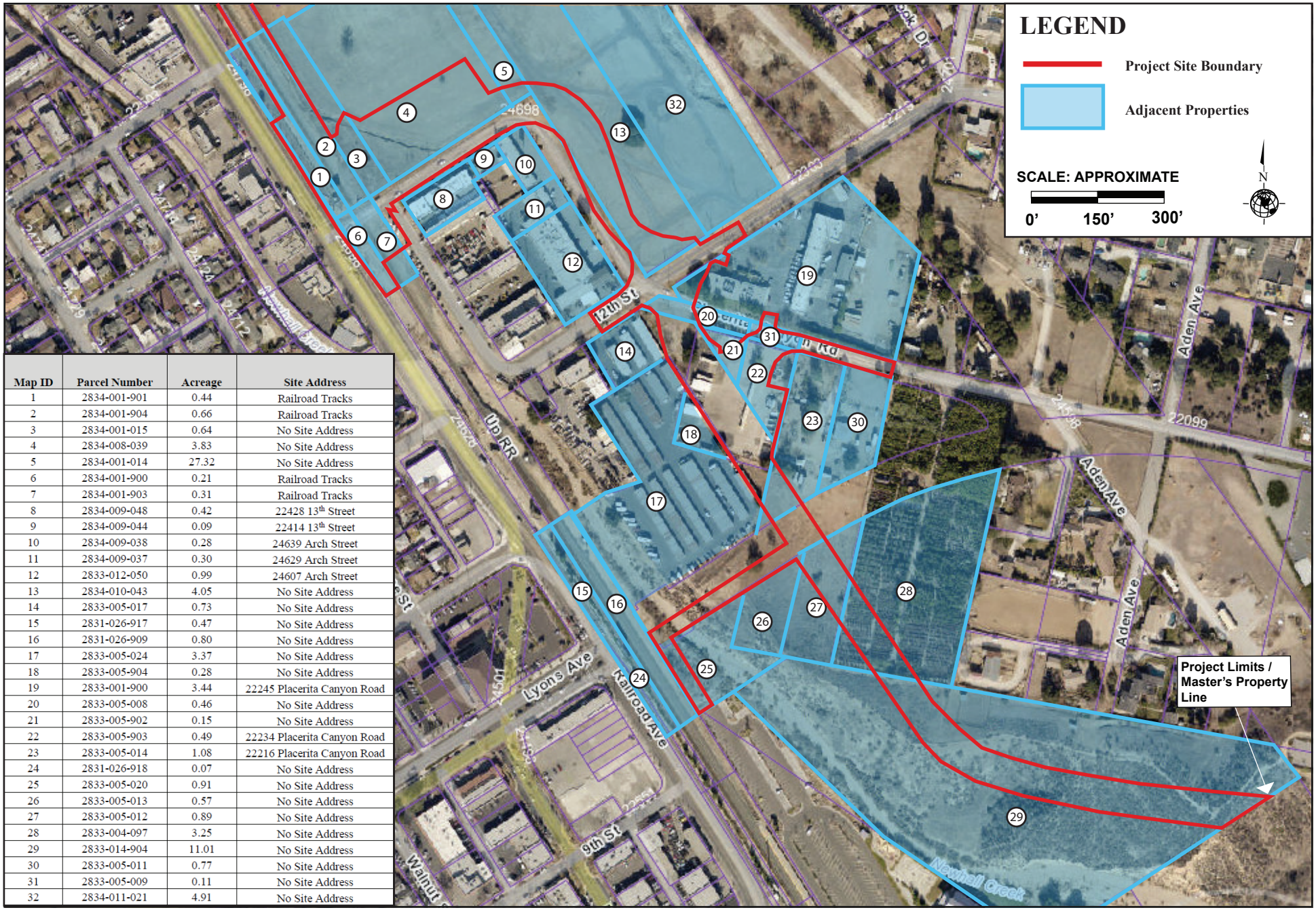
Property Acquisition and/or Easements

Implementation of the Modified Project would require the acquisition of certain easements over public and private properties that are adjacent to the Project Site. Figure 2-13 identifies 32 properties in the project area that are located within or adjacent to the proposed alignment. Table 2-1, below, identifies a total of 22 out of 32 properties identified within the study area that may be affected by easements and or acquisitions. The EIR identified a total of 19 out of 29 properties that may be affected by easements and or acquisitions under the Original Project.

Table 2-1
Potential Property Acquisition and/or Easements

Map ID	Parcel Number	Acreage	Site Address	(Private or Public)
3	2834-001-015	0.64	No Site Address	Private
4	2834-008-039	3.83	No Site Address	Private
5	2834-001-014	27.32	No Site Address	Private
8	2834-009-048	0.42	22428 13th Street	Private
9	2834-009-044	0.09	22414 13th Street	Private
10	2834-009-038	0.28	24639 Arch Street	Private
11	2834-009-037	0.30	24629 Arch Street	Private
12	2833-012-050	0.99	24607 Arch Street	Private
13	2834-010-043	4.05	No Site Address	Private
14	2833-005-017	0.73	No Site Address	Private
17	2833-005-024	3.37	No Site Address	Private
18	2833-005-904	0.28	No Site Address	Public
19	2833-001-900	3.44	22245 Placerita Canyon Road	Public
20	2833-005-008	0.46	No Site Address	Private
21	2833-005-902	0.15	No Site Address	Public
22	2833-005-903	0.49	22234 Placerita Canyon Road	Public
23	2833-005-014	1.08	22216 Placerita Canyon Road	Private
25	2833-005-020	0.91	No Site Address	Private
26	2833-005-013	0.57	No Site Address	Private
27	2833-005-012	0.89	No Site Address	Private
28	2833-004-097	3.25	No Site Address	Private
29	2833-014-904	11.01	No Site Address	Public

Notes: See Figure 2-11, Adjacent Properties Map for corresponding Map ID No.
Sources: Los Angeles County, Department of Regional Planning, Planning and Zoning Information, GIS-NET Public, https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public, accessed February 2021.
Parker Environmental Consultants, 2021.



Map ID	Parcel Number	Acreage	Site Address
1	2834-001-901	0.44	Railroad Tracks
2	2834-001-904	0.66	Railroad Tracks
3	2834-001-015	0.64	No Site Address
4	2834-008-039	3.83	No Site Address
5	2834-001-014	27.32	No Site Address
6	2834-001-900	0.21	Railroad Tracks
7	2834-001-903	0.31	Railroad Tracks
8	2834-009-048	0.42	22428 13th Street
9	2834-009-044	0.09	22414 13th Street
10	2834-009-038	0.28	24639 Arch Street
11	2834-009-037	0.30	24629 Arch Street
12	2833-012-050	0.99	24607 Arch Street
13	2834-010-043	4.05	No Site Address
14	2833-005-017	0.73	No Site Address
15	2831-026-917	0.47	No Site Address
16	2831-026-909	0.80	No Site Address
17	2833-005-024	3.37	No Site Address
18	2833-005-904	0.28	No Site Address
19	2833-001-900	3.44	22245 Placerita Canyon Road
20	2833-005-008	0.46	No Site Address
21	2833-005-902	0.15	No Site Address
22	2833-005-903	0.49	22234 Placerita Canyon Road
23	2833-005-014	1.08	22216 Placerita Canyon Road
24	2831-026-918	0.07	No Site Address
25	2833-005-020	0.91	No Site Address
26	2833-005-013	0.57	No Site Address
27	2833-005-012	0.89	No Site Address
28	2833-004-097	3.25	No Site Address
29	2833-014-904	11.01	No Site Address
30	2833-005-011	0.77	No Site Address
31	2833-005-009	0.11	No Site Address
32	2834-011-021	4.91	No Site Address

Source: Parker Environmental Consultants, 2021.

PARKER ENVIRONMENTAL CONSULTANTS

Figure 2-13
Adjacent Properties Map

Construction and Grading

Construction of the Modified Project would occur over an approximate 18-month timeframe and would involve clearing, grading, excavation, trenching, and asphalt paving. Construction is anticipated to begin in the spring of 2022 with operation beginning in 2025. Construction would require approximately 148,000 cubic yards (cy) of cut and 25,000 cy of fill. Approximately 123,000 cubic yards of soil export would be hauled to The Master's University Expansion Project Site to recycle and use as base material for the extension of the Dockweiler Drive roadway alignment from The Master's University limits on the west to the Valle Del Oro to the east. The Project Site is approximately 15 acres in size, and it is assumed that a maximum of approximately seven acres would be disturbed on a daily basis during the development of the Modified Project.

Construction of the Modified Project would occur during four different phases as described below:

- Phase 1 (9 months): Construction of the widening of 13th Street and Arch Street; and Dockweiler Drive, east of Placerita Canyon Road, to the Master's University's portion of Dockweiler Drive
- Phase 2 (4 months): Construction of 12th Street Roundabout
- Phase 3 (3 months): Reconstruction of existing 13th Street and Arch Street
- Phase 4 (2 months): Whole corridor landscaping, street lighting, signing and striping

The limits of grading for the Modified Project are illustrated in Figure 2-6 through Figure 2-12. The southeastern grading limits for the Modified Project (between Arch Street and The Master's University project limits) are generally within the grading limits that were analyzed for both the Original Project and the Approved Project. Unlike the Original Project, the Modified Project would not include the roadway extension of Lyons Avenue from Railroad Avenue to the proposed Dockweiler Drive extension, which would span a portion of Newhall Creek. The Modified Project would include a bicycle and pedestrian path that extends from the proposed Dockweiler Drive extension to the Newhall Metrolink Station to the south, which spans a smaller footprint of the Newhall Creek.

The Modified Project would include a larger grading footprint on the northern portion of the Project Site (approximately seven acres), as compared to the Original Project and Approved Project, to accommodate the roadway improvements at Arch Street, 13th Street and Placerita Canyon Road, the intersection improvements at 13th Street and Railroad Avenue, grading improvements along the UP/Metrolink Railroad line north of Railroad Avenue, and the addition of two new stormwater treatment basins and associated stormwater drainage improvements.

Construction of the Modified Project would require the addition of a temporary roadway along 13th Street between Railroad Avenue and Arch Street. The temporary roadway would provide a detour for vehicles during construction of the roadway improvements to 13th Street. The temporary roadway would be located on the north side of 13th Street and run parallel to 13th Street. The temporary roadway would be located within the Modified Project's grading limits.

2.7 PROJECT OBJECTIVES

The purpose of the Original Project is to achieve CPUC approval of an at-grade rail crossing at the current terminus of Lyons Avenue and the Southern Pacific Railroad line and extend a through roadway connection from Lyons Avenue to Dockweiler Drive. The City's stated objectives for the Project are as follows:

- Implementation of the goals of the Circulation Element of the Santa Clarita General Plan, including the crossing at Lyons Avenue and the extension of Lyons Avenue/Dockweiler Drive;
- Improve roadway level of service and circulation network;
- Provide a safe and efficient at-grade rail crossing that meets the standards of the California Public Utilities Commission (CPUC);
- Provide sufficient information for CPUC application and approval of the proposed crossing;
- Improve pedestrian and vehicle railroad safety by eliminating an existing substandard at-grade rail crossing at 13th Street and replacing it with a more advanced and enhanced at-grade rail crossing at Lyons Avenue;
- Reduce vehicle miles traveled by creating a more direct route for motorists, eliminating circuitous driving patterns.
- Provide greater connectivity between Old Town Newhall, Placerita Canyon, The Master's University and the residents that live along Dockweiler Drive;
- Provide an economic stimulus to Old Town Newhall with enhanced connectivity to the Old Town Newhall area; and
- Provide an enhanced gateway to Placerita Canyon.

Like the Original Project and Approved Project, the Modified Project would remain consistent with the objectives identified in the EIR. The Modified Project would be consistent with the City's Circulation Element as an additional route of travel connecting Railroad Avenue to Dockweiler Drive. The Modified Project would include upgrades to the at-grade railroad crossing at the intersection of Railroad Avenue and 13th Street, including new turn lanes, roadway widening, and median improvements. The Modified Project would also introduce a roundabout at the 12th Street/ Arch Street/ Dockweiler Drive intersection and modify the roadway connection from Dockweiler Drive to Placerita Canyon Road. These roadway improvements would improve traffic operations and enhance the safety of pedestrians and bicyclists. Additionally, the extension of Dockweiler Drive would promote non-auto travel by including bicycle and pedestrian pathways along Dockweiler Drive and south of Dockweiler Drive that spans Newhall Creek, to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive roadway extension. These improvements would provide connectivity from, Old Town Newhall and the Metrolink Station to The Master's University.

2.8 DISCRETIONARY ACTIONS

Lead Agency

The City of Santa Clarita is the Lead Agency as set forth in CEQA Guidelines §21067 and is responsible for reviewing and approving this EIR Addendum to the Original Project's Final EIR based on the City's independent judgement.

Like the Approved Project, the Modified Project would also require the approval of an Oak Tree Permit and Hillside Review Permit at such time as development occurs or when funding of roadway construction becomes available. The Oak Tree Permit would be required to determine the oak tree impacts at the time of project development. The Hillside Review Permit would permit the grading necessary to construct the roadway. Additional discretionary actions include acquisition of right-of-way and awarding of a contract for construction of the roadway. Additional ministerial actions, such as grading permits, would be required by the City prior to actual grading and construction of the proposed roadway extension.

Responsible Agencies

Public agencies other than the Lead Agency, that have discretionary approval power or regulatory oversight over the proposed project or project activities are considered "Responsible Agencies" (State CEQA Guidelines Section 15381). If the City approves the Proposed Project, subsequent implementation of various project components could require discretionary approval authority from the following responsible agencies:

- California Public Utilities Commission (CPUC);
- Southern California Rail Authority;
- Los Angeles County Metropolitan Transportation Authority (LACMTA);
- California Department of Fish and Wildlife (CDFW);
- California Regional Water Quality Control Board (RWQCB);
- Los Angeles County Fire Department (LACFD):
- Los Angeles County Department of Public Works (LAPW)
- South Coast Air Quality Management District (SCAQMD);
- U.S. Fish and Wildlife Service (USFWS); and
- U.S. Army Corps of Engineers (USACE).

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3.0 ENVIRONMENTAL DETERMINATION

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that the significant effects that would result from the proposed project have been addressed in an earlier certified City of Santa Clarita Lyons Avenue/Dockweiler Drive Extension Project Final EIR (SCH. No. 2013082016) and that none of the determinations set forth in the Public Resources Code Section 21166 and State CEQA Guidelines Section 15162 can be established and, thus an Addendum to the Final EIR shall be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Carla Ann Callahan — 5/17/2021

Signature — Date

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4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section contains a summary of the Approved Project's impacts, as presented in the EIR (see Section 6.4 Alternative 2 of the EIR), and an assessment of the Modified Project's impacts associated with the environmental issues and subject areas identified in the Initial Study Checklist (Appendix G to the State CEQA Guidelines, (C.C.R. Title 14, Chapter 3, 15000-15387), as amended on January 1, 2019. Section 4.5 Energy, Section 4.11 Tribal Cultural Resources and Section 4.12 Wildfire, have been included below in this Addendum to be consistent with the amended CEQA Guidelines. The Modified Project's impacts are then compared to the impacts and level of significance identified for the Approved Project and in some instances where applicable the Original Project.

4.1 AESTHETICS

Approved Project

Temporary Construction Impacts

Under the Approved Project, the existing visual character of the Project Site would be adversely impacted throughout the duration of the construction period. Impacts related to aesthetic character of the area during construction would be considered significant but temporary. Implementation of Mitigation Measure 4.1-1, which would require the screening of construction equipment, would reduce impacts to less than significant.

Long Term Operational Impacts

Under the Approved Project, the Dockweiler Drive roadway extension would be developed in accordance with the City's roadway standards and design guidelines to ensure the graded hillsides, medians, and walkways are landscaped in a manner that maintains the visual aesthetic quality and character of the City's roadway infrastructure. Implementation of Mitigation Measure 4.1-2 would ensure that the roadway median and contoured slopes of the roadway alignment would be landscaped and maintained. Therefore, impacts related to long-term operation would be less than significant.

Alteration of A Significant Ridgeline

As concluded in the Final EIR, construction of the proposed roadway alignment between Dockweiler Drive and Arch Street would permanently alter a significant ridgeline as designated in the City of Santa Clarita General Plan.[2] As a project design feature the Approved Project's grading plan would incorporate landform grading practices to blend the manufactured slopes and required drainage benches into the natural

[2] *As noted in Section 4.1, Aesthetics, of the EIR, the eastern segment of the Dockweiler alignment was previously approved under a separate project entitlement for The Master's University in 2009, which included a Ridgeline Alteration Permit for the eastern segment of this ridgeline. As part of the approved entitlements for The Master's University Master Plan in 2009, the irreversible grading and re-contouring of the ridgeline was approved to the western limit of The Master's University Campus.*

topography to the maximum extent feasible. Plant materials would be utilized to protect slopes from slippage and soil erosion and minimize the visual effects of grading and construction on a hillside area. As concluded in the EIR, with approval of a Hillside Review Permit, aesthetic impacts associated with the grading of the Approved Project would be reduced to less than significant levels.

Visual Character

The Approved Project would include pedestrian and bicycle improvements to Dockweiler Drive. These project features would increase accessibility to scenic natural resources including the Newhall Creek and surrounding ridgelines and mountains. Therefore, impacts related to visual character would be the less than significant.

Roadway Light and Glare

The Approved Project would introduce nighttime lighting to the vicinity, which would include pole-mounted streetlights at intersections and lighted bollards along Dockweiler Drive and would contribute to additional light and glare from the headlights of vehicles utilizing the roadway. Although, the Approved Project would be expected to slightly increase ambient lighting in the area, compliance with the design standards and requirements established in the Santa Clarita Municipal Code Section 17.51.050 would mitigate lighting impacts to a less than significant level. Therefore, impacts related to roadway light and glare would be less than significant.

Modified Project

Temporary Construction Impacts

Similar to the Approved Project, the existing visual character of the Project Site would be adversely impacted throughout the duration of the construction period under the Modified Project. The Modified Project would include a larger grading footprint on the northern portion of the Project Site (approximately seven acres), as compared to the Approved Project, to accommodate the roadway improvements at Arch Street, 13th Street and Placerita Canyon Road, the intersection improvements at 13th Street and Railroad Avenue, grading improvements along the UP/Metrolink Railroad line, and the addition of two new stormwater treatment basins. Grading, temporary storage of building materials and use of construction equipment could occupy the field of view of passing motorists, pedestrians and nearby residents. The construction site would continue to be visible from the residential properties on Aden Avenue and from passing motorists on Lyons Avenue, Railroad Avenue, Market and Race Streets, and at the Arch Street/12th Street/Placerita Canyon intersection. The Modified Project would also include a temporary roadway detour on the north side of 13th Street to provide access between Arch Street and Railroad Avenue to allow for construction on 13th Street. Like the Approved Project, impacts related to aesthetic character of the area during construction under the Modified Project would be considered significant but temporary. Like the Approved Project, the Modified Project would implement Mitigation Measure 4.1-1, which would require the screening of construction equipment, which would reduce impacts to less than significant. Therefore,

impacts related to aesthetic character of the area during construction would be comparable to impacts identified under the Approved Project.

Long Term Operational Impacts

Under the Modified Project, the aesthetic character of the Project Site and its immediate surroundings would be permanently altered to generally the same degree as that which would occur under the Approved Project. Views of the hillside on the southeast portion of the Project Site (between Arch Street and Dockweiler Drive at The Master's University project limits) would be similarly altered by grading for the proposed Dockweiler Drive roadway extension as the grading limits of the Modified Project are largely within the grading limits of the Approved Project. Views of the Project Site at the intersection of Railroad Avenue and 13th Street would be similar to existing views of the intersection, as the Modified Project also includes the improvement of the at-grade railroad crossing. Views of the intersection of the Arch Street/12th Street/Placerita Canyon intersection would be altered to include the four-way legged roundabout intersection. The Modified Project would also include a pedestrian and bicycle pathway that would span Newhall Creek, reprofiling of the UP/Metrolink railroad track between 13th Street and 15th Street, and the addition of two stormwater treatment basins.

Like the Approved Project, implementation of Mitigation Measure 4.1-2, would ensure that the proposed roadway median and contoured slopes of the roadway alignment under the Modified Project would be landscaped and maintained in accordance with the City's roadway standards and design guidelines. Overall, impacts related to long-term operation would remain less than significant and would not result in more severe or new impacts as those identified under the Approved Project.

Loss of Oak Trees

As shown in the Oak Tree Inventory (see Appendix B of this Addendum), construction of the Modified Project would result in the encroachment of eight oak trees within the immediate vicinity of Modified Project's grading limits and require the removal of four oak trees within the Modified Project's grading limits. As concluded under the Approved Project, the removal or encroachment of oak trees as a result of project construction would be considered a significant impact under both the City of Santa Clarita and CEQA. Replacement oak trees would be planted in the number necessary to comply with the requirements stipulated in the Oak Tree Permit issued by the City. Although the Modified Project would result in the encroachment and removal of additional oak trees, as compared to the Approved Project, with approval of the required oak tree permits, and implementation of Mitigation Measure 4.3-7 in Section 4.3, Biological Resources, aesthetic impacts associated with the loss or pruning of any oak tree would be reduced to less than significant levels. Therefore, under of the Modified Project, impacts related to oak trees would be marginally higher but would remain less than significant with mitigation.

Alteration of A Significant Ridgeline

Similar to the Approved Project, construction of the Modified Project would include the roadway alignment between Dockweiler Drive at The Master's University project limits and Arch Street. The hillside on the southeast portion of the Project Site would be similarly altered by grading for the proposed roadway extension as the grading limits of the Modified Project are largely within the grading limits of the Approved Project. Like the Approved Project, the Modified Project would also incorporate landform grading practices and plant materials as a Project Design Feature to protect slopes from slippage and soil erosion and minimize the visual effects of grading and construction on a hillside area. Similarly, the Modified Project would require approval of a Hillside Review Permit. As such aesthetic impacts associated with the grading of the Modified Project would be reduced to less than significant levels and impacts would be similar to that of the Approved Project.

Visual Character

Similar to the Approved Project the Modified Project also includes pedestrian and bicycle improvements to Dockweiler Drive that would include wide sidewalks and Class II bike lanes on each side. These project features would increase accessibility to scenic natural resources including the Newhall Creek and surrounding ridgelines and mountains. Additionally, as shown in Figure 2-10 Modified Project Bike Path, the Modified Project would include a bicycle and pedestrian pathway south of Dockweiler Drive, that spans Newhall Creek, to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive extension. Therefore, impacts related to visual character would be the less than significant and impacts would be similar to that of the Approved Project.

Roadway Light and Glare

The Modified Project would be expected to slightly increase ambient lighting in the area in the same manner as the Approved Project. Lighting uses associated with the Modified Project are not anticipated to substantially impact any surrounding sensitive uses as the streetlights would be installed with downward directional fixtures and would not create light trespass onto any adjacent properties. Light emanating from the Modified Project would be a relatively low-level indirect source of light illuminating the roadway and pedestrian walkways and would not adversely impact other properties in the immediate area. Additionally, the steep terrain and orientation of the southeastern portion of the Project Site would shield vehicle headlights, signage lighting and streetlights from impacting the residential properties within the Placerita Canyon community to the east and along Market and Race Streets to the west. Similarly, compliance with the design standards and requirements established in the Santa Clarita Municipal Code Section 17.51.050 would mitigate lighting impacts to a less than significant level. Therefore, impacts related to roadway light and glare would be the same as those identified under the Approved Project.

4.2 AIR QUALITY

Approved Project

Construction

As discussed in the EIR, construction of the Original Project would occur over an approximate 12-month timeframe and would involve clearing, grading, excavation, trenching, and asphalt paving. Construction would require 4,990 cubic yards (cy) of cut, 2,760 cy of fill, and 2,230 cy of soil export associated with grading and excavation. During construction, on-site stationary sources, heavy-duty construction vehicles, construction worker vehicles, and energy use would generate emissions. Additionally, grading, excavation, and other construction activities on the Project Site would generate fugitive dust emissions. Construction activities and their associated air quality impacts would be short-term in nature and limited only to the period when construction activity is actively taking place on the Project Site. The Project Site under the Original Project would be approximately 5 acres in size and consists of natural land area. For purposes of the analysis it was assumed that a maximum of approximately 2 acres would be disturbed on a daily basis during the development of the Proposed Project. Clearing and grubbing of the area was expected to begin in December of 2019 and last through the end of 2020.

Like the Original Project, construction of the Approved Project would occur over an approximately 12-month timeframe and would involve clearing, grading, excavation, trenching, and asphalt paving. As discussed in the EIR, the Approved Project's construction emissions would be similar to the emissions generated under the Original Project (see Section 4.2 Air Quality and Section 6.4 Alternative 2, of the EIR) but slightly reduced as the Approved Project would involve less mass grading. The increased emissions associated with the Arch Street to 13th Street improvements would be offset by the avoidance of grading associated with the Dockweiler to Lyons connection. As the Original Project emissions would be below South Coast Air Quality Managements District's (SCAQMD's) significance thresholds for all criteria pollutants, the Approved Project's regional construction air quality emissions would also be less than significant.

AQMP Consistency

Like the Original Project, the Approved Project would not exceed the AQMD's significance thresholds for regional construction emissions and thus would not increase the frequency or severity of existing air quality violations or cause or contribute to new air quality violations within the Basin. The Approved Project is consistent with the AQMP and would not interfere with attainment of air quality levels identified in the AQMP. The Approved Project would help reduce congestion and vehicles per miles travelled by providing sidewalks and bicycle lanes and by providing direct access from the residential area and The Master's University area to the Jan Heidt Newhall Metrolink Station and Old Town Newhall. The Approved Project encourages alternative modes of transportation other than motor vehicles and would be consistent with the goals and objectives of the AQMP to reduce vehicle emissions throughout the Basin.

Localized Construction Emissions

Like the Original Project, the EIR concluded that the Approved Project would result in significant localized air emissions in close proximity to residential land uses within 100 meters of the Project Site on a temporary and intermittent basis during construction. Localized NO_x and CO emissions would be below the significance thresholds at all sensitive receptor locations. However, localized thresholds would be exceeded for PM_{10} and $PM_{2.5}$ emissions at two locations: (1) the single-family residential land uses located immediately north of the Project Site (within a proximity of 100 meters) and (2) the residential land uses within 100 meters south of the Project Site in the vicinity of Market Street and Race Street (see Section 4.2 Air Quality, Table 4.2-10, of the EIR). Localized emissions would be below the stated thresholds for any land use located further than 100 meters from the Project Site. Therefore, notwithstanding implementation of Mitigation Measures 4.2-1 through 4.2-4, which require best management practices to minimize construction-related emissions, localized air quality impacts resulting from construction activities would be considered significant and unavoidable.

Operational Emissions

A CO hotspot analysis was conducted for the Original Project, which includes the roadway extension of Lyons Avenue to Dockweiler Drive and the closure of the railroad crossing and vehicular access at the intersection of 13th and Railroad Avenue. As discussed in Section 4.2 Air Quality, of the EIR, modeling of future CO concentrations from the intersections in the study area was based on projected traffic volumes from the intersections contained in the Original Project Traffic Study[3]. Interim year 2019 with-project conditions CO concentrations were calculated for peak hour traffic volumes for those intersections that are anticipated to operate at LOS D or worse, based on the traffic analysis for the Project (see Section 4.9, Transportation and Traffic of the EIR). Background (existing) ambient CO concentrations were also factored into the analysis. The results of these CO Hotspot concentration calculations are presented in Section 4.2 Air Quality, Table 4.2-11, Existing Conditions Plus Project (2019) Carbon Monoxide Concentrations, of the EIR. As shown in Table 4.2-11, the screening calculations predict that, under worst-case conditions, future CO concentrations at each intersection would not exceed the state 1-hour and 8-hour standards with or without the development of the Original Project.

Although the Approved Project would not directly generate any new vehicle trips, it would result in changes to the traffic circulation in the vicinity and would alter the average daily traffic volumes and peak hour traffic volumes at local intersections. As the Approved Project is within the same envelope as the Original Project, it was found that, under worst-case conditions, future CO concentrations at each intersection would not exceed the state 1-hour and 8-hour standards with or without the development of the Project. Therefore, no significant project-related impact would occur relative to future carbon monoxide concentrations of the

[3] *Traffic Impact Analysis: Dockweiler Drive Alignment Project, Santa Clarita, CA, prepared by David Evans and Associates, dated August 8, 2017. See Appendix H of the Final EIR.*

Approved Project. The Approved Project would have a less than significant impact with respect to this criterion.

Modified Project

Construction

Construction of the Modified Project would be slightly different as compared to the Approved Project as the Modified Project would occur over an approximate 18-month timeframe during four different phases as described below:

- Phase 1 (9 months): Construction of the widening of 13th Street and Arch Street; and Dockweiler Drive, east of Placerita Canyon Road, to the Master's University's portion of Dockweiler Drive;
- Phase 2 (4 months): Construction of 12th Street Roundabout
- Phase 3 (3 months): Reconstruction of existing 13th Street and Arch Street
- Phase 4 (2 months): Whole corridor landscaping, street lighting, signing and striping

Construction of the Modified Project would involve site clearing, grading, excavation, trenching, and asphalt paving, and utility relocation. Construction would require a total of 148,000 cubic yards (cy) of cut/export and 25,000 cy of fill associated with grading and excavation. Approximately 123,000 cubic yards of export would be hauled to The Master's University to recycle and use as base material. During construction, on-site stationary sources, heavy-duty construction vehicles, construction worker vehicles, and energy use would generate emissions. Additionally, grading, excavation, and other construction activities on the Project Site would generate fugitive dust emissions. Construction activities and their associated air quality impacts would be short-term in nature and limited only to the period when construction activity is actively taking place on the Project Site. The entire Project Site is approximately 15 acres in size and consists of natural land area. For purposes of this analysis, it is assumed that a maximum of approximately 7 acres would be disturbed on a daily basis during the development of the Proposed Project.

As discussed above, construction of the Modified Project would occur over an approximately 18-month timeframe during four different phases and would involve clearing, grading, excavation, trenching, and asphalt paving. Construction is anticipated to begin in the spring of 2022 with operation beginning in 2025. Sources of emissions during construction include stationary and mobile uses of construction equipment, construction vehicles (heavy-duty construction vehicles and worker vehicles), and energy use. As shown in Table 4-1, the Modified Project's construction emissions would be higher than the emissions generated under the Original Project (see Section 4.2 Air Quality) since the Modified Project would involve more mass grading activity and anticipates a longer construction schedule. The increased emissions associated with the Arch Street to 13th Street improvements would be offset by the avoidance of grading associated with the Dockweiler to Lyons connection. Additionally, a majority of the anticipated soil export would be hauled to Master's University, which would reduce the amount of fugitive dust and diesel emissions, compared to soil export that would typically be hauled to a disposal site much farther away from the Project

Site. As the Original Project emissions would be below South Coast Air Quality Managements District's (SCAQMD's) significance thresholds for all criteria pollutants, the Modified Project's regional construction air quality emissions would remain less than significant and no new impacts or severity in impacts would occur.

Table 4-1
Estimated Peak Daily Construction Emissions

Emissions Source	Emissions in Pounds per Day				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Phase 1 – Widening of 13th Street and Arch Street, Dockweiler Drive, and Placerita Canyon Road					
Grubbing/Land Clearing	1.8	17.2	16.6	70.7	15.2
Grading/Excavation	8.2	78.8	71.7	73.6	17.8
Drainage/Utilities/Sub-Grade	6.7	60.8	58.7	72.9	17.2
Paving	2.3	20.5	24.6	1.1	1.0
Maximum Daily Emissions	***8.2***	***78.8***	***71.7***	***73.6***	***17.8***
SCAQMD Thresholds	75.00	100.00	550.00	150.00	55.00
Significant Impact?	No	No	No	No	No
Phase 2 – Construction of 12th Street Roundabout					
Grubbing/Land Clearing	0.9	7.8	8.9	20.3	4.5
Grading/Excavation	4.5	40.9	42.9	21.9	5.8
Drainage/Utilities/Sub-Grade	3.7	33.3	34.5	21.5	5.5
Paving	1.4	12.4	15.4	0.7	0.6
Maximum Daily Emissions	***4.5***	***40.9***	***42.9***	***21.9***	***5.8***
SCAQMD Thresholds	75.00	100.00	550.00	150.00	55.00
Significant Impact?	No	No	No	No	No
Phase 3 – Reconstruction of 13th Street and Arch Street					
Grubbing/Land Clearing	0.9	7.9	8.9	20.3	4.5
Grading/Excavation	--	--	--	--	--
Drainage/Utilities/Sub-Grade	3.7	33.3	34.5	21.5	5.5
Paving	1.4	12.4	15.4	0.7	0.6
Maximum Daily Emissions	***3.7***	***33.3***	***34.5***	***21.5***	***5.5***
SCAQMD Thresholds	75.00	100.00	550.00	150.00	55.00
Significant Impact?	No	No	No	No	No
Phase 4 - Landscaping, Street Lighting, Signing, and Striping					
Grubbing/Land Clearing	--	--	--	--	--
Grading/Excavation	--	--	--	--	--
Drainage/Utilities/Sub-Grade	3.9	34.4	35.8	21.6	5.6
Paving	--	--	--	--	--
Maximum Daily Emissions	***3.9***	***34.4***	***35.8***	***21.6***	***5.6***
SCAQMD Thresholds	75.00	100.00	550.00	150.00	55.00
Significant Impact?	No	No	No	No	No

Source: Road Construction Emissions Model, Version 7.1.5.1. Sacramento Air Quality Management District, updated 12/11/13. Calculation sheets are provided in Appendix A to this Addendum.

AQMP Consistency

The Modified Project would not exceed the AQMD's significance thresholds for regional construction emissions and thus would not increase the frequency or severity of existing air quality violations or cause or contribute to new air quality violations within the Basin. Like the Approved Project, the Modified Project would also be consistent with the AQMP and would not interfere with attainment of air quality levels identified in the AQMP. The Modified Project would help reduce congestion and vehicles per miles traveled by providing sidewalks and bicycle lanes and by providing direct non-auto travel access from the residential area and Master's University area to the Jan Heidt Newhall Metrolink Station and Old Town Newhall. The Modified Project encourages alternative modes of transportation other than motor vehicles and would be consistent with the goals and objectives of the AQMP to reduce vehicle emissions throughout the Basin.

Localized Construction Emissions

Like the Approved Project, the Modified Project would also result in significant localized air emissions in close proximity to residential and institutional land uses within 100 meters of the Project Site on a temporary and intermittent basis during construction. Three additional sensitive receptors were identified that would be impacted by localized emissions from the Modified Project construction: residential uses at Newhall Crossings, residential uses fronting Walnut Street and Newhall Avenue, and the mobile homes fronting Railroad Avenue (added as Sensitive Receptor 5 to 7 in Table 4-2, below). See Figure 4-1, Air Quality Sensitive Receptor Map, for all identified sensitive receptors within 0.25-mile of the Modified Project's construction. As mentioned previously, the entire Project Site is approximately 15 acres in size, and it is assumed that a maximum of approximately 7 acres would be disturbed on a daily basis during the development of the Modified Project. As such, under this scenario, the localized air quality impacts were then compared to the SCAQMD's localized significance thresholds screening criteria for a 5-acre site as a conservative estimate. The Modified Project's localized construction emissions would be higher than the emissions generated under the Original Project, since the Modified Project would involve more mass grading activity and anticipates a longer construction schedule. As shown in Table 4-1, below, localized NO_x and CO emissions would be below the significance thresholds at all sensitive receptor locations. However, localized thresholds would be exceeded for PM_{10} and $PM_{2.5}$ emissions at all residential sensitive receptor locations within a proximity of 200 meters. Localized emissions would be below the stated thresholds for any land use located further than 200 meters from the Project Site. Therefore, notwithstanding implementation of Mitigation Measures 4.2-1 through 4.2-4, which require best management practices to minimize construction-related emissions, localized air quality impacts resulting from construction activities would be considered significant and unavoidable, similar to the Approved Project**.**

Table 4-2
Localized On-Site Peak Daily Construction Emissions

Construction Activity	Distance From Project Site [c]	Highest On-Site Emissions (Pounds per Day)							
		NO_x [b]		CO		PM_{10}		$PM_{2.5}$	
		78.8 lbs./day		71.7 lbs./day		73.6 lbs./day		17.8 lbs./day	
		[A] [a]	[B]	[A] [a]	[B]	[A] [a]	[B]	[A] [a]	[B]
1.Single-family homes in Placerita Canyon	40 m	246	No	1,644	No	12	**Yes**	6	**Yes**
2.Residential uses south of the Project Site	75 m	236	No	2,095	No	38	**Yes**	8	**Yes**
3.The Master's University Campus	150 m	251	No	2,922	No	52	**Yes**	13	**Yes**
4.Residential uses northwest of the Project Site	110 m	251	No	2,922	No	52	**Yes**	13	**Yes**
5.Newhall Elementary School	225 m	275	No	4,608	No	79	No	26	No
6. Residential uses at Newhall Crossings	70 m	236	No	2,095	No	38	**Yes**	8	**Yes**
7. Residential uses fronting Walnut Street and Newhall Avenue	150 m	251	No	2,922	No	52	**Yes**	13	**Yes**
8. Mobile homes fronting Railroad Avenue	25 m	246	No	1,644	No	12	**Yes**	6	**Yes**

Explanation of Columns:
[A] LST: Localized Thresholds of Significance: Localized thresholds are expressed in terms of lbs./day.
[B] Significant Impact? Yes or No.
[a] *The localized thresholds for all receptors are based on the specified receptor distance and the mass look up rates identified in Appendix C of the Final Localized Significance Threshold Methodology (Revised July 2008) for SRA 13 (Santa Clarita Valley).*
[b] *The localized thresholds listed for NO_x in this table take into consideration the gradual conversion of NO_x to NO_2, and are provided in the mass rate look-up tables in the Final Localized Significance Threshold Methodology document. The analysis of localized air quality impacts associated with NO_x emissions is focused on NO_2 levels as they are associated with adverse health effects.*
[c] *Distances from the Project Site to the sensitive receptors are expressed in meters.*
Calculation sheets are provided in Appendix A to this Addendum.

Operational Emissions

Although the Modified Project would not directly generate any new vehicle trips, the Project would result in changes to the traffic circulation in the vicinity and would alter the average daily traffic volumes and peak hour traffic volumes at local intersections, similar to the Approved Project and Original Project. As discussed above under the Approved Project, a CO hotspot analysis was conducted for the Original Project. Modeling of future CO concentrations from the intersections in the study area was based on projected traffic volumes from the intersections contained in the Original Project Traffic Study[4].

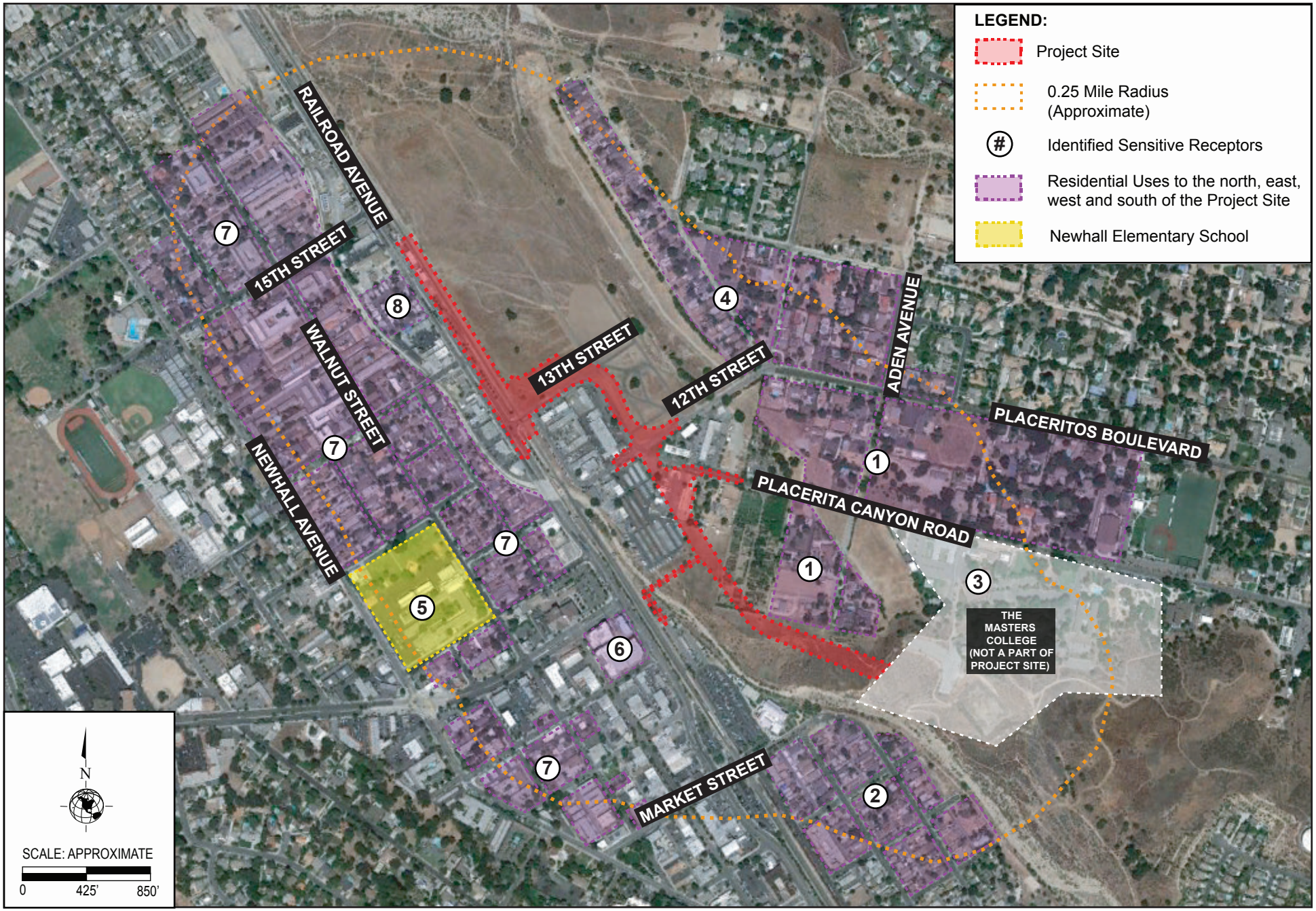
With respect to roadway improvements, the Modified Project includes the extension of Dockweiler Drive to Arch Street, as well as the installation of a roundabout at the intersection of the Arch Street/12th

4 *Ibid.*

Street/Placerita Canyon intersection. As discussed further below in Section 4.10 Transportation, the traffic volumes for the Modified Project's Traffic Study (see Appendix D of the Addendum) were based on results of the Traffic Impact Study for the EIR and its assumptions for traffic forecast modeling. Based on updated modeling for the project area with respect to traffic distribution and the Modified Project's roadway configurations at the Arch Street/12th Street/Placerita Canyon intersection, traffic volume actually decreased on the roadway segments between Railroad Avenue and 13th Street and 12th Street and Dockweiler Drive under the 2035 horizon year project scenario[5], as compared to the Approved Project. As no new significant vehicle delays were identified with respect to the Modified Project's roundabout configuration at the Arch Street/12th Street/Placerita Canyon intersection[6], and the extension of Dockweiler Drive between Arch Street and The Master's University project site limits are largely within the footprint that was analyzed under the Original Project, no significant project-related impact would occur relative to future carbon monoxide concentrations of the Modified Project. Therefore, similar to the Approved Project, the Modified Project would have a less than significant impact with respect to operational air quality emissions.

[5] *As discussed in the Traffic Study (see Appendix D), a project year of 2025 was identified as the opening year for the Modified Project. Traffic volumes for year 2025 were calculated by interpolation between the EIR Alternative 2 Year 2019 and Year 2035 traffic volumes.*

[6] *The Traffic Study (see Appendix D) notes that based upon the proposed intersection alternatives and discussion with the City of Santa Clarita, it was determined that comparing Level of Service (LOS) would not be appropriate, as roundabouts and standard intersections operate differently. Therefore, Vehicle Queue Lengths and Vehicle Delay at the approaches of the Dockweiler Drive/12th Street/Placerita Canyon Road study intersection would be estimated to determine how the project performs.*



Source: Google Earth, 2020.

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Figure 4-1
Air Quality Sensitive Receptors Location Map

4.3 BIOLOGICAL RESOURCES

Approved Project

Habitat Modification

i. Vegetation

The Final EIR concluded that of the vegetation communities impacted by the Approved Project, Disturbed California Sagebrush-California Buckwheat Scrub would be the dominant plant community present by area and approximately less than 0.63 acre of this habitat would be lost through site grading and project implementation. Due to the Project Site's disturbance history, its small size, the lack of sensitive plant communities, the lack of structure for wildlife, and high percentage of invasive and non-native plant species generally associated with disturbed areas, impacts associated with the loss of less than 2 acres of vegetation present on-site is considered less than significant. The only special-status plants observed during the field investigation were two coast live oaks. No other special-status plants are considered to have a high potential for occurrence within the Project Site. With implementation of Mitigation Measure 4.3-7, which would ensure compliance with the City's Oak Tree Preservation and Protection Guidelines, impacts would be mitigated to less than significant.

ii. Wildlife

Project-related activities associated with site preparation and construction of the Approved Project could result in the direct loss of individuals of one special-status wildlife species (the silvery legless lizard) and of active nests or the abandonment of active nests by adult birds should grading occur during nesting season. The loss of a California species of special concern and active bird nests would be a considered significant without mitigation. However, implementation of Mitigation Measures 4.3-1 and 4.3-2 would reduce impacts to the silvery legless lizard and nesting birds to a less than significant level.

Federally Protected Wetlands

The Approved Project would not result in either temporary or permanent impacts to the areas of the Newhall Creek and its associated tributary. The Approved Project does not include the extension of Lyons Avenue to Dockweiler Drive, which would span a portion of the Newhall Creek. As such no impacts to jurisdictional resources would occur.

Wildlife Movement and Corridors

The Project Site is generally surrounded on three sides by development and road networks. Although the Newhall Creek is located to the west of the Project Site, the Approved Project would not result in any barrier to wildlife movement and would not impede the ability of Newhall Creek to function as a wildlife movement corridor. The Approved Project would not result in significant impacts to wildlife movement.

Construction Activity

Construction-related activities, particularly site clearing, grading, and the implementation of the road surface, could have adverse effects on plant and wildlife habitat, and together, would be considered a significant impact. Implementation of Mitigation Measure 4.3-4, which specifies guidelines to minimize impacts on remaining biological resources on the site as a result of construction and grading activities, would reduce these construction-related impacts to a less than significant level.

Operation

i. Increase in Populations of Non-Native Species

Historical and ongoing development in the vicinity of the Project Site has already supported continual and ongoing increase and proliferation of non-native plant and wildlife species in the vicinity of the Project Site. Development of the Approved Project is not expected to substantially increase the distribution of non-native plants and wildlife. Compliance with Mitigation Measure 4.3-5, which requires provisions to avoid the use of, or growth of, invasive plant species, would reduce impacts to a less than significant level.

ii. Increased Light and Glare

As concluded in the Final EIR, it is anticipated that nighttime lighting would increase in areas adjacent to the Project Site, which can disturb breeding and foraging behavior, movement, and can potentially alter breeding cycles of birds, mammals, and nocturnal invertebrates. The Approved Project would increase light and glare effects near to the Newhall Creek corridor. Implementation of Mitigation Measure 4.3-6 would require that lighting is directed away from natural areas, which would decrease this impact to a less than significant level.

Stormwater and Urban Runoff

It is expected that stormwater runoff associated with the Approved Project would be limited to pavement runoff during periodic storm events. Runoff could substantially affect special-status species potentially occurring downstream from the Project Site (i.e. Newhall Creek), incrementally diminish habitat, and degrade the quality of the environment. With the compliance to City's standard stormwater requirements and required design criteria, impacts to Newhall Creek resulting from Stormwater runoff from the Approved Project would be less than significant.

Modified Project

Habitat Modification

i. Vegetation

Based on the Biological Resources Assessment prepared for the EIR, (see Appendix D of the EIR)[7], of the vegetation communities impacted by the Modified Project, Disturbed California Sagebrush-California Buckwheat Scrub would be the dominant plant community present within the Project Site, similar to the Approved Project. Although the Modified Project would include a larger grading footprint on the northern portion of the Project Site to accommodate grading improvements associated with the UP/Metrolink rail trail and stormwater treatment basins, as compared to the Approved Project, due to the Project Site's disturbance history, its small size, the lack of sensitive plant communities, the lack of structure for wildlife, and high percentage of invasive and non-native plant species generally associated with disturbed areas, impacts associated with the loss of the vegetation present on-site would be considered less than significant.

As shown in the Oak Tree Inventory (see Appendix B of this Addendum), construction of the Modified Project may result in the encroachment of eight oak trees within the immediate vicinity of Modified Project's grading limits and require the removal of four oak trees within the Modified Project's grading limits. Although the Modified Project would result in the encroachment and removal of additional oak trees, as compared to the Approved Project, with approval of the required oak tree permits, and implementation of Mitigation Measure 4.3-7, which would ensure compliance with the City's Oak Tree Preservation and Protection Guidelines, impacts would be mitigated to less than significant. Therefore, under of the Modified Project, impacts related to vegetation would be marginally higher but would remain less than significant with mitigation, like the Approved Project.

ii. Wildlife

Like the Approved Project, activities associated with site preparation and construction of the Modified Project could result in the direct loss of individuals of one special-status wildlife species (the silvery legless lizard) and of active nests or the abandonment of active nests by adult birds should grading occur during nesting season. Although the Modified Project would include a larger grading footprint on the northern portion of the Project Site, as compared to the Approved Project, like the Approved Project implementation of Mitigation Measures 4.3-1 and 4.3-2 would reduce impacts to the silvery legless lizard and nesting birds to a less than significant level. Therefore, impacts associated with wildlife under the Modified Project would be the same as those identified under the Approved Project.

[7] *Impact Sciences, Inc., Biological Resources Assessment, Jurisdictional Delineation and Impact Assessment, Dockweiler Road Extension Project, Santa Clarita, California. April 2015. See Appendix D of the EIR.*

Federally Protected Wetlands

Unlike the Approved Project, the Modified Project would include a pedestrian/bicycle pathway that connects from the proposed Dockweiler Drive extension to the Newhall Metrolink Station to the southwest). A portion of this pathway would cross over Newhall Creek; however, no footings within Newhall Creek would be required. Nevertheless, the Modified Project would require implementation of Mitigation 4.3-3, which would reduce impacts to jurisdictional resources to a less than significant level.

When compared to the Original Project, which includes the extension of Lyons Avenue to Dockweiler Drive, which would span a portion of Newhall Creek, the Modified Project has a smaller footprint and span with respect to Newhall Creek. While impacts under the Modified Project would be marginally higher as compared to the Approved Project, impacts would be less than those identified under the Original Project.

Wildlife Movement and Corridors

Like the Approved Project, the Modified Project would not result in any barrier to wildlife movement. The Modified Project would include a pedestrian/bicycle pathway and bridge that connects from the proposed Dockweiler Drive extension to the Newhall Metrolink Station to the southwest. A portion of this pathway would span the Newhall Creek; however, no footings within Newhall Creek would be required. Therefore, the Approved Project would not impede the ability of Newhall Creek to function as a wildlife movement corridor. The Modified Project would not result in significant impacts to wildlife movement. Impacts related to wildlife movement would be similar to those identified under the Approved Project.

Construction Activity

Like the Approved Project, construction-related activities of the Modified Project, particularly site clearing, grading, and the implementation of the road surface, could have adverse effects on plant and wildlife habitat, and together, would be considered a significant impact. Although the Modified Project would include a larger grading footprint on the northern portion of the Project Site, as compared to the Approved Project, implementation of Mitigation Measure 4.3-4, which specifies guidelines to minimize impacts on remaining biological resources on the site as a result of construction and grading activities, would reduce these construction-related impacts to a less than significant level. Therefore, under of the Modified Project, impacts related to biological resources during construction would be marginally higher but would remain less than significant with mitigation.

Operation

i. Increase in Populations of Non-Native Species

As concluded under the Approved Project, historical and ongoing development in the vicinity of the Project Site has already supported continual and ongoing increase and proliferation of non-native plant and wildlife species in the project area vicinity. Therefore, like the Approved Project, development of the Modified Project is not expected to substantially increase the distribution of non-native plants and wildlife. Compliance with Mitigation Measure 4.3-5, which requires provisions to avoid the use of, or growth of, invasive plant species, would reduce impacts to a less than significant level, similar to the Approved Project.

ii. Increased Light and Glare

Like the Approved Project, it is anticipated that nighttime lighting proposed under the Modified Project would increase in areas adjacent to the Project Site, which can disturb breeding and foraging behavior, movement, and can potentially alter breeding cycles of birds, mammals, and nocturnal invertebrates. The Modified Project would increase light and glare effects near to the Newhall Creek corridor. However, implementation of Mitigation Measure 4.3-6 would require that lighting is directed away from natural areas, which would decrease this impact to a less than significant level, like the Approved Project.

Stormwater and Urban Runoff

It is expected that stormwater runoff associated with the Modified Project would be limited to pavement runoff during periodic storm events. Similar to the Approved Project, runoff could substantially affect special-status species potentially occurring downstream from the Project Site (i.e. Newhall Creek), incrementally diminish habitat, and degrade the quality of the environment. The Modified Project would include two basins for stormwater capture and treatment; one interim detention would be located to the north of 13th Street and east of Railroad Avenue (see Figure 2-7 Modified Project Grading Plan at Railroad Avenue and 13th Street) and one infiltration basin would be located south of the improvements as Placerita Canyon Road and east of the proposed Dockweiler Drive Alignment (see Figure 2-8 Modified Project Grading Plan at Arch Street/ 12th Street/ Placerita Canyon Road/ Dockweiler Drive Extension Intersection). The stormwater basins would capture and treat stormwater runoff associated with the roadway improvements in accordance with the National Pollutant Discharge Elimination System (NPDES) requirements and City grading regulations. Similar to the Approved Project, compliance with the City's standard stormwater requirements and required design criteria would reduce impacts to Newhall Creek stormwater runoff impacts to a less than significant level. Impacts from stormwater runoff would be marginally less, due to the addition of the stormwater basins on the Project Site, as compared to the Approved Project.

4.4 CULTURAL RESOURCES

Approved Project

Cultural and Historic Resources

No cultural or historic habitable structures are located on-site, and as such, the Approved Project would not have the potential to adversely impact any historic or cultural resources.

Archaeological Resources and Human Remains

No known archeological sites are identified within the Project Site for the Approved Project. However, construction-related earthwork activities may result in the accidental discovery of prehistoric or historic archaeological resources or Native American burial sites. Implementation of Mitigation Measures 4.4-1, which would ensure the preservation, conservation, or relocation in the event any resources are discovered during construction-related earthwork activities, would reduce impacts to a less than significant level.

Modified Project

Cultural and Historic Resources

Like the Approved Project, no cultural or historic habitable structures are located on the Project Site, and as such, the Modified Project would not have the potential to adversely impact any historic or cultural resources. Project impacts associated with historic and cultural resources would therefore be the same under the Modified Project as that which was analyzed under the Approved Project.

Archaeological Resources and Human Remains

The southeastern grading limits for the Modified Project (between Arch Street and The Master's University project limits) are generally within the grading limits that were analyzed for both the Original Project and the Approved Project. The Modified Project would include a larger grading footprint on the northern portion of the Project Site (approximately seven acres), as compared to the Original Project and Approved Project, to accommodate the roadway improvements at Arch Street, 13th Street and Placerita Canyon Road, the intersection improvements at 13th Street and Railroad Avenue, grading improvements along the UP/Metrolink railroad line between 13th Street and 15th Street, and the addition of two new stormwater basins. Similar to the Approved Project, construction-related earthwork activities may result in the accidental discovery of prehistoric or historic archaeological resources or Native American burial sites. Like the Approved Project implementation of Mitigation Measures 4.4-1 would ensure the preservation, conservation, or relocation in the event any resources are discovered during construction-related earthwork activities, would reduce impacts to a less than significant level. Impacts under the Modified Project would therefore be similar to those identified under the Approved Project.

4.5 ENERGY

Approved Project

Subsequent to the adoption of the EIR, the State CEQA Guidelines have been amended to require lead agencies to determine a project's demand on electricity, natural gas, and transportation energy. This section analyzes the Modified Project's impacts to energy conservation and resources.

Modified Project

In accordance with guidance provided in Appendix G to the state CEQA Guidelines, the Modified Project would have a significant impact on energy if it would:

(a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation;

(b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency;

Impact Analysis

a) Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

A significant impact would occur if the Modified Project results in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Construction

Energy would be consumed during the grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving phases of the Modified Project for grading and materials transfer by heavy-duty equipment, which is usually diesel powered. Construction of the Modified Project would generate an increased demand for electricity use related to the treatment and conveyance of water for dust suppression activities during the excavation and grading phase, and the consumption of gasoline and diesel fuels associated with haul trucks, deliveries, and worker commute trips.

However, due to the relatively short duration of the construction process, and the fact that the extent of fuel consumption is inherent to construction projects of this size and nature, fuel consumption impacts would not be considered excessive or substantial with respect to regional fuel supplies. Further, compliance with regulatory compliance measures, such as restricting haul trucks to off-peak hours and not allowing engines to idle excessively when not in use (AQMD Rule 403), and meeting specified fuel and fuel additive requirements and emission standards (C.C.R. Title 13, Sec. 2485), would further serve to increase energy efficiency and reduce consumption of fossil fuels. The energy demands during construction would be typical of construction projects for projects of this size and would not necessitate additional long-term

energy facilities or distribution infrastructure or cause wasteful, inefficient or unnecessary consumption of energy. Accordingly, energy demands during construction would be less than significant.

Operation

The Modified Project consists of a roadway extension project aimed to improve circulation and access in the Placerita Canyon and Newhall communities and does not include any buildings or land uses. Therefore, the Modified Project would not generate electricity or natural gas demands during operation.

Transportation Energy

The Modified Project consists of a roadway extension to Dockweiler Drive, aimed to improve circulation and access in the Placerita Canyon and Newhall communities. As discussed in the Transportation section below, the Modified Project would alter traffic distribution, which would also reduce delays in the area when compared to existing conditions (2019). Thus, the Modified Project would promote reductions in vehicle-miles-traveled (VMT) and would lessen the amount of time spent along these roadways.

Additionally, Class II bike lanes, multiuse paths and pedestrian sidewalks would be provided to enhance non-auto travel safety and promote connectivity between The Master's University, the Newhall Metrolink Station and Old Town Newhall. The Modified Project would include a bicycle and pedestrian pathway south of Dockweiler Drive, that spans Newhall Creek, to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive extension. This would aim to reduce trips and promote the use of other modes of transportation.

Therefore, the operation of the Modified Project would result in improved circulation in the local area, reduce VMT, decrease delays, promote alternate modes of transportation, and reduce its reliance on transportation energy. Thus, impacts from transportation energy would be less than significant.

b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Modified Project consists of a roadway extension project aimed to improve circulation and access in the Placerita Canyon and Newhall communities and does not include any buildings or land uses. Therefore, the Modified Project would not generate electricity or natural gas demands during operation.

With respect to transportation energy, vehicle trips generated during the Modified Project operations would comply with CAFÉ fuel economy standards. During construction activities, the Modified Project would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations. As such, the Modified Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant.

4.6 GEOLOGY AND SOILS

Approved Project

As concluded in the EIR, the potential for earthquake-induced slope failure at the Project Site is considered low provided that future geologic and geotechnical evaluations and recommendations for slope stability are incorporated into design and construction of the Approved Project. Additionally, specific recommendations for design and construction would address soil stability, including: hydro-compression, expansive soils, rippability, the handling of oversized material, soil corrosivity, shirking and bulking of materials, and the handling of the need for retaining wall. As concluded in the Final EIR, the implementation of Mitigation Measure 4.5-1 and 4.5-2 would ensure that potential project impacts associated with geotechnical stability and earthwork would be reduced to a less than significant level.

Paleontological Resources

As discussed in the EIR, the records search conducted by the Vertebrate Paleontology Department of the Natural History Museum of Los Angeles County yielded no known fossil localities within the Project Site. While it is possible that fossilized materials may be discovered during site preparation and construction, specifically grading and excavation activities, precautionary measures set forth in Mitigation Measure 4.4-2 would reduce any potential adverse impacts related to the discovery of paleontological resources during construction-related earthwork activities to a less than significant level.

Modified Project

Like the Approved Project, the potential for earthquake-induced slope failure at the Project Site is considered low provided that future geologic and geotechnical evaluations and recommendations for slope stability are incorporated into design and construction of the Modified Project. Additionally, specific recommendations for design and construction would address soil stability, including: hydro-compression, expansive soils, rippability, the handling of oversized material, soil corrosivity, shirking and bulking of materials, and the handling of the need for retaining wall. Similar to the Approved Project, implementation of Mitigation Measure 4.5-1 and 4.5-2 would ensure that potential project impacts associated with geotechnical stability and earthwork would be reduced to a less than significant level. The Modified Project would not result in impacts that are more severe than those that were identified under the Approved Project in the EIR.

Paleontological Resources

The southeastern grading limits for the Modified Project (between Arch Street and The Master's University project limits) are generally within the grading limits that were analyzed for both the Original Project and the Approved Project. The Modified Project would include a larger grading footprint on the northern portion of the Project Site (approximately seven acres), as compared to the Original Project and Approved Project, to accommodate the roadway improvements at Arch Street, 13th Street and Placerita Canyon Road, the intersection improvements at 13th Street and Railroad Avenue, grading improvements along the

UP/Metrolink railroad line between 13th Street and 15th Street, and the addition of two new stormwater treatment basins. Like the Approved Project, site preparation and construction, specifically grading and excavation activities may unearth fossilized materials. Precautionary measures as identified in Mitigation Measure 4.4-2 would reduce any potential adverse impacts related to the discovery of paleontological resources during construction-related earthwork activities to a less than significant level. Therefore, impacts related to paleontological resources would be the same as compared to the Approved Project.

4.7 HYDROLOGY AND WATER QUALITY

Approved Project

Construction

The Approved Project would be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) prior to earthwork activities that will put best management practices and erosion control measures to prevent pollution in stormwater discharge. Through compliance with National Pollutant Discharge Elimination System (NPDES) requirements and City grading regulations, the Approved Project's construction impacts related to water quality would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. Construction-related impacts to hydrology and water quality would therefore be less than significant.

Operation

In accordance with NPDES requirements, the Project Applicant would be required to have a Project-specific Standard Urban Storm Water Mitigation Plan (SUSMP) in place during the operational life of the Project to address the management of runoff from the proposed roadway extension. The SUSMP would include site design, source control, low-impact development, and best management practices. Therefore, implementation of the storm water quality plan would reduce water quality impacts during the Approved Project's operation to less than significant.

Inundation and Flooding

As concluded in the Final EIR, unlike the Original Project, the Approved Project, does not include the roadway extension from Lyons Avenue to Dockweiler Drive, which spans a portion of the Newhall Creek. As such, the Approved Project would not include the development of a new bridge across Newhall Creek or require embankment protection to the roadway and creek and would not result in impacts upon hydrologic flows within Newhall Creek.

Modified Project

Construction

Like the Approved Project, the Modified Project would be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) prior to earthwork activities that will implement best management practices and erosion control measures to prevent pollution in stormwater discharge. Through compliance with National Pollutant Discharge Elimination System (NPDES) requirements and City grading regulations, the Modified Project's construction impacts related to water quality would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. The Modified Project's construction-related impacts to hydrology and water quality would therefore be less than significant.

Operation

As shown in Figure 2-6 Modified Project Site Plan, the Modified Project would include the addition of two basins for stormwater capture and treatment associated with the roadway improvements; one interim detention basin would be located to the north of 13th Street and east of Railroad Avenue (see Figure 2-7 Modified Project Grading Plan at Railroad Avenue and 13th Street) and one infiltration basin would be located south of the improvements as Placerita Canyon Road and east of the proposed Dockweiler Drive Alignment (see Figure 2-8 Modified Project Grading Plan at Arch Street/ 12th Street/ Placerita Canyon Road/ Dockweiler Drive Extension Intersection). Like the Approved Project, the Modified Project would be required to have a Project-specific SUSMP in place during the operational life of the Project to address the management of runoff from the proposed roadway extension in accordance with NPDES requirements. The SUSMP would include site design, source control, low-impact development, and treatment control BMPs and would address site design BMPs (such as minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, and creating reduced or "zero discharge" areas); incorporate applicable source control BMPs; incorporate treatment control BMPs as described in the Los Angeles County SUSMP; describe long-term operation and maintenance requirements for the treatment control BMPs; and describe the mechanism for funding the long-term operation and maintenance of the treatment control BMPs.

The final selection of BMPs would be completed through coordination with the City. Also, per the NPDES, the storm water quality plan would be subject to review and approval by the City for compliance with the County's Development Best Management Practices Handbook, Low Impact Development Manual, Part B Planning Activities. As stated in the Low Impact Development Manual, because the Modified Project would result in the construction of a roadway of more than 10,000 square feet, the Modified Project would be required to comply with the US Environmental Protection Agency's (USEPA) guidance on "green streets",[8] to the maximum extent feasible. The EPA's green streets manual provides guidance on a variety of design

[8] *US Environmental Protection Agency, Managing Wet Weather with Green Infrastructure: Green Streets 26, EPA-833-F-08-009, December 2008.*

elements including street trees, permeable pavements, bioretention, and swales, in an effort to provide source control of stormwater, limit its transport and pollutant conveyance to the collection system, restore predevelopment hydrology to the extent possible, and provide environmentally enhanced roads.[9]

Therefore, like the Approved Project, with implementation of the storm water quality plan as discussed above, water quality impacts during operation of the Modified Project would be less than significant.

Inundation and Flooding

Portions of the roadway improvements along Arch Street and 13th Street, and the bicycle and pedestrian pathway and bridge south of Dockweiler Drive, are located in a "Zone A", as indicated in the National Flood Insurance Rate Map for Los Angeles County, which indicates a special flood hazard area that is subject to inundation by the 1% annual chance flood (100-year flood).[10] Like the Approved Project, the Modified Project does not include the roadway extension from Lyons Avenue to Dockweiler Drive, which spans a portion of the Newhall Creek. However, the proposed bicycle and pedestrian pathway south of Dockweiler Drive, would span a portion of the Newhall Creek, to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive extension. With respect to the Original Project, the EIR concluded that the proposed bridge and channel improvements, associated with the roadway extension, could accommodate the Capital Flood and would not create any flood hazard for the adjacent railroad and proposed street improvements with implementation of regulatory code compliance. Installation of the bicycle and pedestrian bridge would be implemented by placing the footings upland and outside of Newhall Creek. Unlike the Original Project, which included the installation of footings within the creek channel, this alternative would avoid direct impacts within the creek bed. As the bicycle and pedestrian bridge proposed under the Modified Project is generally within the same outer footprint as the roadway alignment analyzed for the Original Project, and would generally be smaller in scale and scope, as compared to the roadway alignment, impacts associated with inundation and flooding would be less than significant and would not result in new or more severe impacts as those analyzed in the Final EIR under the Approved Project.

9 *US Environmental Protection Agency, Managing Wet Weather with Green Infrastructure Municipal Handbook, Green Street, EPA-833-F-08-009, December 2008.*

10 *Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map, Los Angeles County, California and Incorporated Areas, Map Number 06037C0820F, September 26, 2008.*

4.8 LAND USE AND PLANNING

Approved Project

The Approved Project would involve the development of the proposed roadway alignment and associated infrastructure for Dockweiler Drive, which would extend Dockweiler Drive to Arch Street. Unlike the Original Project, the Approved Project does not include the roadway segment between the Dockweiler extension and Lyons Avenue. The route would continue along Arch Street to 13th Street to link to Railroad Avenue. Additionally, Approved Project proposes to maintain and improve the 13th Street rail crossing. As discussed in the Final EIR, the Approved Project is in substantial compliance with the applicable land use plans, policies, or regulations, including: the Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), City of Santa Clarita Municipal Code, City of Santa Clarita General Plan (including the Circulation Element), the Placerita Canyon Special Standards District and North Newhall Area, Old Town Newhall Specific Plan, and the Compass Blueprint Concept Plan. As such, implementation of the Approved Project would create a less than significant impact with regards to land use and planning.

Modified Project

Like the Original Project and Approved Project, the Modified Project would be consistent with the City's Circulation Element as an additional route of travel connecting Railroad Avenue to Dockweiler Drive. The Modified Project would include upgrades to the at-grade railroad crossing at the intersection of Railroad Avenue and 13th street, new turn lanes, roadway widening, and median improvements. The Modified Project would also introduce a roundabout at the 12th Street/ Arch Street/ Dockweiler Drive intersection and modify the roadway connection from Dockweiler Drive to Placerita Canyon Road. These roadway improvements would improve traffic operations and enhance the safety of pedestrians and bicyclists. Additionally, the extension of Dockweiler Drive would promote non-auto travel by including a bicycle and pedestrian pathway south of Dockweiler Drive, that spans Newhall Creek, to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive extension. These improvements would provide connectivity from, Old Town Newhall and the Metrolink Station to The Master's University. As such, the Modified Project would similarly not conflict with any applicable land use plans, policies, or regulations identified under the Approved Project. Implementation of the Modified Project would create a less than significant impact with regards to land use and planning and would be similar to those impacts analyzed for the Approved Project.

4.9 NOISE

Approved Project

Construction

The Approved Project would require the use of heavy equipment for ground clearing, site grading, and roadway construction. Several pieces of construction equipment operating simultaneously would generate a noise level of approximately 94.6 dBA. The estimated construction noise levels impacting sensitive

receptors are expected to exceed the City's daytime noise standards for residential uses (see Section 4.8, Noise, Table 4.8-9, Estimated Exterior Construction Noise at Nearest Sensitive Receptors, of the EIR). Notwithstanding implementation of Mitigation Measures 4.8-1 through 4.8-9, which would require best practices to reduce construction related noise, construction noise levels would still constitute a significant unavoidable impact.

Operational

Section 4.8 Noise, of the EIR, analyzed operational noise impacts resulting from the proposed Original Project, which included the extension of the proposed Dockweiler Drive roadway to Lyons Avenue, a new at grade railroad crossing at Lyons Avenue and Railroad Avenue, and the closure of the 13th Street and Railroad Avenue intersection. The changes in future noise levels along the study-area roadway segments in the project vicinity for the Original Project near term (Year 2019) impacts would increase local noise levels by a maximum of 2.7 dBA CNEL (at the location of Dockweiler Drive (between Sierra Highway and Valle del Oro) (see Section 4.8, Noise, Table 4.8-11 Future (2019) Project Roadway Noise Impacts at Off-Site Locations, of the EIR). This increase would be below the identified thresholds of significance. At all other roadway segments, the resulting noise levels are anticipated to decrease.

Similarly, the EIR concluded that the Approved Project's potential to generate a substantial permanent increase in ambient noise levels in the project vicinity above existing levels would also be less than significant as the Approved Project would exclude the extension of Dockweiler Drive to Lyons Avenue but would include improvements to the intersection of Arch Street, 12th Street and Placerita Canyon Road, and at-grade railroad crossing and roadway improvements at the intersection of 13th Street and Railroad Avenue.

Under the proposed Original Project scenario, the Future (2019) With Project noise levels on the new roadway segment from Lyons Avenue to Valle del Oro are expected to be 63.3 dBA (CNEL) within 50 feet of the centerline of the roadway. The resulting noise levels at the three identified sensitive receptors would be below 52.9 dBA (see Section 4.8, Noise, Table 4.8-12 Estimated Roadway Noise at Nearest Sensitive Receptors, of the EIR). Thus, the anticipated with project noise levels at all off-site receptor locations would be within the "normally acceptable" range of noise for residential areas.

The Approved Project would direct more traffic through Arch Street and 13th Street. The land uses along Arch Street and 13th Street are commercial properties and are not considered sensitive land uses for purposes of evaluating noise impacts. Thus, noise impacts associated with the change of traffic flows under the Approved Project would be less than significant.

Modified Project

Construction

Like the Original and Approved Project, the Modified Project would require the use of heavy equipment for ground clearing, site grading, and roadway construction. Subsequent to the preparation of the EIR, a new mixed-use apartment complex located at 24480 Main Street (Newhall Crossings) has been completed (see Sensitive Receptor No. 6, Figure 4-2). This property is located more than 500 feet from a majority of where the Modified Project's construction would occur and would only be subject to potential construction noise impacts during the construction of the bicycle and pedestrian path and bridge that would connect Dockweiler Drive and the Metrolink Station parking lot.

As discussed above, the Original Project's construction noise analysis analyzed the extension of Lyons Avenue, which would span Newhall Creek, to connect to the proposed Dockweiler Drive. The Modified Project would not include the roadway extension of Lyons Avenue and instead would include a pedestrian and bicycle bridge that would cross Newhall Creek to connect with the northwest end of the Newhall Metrolink Station parking lot (see Figure 2-10 Modified Project Bike Path). Construction of the pedestrian and bicycle bridge would require cast-in-drilled-hole concrete piling to install three piles per bridge abutment (six piles total).

Drilling activity associated with the piles would occur over approximately ten days during Phase I of construction.[11] The use of drilling equipment for the piles would be limited to the permissible hours of construction and building activity pursuant to the City's Municipal Code[12]. Table 4-4 shows the estimated noise levels from the identified sensitive receptors and the location of drilling activity. As shown in Table 4-4, construction noise related to drilling activity would exceed the threshold level for the residential uses at Sensitive Receptor No. 6 (Newhall Crossings). Pursuant to the City of Santa Clarita Municipal Code, Section 11.44.040 (B), Noise Limits, Noise Condition (1), a -5 dBA correction to the noise limits for the sensitive receptors would be applied to adjust for the repetitive impulsive noise resulting from use of drilling equipment.[13] Therefore, construction noise generated by the drilling activities would impact one of the eight

[11] *As discussed above under Subsection 2.6, Modified Project, Phase 1 includes the construction of the widening of 13th Street and Arch Street, and Dockweiler Drive, east of Placerita Canyon Road, to the Master's University's portion of Dockweiler Drive to the southeast.*

[12] *Section 11.44.080 of the Noise Ordinance provides noise standards for construction and building activities. Pursuant to Section 11.44.080, no person shall engage in any construction work which requires a building permit from the City on sites within three hundred (300) feet of a residentially zoned property except between the hours of 7:00 A.M. to 7:00 P.M., Monday through Friday, and 8:00 A.M. to 6:00 P.M. on Saturday. Further, no work shall be performed on the following public holidays: New Year's Day, Independence Day, Thanksgiving, Christmas, Memorial Day and Labor Day. Emergency work as defined in Section 11.44.020(D) is permitted at all times.*

[13] *See Table 4.8-3, City Ordinance Noise Limits, Part B, Corrections to Noise Limits, (1) Repetitive Impulsive Noise, of the EIR, for additional factors and circumstances. Pursuant to the City of Santa Clarita Municipal Code, Section 11.44.040 (B), Noise Limits.*

sensitive receptors within the Project Site vicinity but would not result in more severe impacts as compared to impacts identified in the EIR under the Original Project.

Notwithstanding implementation of Mitigation Measures 4.8-1 through 4.8-9, and the addition of Mitigation Measure 4.8-10 (see below), which would require best practices to reduce drilling noise, the noise levels associated with drilling activity would still constitute a significant and unavoidable impact, similar to the Original and Approved Project. With respect to any vibration impacts from drilling activity, because of the distances from the nearest sensitive receptors to the location of drilling, the drilling activities would not result in any structural vibration impacts to any sensitive receptors.

Although drilling activity would only occur for a duration of approximately ten days during Phase I of construction, and notwithstanding Mitigation Measure 4.8-9 (Temporary Noise Barrier), the addition of Mitigation Measure 4.8-10, below, would ensure that noise impacts to sensitive receptors resulting from drilling activity would be reduced to the maximum extent feasible:

4.8-10 The project contractor shall erect a temporary noise-attenuating sound barrier along the perimeter(s) where drilling activity associated with the installation of piles occurs on the Project Site. The sound barrier will be a minimum of 8 feet in height to block the line-of-sight of construction equipment and off-site receptors.

Additionally, the Modified Project would include roadway improvements along Placerita Canyon Road to connect the existing street with the proposed roundabout at the Arch Street/12th Street and Placerita Canyon Road intersection. Several single-family homes near the intersection of Placerita Canyon Road and Aden Avenue are located within 500 feet of the Modified Project's grading limits (see Sensitive Receptor No. 7, Figure 4-2). The Modified Project's grading limits would also extend further north along Railroad Avenue as compared to the Approved Project. Therefore, the residential mobile homes fronting Railroad Avenue and the residences further west of Railroad Avenue, fronting Walnut Street, would be located within 500 feet of the Project Site (see Sensitive Receptor No. 8, Figure 4-2). The estimated construction noise levels impacting these sensitive receptors (Sensitive Receptor No. 6, 7 and 8) are shown in Table 4-4, below. As shown in Table 4-4, construction noise would exceed the threshold level for the residential uses at Sensitive Receptor No. 6, 7 and 8. Therefore, construction noise generated by the Modified Project would affect three additional sensitive receptors in the Project Site vicinity but would not result in more severe impacts as compared to impacts identified in the EIR under the Original and Approved Project. Notwithstanding implementation of Mitigation Measures 4.8-1 through 4.8-9, which would require best practices to reduce construction related noise, construction noise levels would still constitute a significant and unavoidable impact, similar to the Approved Project.

Table 4-3
Estimated Exterior Construction Reference Noise at Nearest Sensitive Receptors from Drilling

Sensitive Land Uses	Reference to Project Site (feet)	Reference Noise Level at Sensitive Receptor (dBA L_{eq})	Estimated Peak Construction Noise Levels at Receptor Location (dBA L_{eq}) [a]	Threshold Level (dBA L_{eq}) [b]	Significant Impact
1. Old Town Newhall Library (Noise Monitoring Location 3)	500	66.3	60.0	75	**No**
2. Residential uses on Aden Ave. (Noise Monitoring Location 5)	650	41.9	57.2	60	**No**
3. The Master's University Campus (Noise Monitoring Location 4)	1,500	60.5	48.1	60	**No**
4. Residential homes West of Railroad Avenue and north of Lyons Avenue (Noise Monitoring Location 2)	700	65.4	56.3	60	**No**
5. Residential uses south of Market Street (Noise Monitoring Location 4)	1,200	60.4	50.5	60	**No**
6. Residential uses at Newhall Crossings (Noise Monitoring Location 3)	230	66.3	68.4	60	**Yes**
7. Residential along Placerita Canyon Road (Noise Monitoring Location 5)	800	56.6	54.9	60	**No**
8. Mobile Homes fronting Railroad Avenue (Noise Monitoring Location 1)	2,200	74.8	43.9	60	**No**

Notes:

[a] Calculations based on Federal Transit Administration, Transit Noise and Vibration Impact Assessment, Final Report, May 2006. It should be noted that the peak noise level increase at the nearby sensitive receptors during Project construction represents the highest composite noise level that would be generated periodically during a worst-case construction activity and does not represent continuous noise levels occurring throughout the construction day or period.

[b] This threshold level represents the lowest threshold applicable for the types of noise activities anticipated to occur over a typical 8-hour workday. See Table 4.8-3, City Ordinance Noise Limits, Part B, Corrections to Noise Limits, (1) Repetitive Impulsive Noise, of the EIR, for additional factors and circumstances. Pursuant to the City of Santa Clarita Municipal Code, Section 11.44.040 (B), Noise Limits.

Source: Parker Environmental Consultants, See Appendix C, Noise Calculation Worksheets, of this Addendum.

Table 4-4
Estimated Exterior Construction Reference Noise at Nearest Sensitive Receptors

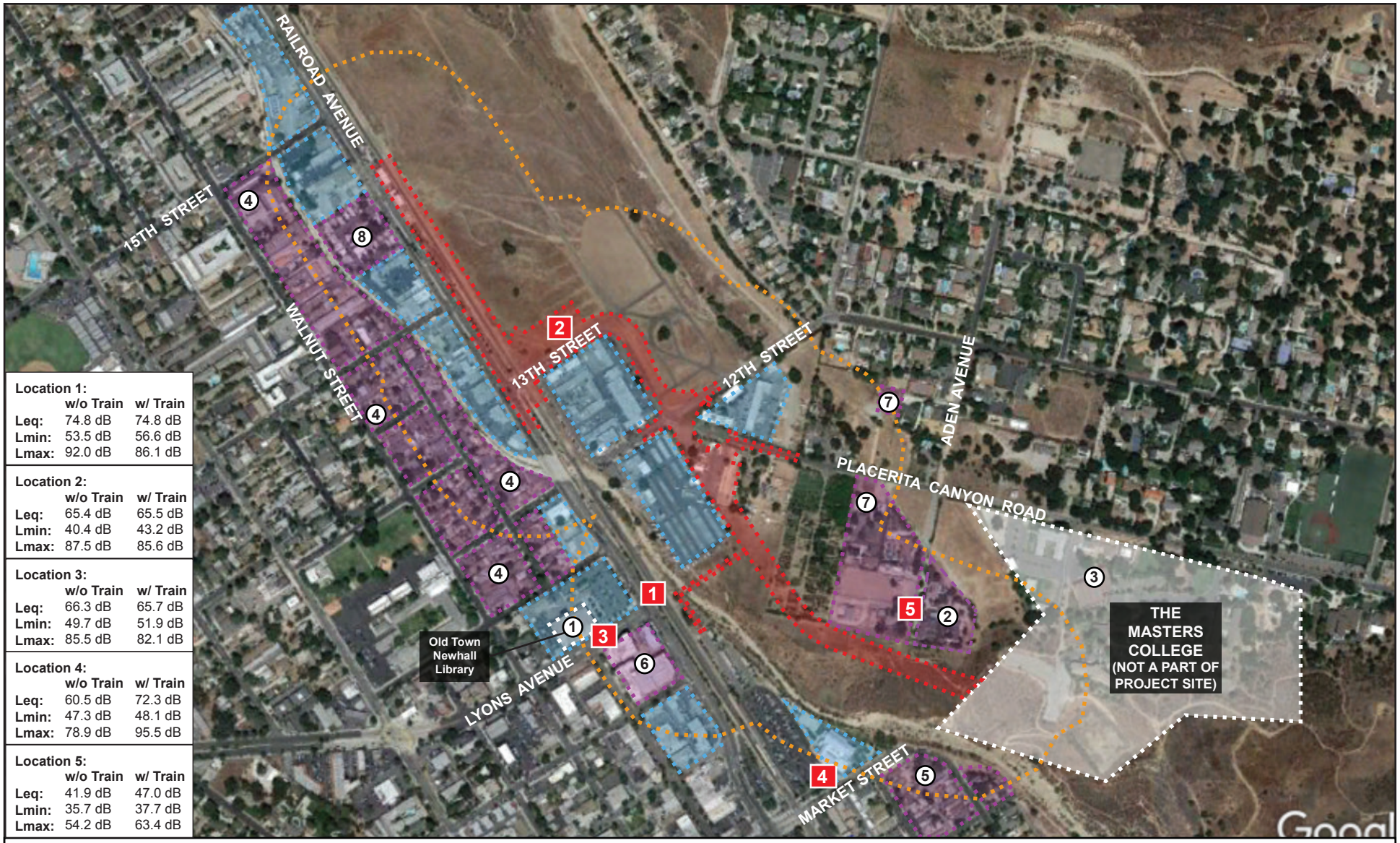
Sensitive Land Uses	Reference to Project Site (feet)	Reference Noise Level at Sensitive Receptor (dBA L_{eq})	Estimated Peak Construction Noise Levels at Receptor Location (dBA L_{eq}) [a]	Threshold Level (dBA L_{eq}) [b]	Significant Impact
1. Old Town Newhall Library (Noise Monitoring Location 3)	290	66.3	76.9	80	**No**
2. Residential uses on Aden Ave. (Noise Monitoring Location 5)	130	41.9	85.6	65	**Yes**
3. The Master's University Campus (Noise Monitoring Location 4)	490	60.5	71.2	65	**Yes**
4. Residential homes West of Railroad Avenue and north of Lyons Avenue (Noise Monitoring Location 2)	490	65.4	71.2	65	**Yes**
5. Residential uses south of Market Street (Noise Monitoring Location 4)	245	60.4	78.7	65	**Yes**
6. Residential uses at Newhall Crossings (Noise Monitoring Location 3)	230	66.3	79.4	65	**Yes**
7. Residential along Placerita Canyon Road (Noise Monitoring Location 5)	160	56.6	85.6	65	**Yes**
8. Mobile Homes fronting Railroad Avenue (Noise Monitoring Location 1)	90	74.8	89.6	65	**Yes**

Notes:

[a] *Calculations based on Federal Transit Administration, Transit Noise and Vibration Impact Assessment, Final Report, May 2006. It should be noted that the peak noise level increase at the nearby sensitive receptors during Project construction represents the highest composite noise level that would be generated periodically during a worst-case construction activity and does not represent continuous noise levels occurring throughout the construction day or period.*

[b] *This threshold level represents the lowest threshold applicable for the types of noise activities anticipated to occur over a typical 8-hour workday. See Table 4.8-3 for additional factors and circumstances with LAMC Section 112.05, which is an exceedance of 75 dBA at a distance of 50 feet from the noise source.*

Source: Parker Environmental Consultants, See Appendix C, Noise Calculation Worksheets, of this Addendum.



Source: Google Earth, 2018; Noise Measurements June 13, 2017.

PARKER ENVIRONMENTAL CONSULTANTS

Figure 4-2
Noise Monitoring Location Map

Operational

Similar to the Approved Project, the Modified Project would alter roadway traffic volumes as the Modified Project would create a new roadway segment connecting 13th Street and Arch Street to the proposed Dockweiler Drive roadway extension. As such, the Modified Project would not directly generate any new vehicle trips; however, locations in the vicinity of the Project Site could experience slight changes in noise levels as a result of the change in traffic patterns. As discussed above under the Approved Project, the changes in future noise levels along the study-area roadway segments in the project vicinity area for the Original Project near term (Year 2019) impacts would be below the identified thresholds of significance. In addition, the resulting noise levels from the additional vehicle trips generated by the Original Project at the identified sensitive receptors would be within the "normally acceptable" range of noise for residential areas.

The Modified Project includes the extension of Dockweiler Drive to Arch Street, as well as the installation of a roundabout at the intersection of the Arch Street/12th Street/Placerita Canyon intersection, a pedestrian and bicycle pathway that would span Newhall Creek, reprofiling of the UP/Metrolink railroad track, and the addition of stormwater treatment basins. Since the preparation of the EIR, a new apartment complex located at 24480 Main Street (Newhall Crossings), has been completed (see Sensitive Receptor No. 6, Figure 4-2). This property is located more than 600 feet southwest from the roadway extension portion of Dockweiler Drive and as such, would not incur additional operational noise impacts associated with vehicle traffic along the roadway extension. Additionally, the Modified Project would include grading improvements along Placerita Canyon Road to match the profile of the street to the proposed roundabout. Several single-family homes near the intersection of Placerita Canyon Road and Aden Avenue are located within 500 feet of the Modified Project's grading limits (see Sensitive Receptor No. 7, Figure 4-2) but are located over 700 feet from the proposed roundabout configuration. As such, these residences would not experience a significant increase related to roadway traffic along Placerita Canyon Road or the proposed roundabout. The Modified Project's grading limits would also extend further north along Railroad Avenue to accommodate the reprofiling of the UP/Metrolink railroad track (within the railroad's right-of-way, largely between 13th Street and 15th Street). Although the residential mobile homes fronting Railroad Avenue (located one block south of 15th Street and Railroad Avenue) (see sensitive Receptor No. 8, Figure 4-2) and the residences further west of Railroad Avenue, fronting Walnut Street, would be located within 500 feet of the Project Site, no new traffic configurations are proposed along this section of the Project Site, as modifications are limited to grading. The infrastructure improvements related to stormwater capture and railroad track reprofiling would not generate new roadway noise. With respect to roadway noise generated under the Modified Project at the intersection of 13th Street and Railroad Avenue, and 13th Street and Arch Street, land uses along Arch Street and 13th Street are commercial properties and are not considered sensitive land uses for purposes of evaluating noise impacts. Lastly, the footprint of the extension of Dockweiler Drive from Arch Street on the northwest to The Master's University project site limits to the southeast is largely within the same footprint of the Original Project that was analyzed in the EIR. As such, operational noise impacts on the residential uses along Aden Avenue would be similar to those analyzed under the Approved Project.

Therefore, like the Approved Project, the Modified Project's potential to generate a substantial permanent increase in ambient noise levels in the project vicinity above existing levels would be less than significant. In summary, operational noise impacts associated with the change of traffic flows under the Modified Project would be less than significant and would not result in new or more severe impacts as compared to impacts analyzed in the EIR under the Approved Project.

4.10 TRANSPORTATION

Approved Project

The summary of the Approved Project's traffic impacts discussed below is based on Section 6.4 Alternative 2, of the EIR, and the Traffic Study titled, *Traffic Impact Analysis: Dockweiler Drive Extension Project, Santa Clarita, CA*, prepared by David Evans and Associates, dated August 8, 2017. The complete Traffic Study is included in Appendix H of the EIR.

Opening Year (2019) Conditions

The Santa Clarita Valley Consolidated Traffic Model (SCVCTM) for Interim Year provided traffic volumes for the Project Year 2019. The Project Year 2019 Approved Project study intersections and the volumes are provided in Section 6.4 Alternative 2, Figure 6.4-7 and Figure 6.4-8, respectively, of the EIR.

The analysis for the intersection of Arch Street/Dockweiler Drive and 12th Street/Placerita Canyon Road was conducted as a 5-leg all way stop controlled intersection. The intersections were analyzed using the capacity analysis methodology. The analysis was conducted with the Project Year 2019 with the Approved Project existing and mitigated study intersection geometrics illustrated in in Section 6.4 Alternative 2, Figure 6.4-9, of the EIR. The LOS for the study intersections presented in Section 6.4 Alternative 2, Table 6.4-1 of the EIR, represents the LOS for the critical movement.

As concluded in the Final EIR, most of the study intersections are anticipated to continue to operate at LOS E or better under the Approved Project. Four intersections are anticipated to operate at LOS F, they are: Sierra Highway and SR-14 Southbound Ramps, Sierra Highway and Placerita Canyon Road, SR-14 Northbound Ramps and Placerita Canyon Road, SR-14 Southbound Ramps and Newhall Avenue.

Conclusion

With mitigation, the Sierra Highway and SR-14 Southbound Ramp intersection (see Study Intersection 1, Section 6.4 Alternative 2, Figure 6.4-7) levels of service will increase to LOS B and LOS C during the AM and PM peak hours, respectively. With mitigation, the Sierra Highway and Placerita Canyon Road intersection (see Study Intersection 2, Section 6.4 Alternative 2, Figure 6.4-7) level of service will remain the same at LOS C during the AM peak hour and will increase to LOS D during the PM peak hour. With mitigation, the SR-14 Northbound Ramps and Placerita Canyon Road intersection (see Study Intersection 3, Section 6.4 Alternative 2, Figure 6.4-7) level of service will remain the same at LOS B during the AM peak hour and will increase to LOS B during the PM peak hour. With mitigation, the SR-14 Southbound

Ramps and Newhall Avenue intersection (see Study Intersection 5, Section 6.4 Alternative 2, Figure 6.4-7) levels of service will increase to LOS A during both AM and PM peak hours.

In summary, with the implementation of Mitigation Measures 4.9-1, 4.9-3, and 4.9-6 through 4.9-16 the Approved Project's impacts during the 2019 build-out year would be less than significant.

Future (2035) Conditions

The Santa Clarita Valley Consolidated Traffic Model (SCVCTM) for Build-Out Year provided traffic volumes for the Future Year 2035. The analysis of the Approved Project utilizes the traffic volume projections for the City of Santa Clarita's traffic model together with the existing traffic flow data. The traffic projections are based on the General Plan Buildout. The buildout includes construction of future roadways Dockweiler Drive between 13th Street and Valle Del Oro, Magic Mountain Parkway from Railroad Avenue to Via Princessa, between Claibourne Lane and Sheldon Avenue, and Santa Clarita Parkway. This also includes the proposed conceptual development of the North Newhall area (809 dwelling unit plus an approximate 11-acre commercial land use). The Future Year 2035 Approved Project study intersections and the volumes are provided in Section 6.4 Alternative 2, Figure 6.4-10 and Figure 6.4-11, respectively, of the EIR.

The intersections were analyzed using the capacity analysis methodology. The analysis was conducted with the Future Year 2035 Approved Project existing and mitigated study intersection geometrics illustrated in Section 6.4 Alterative 2, Figure 6.4-12 of the EIR. The LOS for the study intersections presented in Section 6.4 Alterative 2, Table 6.4-2, of the EIR, represents the LOS for the critical movement.

As presented in Section 6.4 Alterative 2, Table 6.4-2 under Future Year 2035 with the Approved Project, several of the study intersections are anticipated to operate at LOS F. There are five intersections that are anticipated to operate at LOS F, they are: Sierra Highway and Placerita Canyon Road, Sierra Highway and Newhall Avenue, Valle Del Oro and Dockweiler Drive, Railroad Avenue and 13th Street, and Main Street and Newhall Avenue.

Conclusion

With mitigation, the Sierra Highway and Placerita Canyon Road intersection (see Study Intersection 2, Section 6.4 Alternative 2, Figure 6.4-10) levels of service will increase from a LOS F to LOS D during both AM and PM peak hours. With mitigation, the Sierra Highway and Newhall Avenue intersection (see Study Intersection 6, Section 6.4 Alternative 2, Figure 6.4-10) levels of service will increase from LOS E to LOS D during the AM peak hour and LOS F to LOS D during the PM peak hour. With mitigation, the Valle Del Oro and Dockweiler Drive intersection (see Study Intersection 8, Section 6.4 Alternative 2, Figure 6.4-10) levels of service will increase from a LOS F to LOS C during the AM peak hour and remain at a LOS C during the PM peak hour. With mitigation, the Railroad Avenue and 13th Street intersection (see Study Intersection 13, Section 6.4 Alternative 2, Figure 6.4-10) levels of service will remain at a LOS D during the AM peak hour and increase from a LOS F to LOS D during the PM peak hour. With mitigation, the Main Street and Newhall Avenue intersection (see Study Intersection 15, Section 6.4 Alternative 2, Figure

6.4-10) levels of service will increase from LOS F to LOS A during the AM peak hour and LOS F to LOS B during the PM peak hour.

In summary, with the implementation of Mitigation Measures 4.9-1, 4.9-3, and 4.9-6 through 4.9-16 the Approved Project's impacts during the 2035 year would be less than significant.

Railroad Crossing Analysis

The Approved Project scenario for Daily, AM and PM Peak hour traffic volumes were compiled for the Year 2019 and 2035 conditions as presented in Section 6.4 Alternative 2, Table 6.4-3 and Table 6.4-4, respectively. As presented in Table 6.4-3, the total average daily traffic is anticipated to be higher under the No Build Condition as compared to the Original Project and the Approved Project. The Approved Project's total average daily railroad crossings would result in 6,390 fewer crossings as compared to the No Build condition and 820 fewer railroad crossings as compared to the Original Project. For the Year 2035 Condition, the total average daily traffic is anticipated to be highest under the Original Project. The Approved Project would result in 3,370 fewer crossings as compared to the No Build condition and 6,230 fewer crossings than the Original Project.

Bicycle and Pedestrian Facilities

The Approved Project would comply with Santa Clarita's circulation goals and enhancing the circulation system by providing bicycle lanes and accessibility to bicycle paths that are fundamental for a comprehensive transportation network.

Vehicle Miles Traveled

As discussed in Section 4.9 Transportation and Traffic, of the EIR, The Original Project is identified as one of the financially constrained projects within the RTP/SCS, as shown in Table 1, 2020-2045 RTP/SCS Project List.[14] As such, the Approved Project is recognized as part of the regional strategy that is consistent with SCAG's policies to reduce vehicle miles traveled (VMTs). The Approved Project is also consistent with the City's Circulation Element as an additional route of travel connecting Railroad Avenue to Dockweiler Drive. Because no new land uses are being proposed, the Approved Project would not generate any new vehicle trips and thus would not have the potential to increase VMTs on a per capita basis.

Modified Project

The summary of the Modified Project's traffic impacts, discussed below, is based on the *Dockweiler Drive Extension Project Traffic Study,* prepared by ADVANTEC Consulting Engineers, dated September 2020. The complete Traffic Study is included in Appendix D of this Addendum.

[14] *Southern California Association of Governments, Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), Technical Report, Project List, Table 1, FTIP Projects, page 27.*

The Traffic Study analyzed three alternatives at the intersection of Arch Street, 12th Street, Placerita Canyon and Dockweiler Drive. Alternative 2 of the Traffic Study is consistent with the Modified Project as identified in this Addendum. In summary, the Modified Project proposes to extend Dockweiler Drive from its existing terminus, westward to intersect with Arch Street, and 12th Street providing a 4-legged roundabout with a signalized offset T-intersection with Placerita Canyon Road. The roundabout will have one main lane in the circle, with one lane approach from Arch Street, Dockweiler Drive, and 12th Street.

Methodology

The Traffic Study notes that based upon the proposed intersection alternatives and discussion with the City of Santa Clarita, it was determined that comparing Level of Service (LOS) would not be appropriate, as roundabouts and standard intersections operate differently. Therefore, Vehicle Queue Lengths and Vehicle Delay at the approaches of the Dockweiler Drive/12th Street/Placerita Canyon Road study intersection would be estimated to determine how each alternative performs.

Synchro/Simtraffic simulation was used to estimate vehicle queue lengths and vehicle delay. A 30-minute simulation was run using the peak hour volumes (AM and PM) for 2025 and 2035. A 2019 No-Build simulation was also created using existing traffic volumes. The simulations were then used to record the maximum queue (feet) and total delay (seconds per vehicle) experienced. The maximum queue was reported per lane group (i.e., exclusive lefts, through/shared, or exclusive rights). The total delay was reported per intersection approach.

Traffic volumes for year 2025 and 2035 were obtained from the Traffic Impact Study[15] of the Final EIR. The EIR's Year 2035 scenarios (Alternative 2 and No Build) traffic volumes were then adjusted to remove the traffic volumes corresponding to the Traffic Analysis Zone that represents the currently undeveloped area north of 13th Street/Arch Street. The removed traffic volumes were then replaced with the projected volumes for the Placerita Meadows development[16], with access points at 13th Street and at 12th Street. The Placerita Meadows development was assumed to be fully built by Year 2025.

A project year of 2025 was identified as the opening year for the Modified Project. Traffic volumes for year 2025 were calculated by interpolation between the EIR Alternative 2 Year 2019 and Year 2035 traffic volumes.

Opening Year (2025) Conditions

Table 4-5 and Table 4-6 below summarize the Opening Year 2025 maximum queue length and delay per vehicle for the study intersections, respectively. Figure 4-3 and Figure 4-4 provide the Modified Project's

[15] *Traffic Impact Analysis: Dockweiler Drive Alignment Project, Santa Clarita, CA, prepared by David Evans and Associates, dated August 8, 2017. See Appendix H of the Final EIR.*

[16] *City of Santa Clarita, Master Case No. 16-234, SCH No. 2019060009.*

traffic volumes for Opening Year 2025 for Railroad Avenue/13th Street and the Dockweiler Drive/12th Street/Placerita Canyon Road study intersections, respectively.

Horizon Year (2035) Conditions

Table 4-7 and Table 4-8 below summarize the Horizon Year 2035 maximum queue length and delay per vehicle for the study intersections, respectively. Figure 4-5 and Figure 4-6 provide the Modified Project's traffic volumes for Horizon Year 2035 for Railroad Avenue/13th Street and the Dockweiler Drive/12th Street/Placerita Canyon Road study intersections, respectively.

Conclusion

As concluded in the Traffic Study, the results of the Vehicle Queue Length analysis for 13th Street/Railroad Avenue intersection show that the Modified Project produced maximum queue lengths between 74 feet and 276 feet during AM period and between 22 feet and 362 feet during PM period for the Opening Year 2025 scenario. Additionally, the Modified Project produced maximum queue lengths between 96 feet and 298 feet during AM period and between 96 feet and 397 feet during PM period for the Horizon Year 2035 scenario.

The results of the Vehicle Queue Length analysis for Dockweiler Drive/ 12th Street intersection show that the Modified Project produced maximum queue lengths between 32 feet and 174 feet during AM period and between 32 feet and 202 feet during PM period for the Opening Year 2025 scenario. Additionally, the Modified Project produced maximum queue lengths between 53 feet and 153 feet during AM period and between 53 feet and 228 feet during PM period for the Horizon Year 2035 scenario.

The results of the Vehicle Queue Length analysis for Dockweiler Drive/Placerita Canyon Road intersection show that the Modified Project produced maximum queue lengths between 97 feet and 124 feet during AM period and between 72 feet and 92 feet during PM period for the Opening Year 2025 scenario. Additionally, the Modified Project produced maximum queue lengths between 74 feet and 117 feet during AM period and between 96 feet and 190 feet during PM period for the Horizon Year 2035 scenario.

These results indicate that the average queues expected to be experienced by drivers should not cause blockage of turn pockets or through lanes.

As noted above, traffic volumes for the Traffic Study were based on results of the Traffic Impact Study for the EIR and its assumptions for traffic forecast modeling. According to the Model Plots supplied in Appendix A of the Traffic Study, the No Build 2035 model assumes that there will be an additional roadway link extending from the existing Dockweiler Drive terminus to Master's University. This assumption in the No Build 2035 model alters the traffic distribution in the area and reduces the volumes at the intersection of 13th Street/Railroad Avenue intersection. The Model Plot for No Build 2019 does not assume this additional link. For this reason, traffic volumes at 13th Street/Railroad show a decrease from 2019 to 2035, which in turn causes a decrease in delay in future year (2035) when compared to existing (2019) and opening year (2025).

which in turn causes a decrease in delay in future year (2035) when compared to existing (2019) and opening year (2025).

Traffic volumes for 2035 horizon year were updated with more recent information on the Placerita Meadows development and the Traffic Analysis Zone it lies in. This caused volumes to decrease substantially on the segment between Railroad Ave and 13th Street and 12th Street and Dockweiler Drive. The decrease in volumes caused delays to also decrease.

Therefore, like the Approved Project, with implementation of Mitigation Measures 4.9-1, 4.9-3, and 4.9- 5 through 4.9-16 the Approved Project's impacts during the 2035 year would be less than significant. Mitigation Measure 4.9-3 would be modified to accommodate the proposed 4-legged roundabout with a signalized offset T-intersection with Placerita Canyon Road. Mitigation Measure 4.9-5 would be modified to accommodate the proposed upgrades and improvements at the 13th Street and Railroad Avenue intersection. Mitigation Measure 4.9-2 and 4.9-4 would no longer be applicable to Modified Project, as the Project does not include the extension of Lyons Avenue to Dockweiler Drive. Modifications to Mitigation Measures 4.9-3 and 4.9-5 are noted in by strikeout (deleted text) and underline (added text), below. These modifications would not result in new impacts or increase the severity of impacts above those which were previously analyzed under the Approved Project in the Final EIR.

Modification to Mitigation Measure 4.9-3 of the EIR

Arch Street (north leg) / Dockweiler Drive (south leg) / 12th Street (east and west legs) ~~/ Placerita Canyon Road (southeast leg)~~: Convert intersection to a 4-~~5~~-leg roundabout with a signalized offset T-intersection with Placerita Canyon Road. ~~all way stop controlled intersection including Dockweiler Drive as the 5th leg.~~ The roundabout will have one main lane in the circle with one lane approach from Arch Street, Dockweiler Drive and 12th Street. At the roundabout, Arch Street will ~~include a shared left-through-right lane~~ accommodate ~~accommodating left~~ right turning movements to the east and west legs of 12th Street and through access to Dockweiler Drive. ~~and Placerita Canyon Road.~~ Dockweiler Drive will ~~include a shared left-through-right lane~~ accommodate ~~accommodating~~ left (southbound) and right (northbound) turning movements to Placerita Canyon Road at the offset signalized T-intersection. ~~and the west leg (12th Street). The east leg (12th Street) will include a shared left-through-right lane accommodating left turning movements to Placerita Canyon Road and Dockweiler Drive. The west leg (12th Street) will include a shared left-through-right lane accommodating right turning movements to Dockweiler Drive and Placerita Canyon Road.~~ Placerita Canyon Road (westbound) will ~~include a shared left-right lane accommodating~~ accommodate right ~~left~~ turning movements to Dockweiler Drive. ~~and west leg (12th Street) and right turning movements to the east leg (12th Street) and Arch Street~~.

Modification to Mitigation Measure 4.9-5 of the EIR

~~Railroad Avenue (North-South) and 13th Street (East-West): The railroad crossing to be closed. The intersection modifications include removing the northbound right turn lane and southbound left turn lane and restricting the eastbound through movement. The northbound direction will include a left turn lane and~~

~~two through lanes. The southbound direction will include a through lane and a shared through-right turn lane. The eastbound direction will include a shared left-right turn lane.~~

Railroad Avenue (North-South) and 13th Street (East-West): The intersection modifications include widening the south and westbound direction to include a left turn lane. The northbound direction will include a left turn lane, two through lanes and a right turn lane. The southbound direction will include two left turn lanes, through lane, and a shared through-right turn lane. The eastbound direction will include a shared left-through-right turn lane. The westbound direction will include a left turn lane, a through, and a right turn lane.

Table 4-5
Vehicle Queue Length Analysis – Opening Year 2025 Modified Project

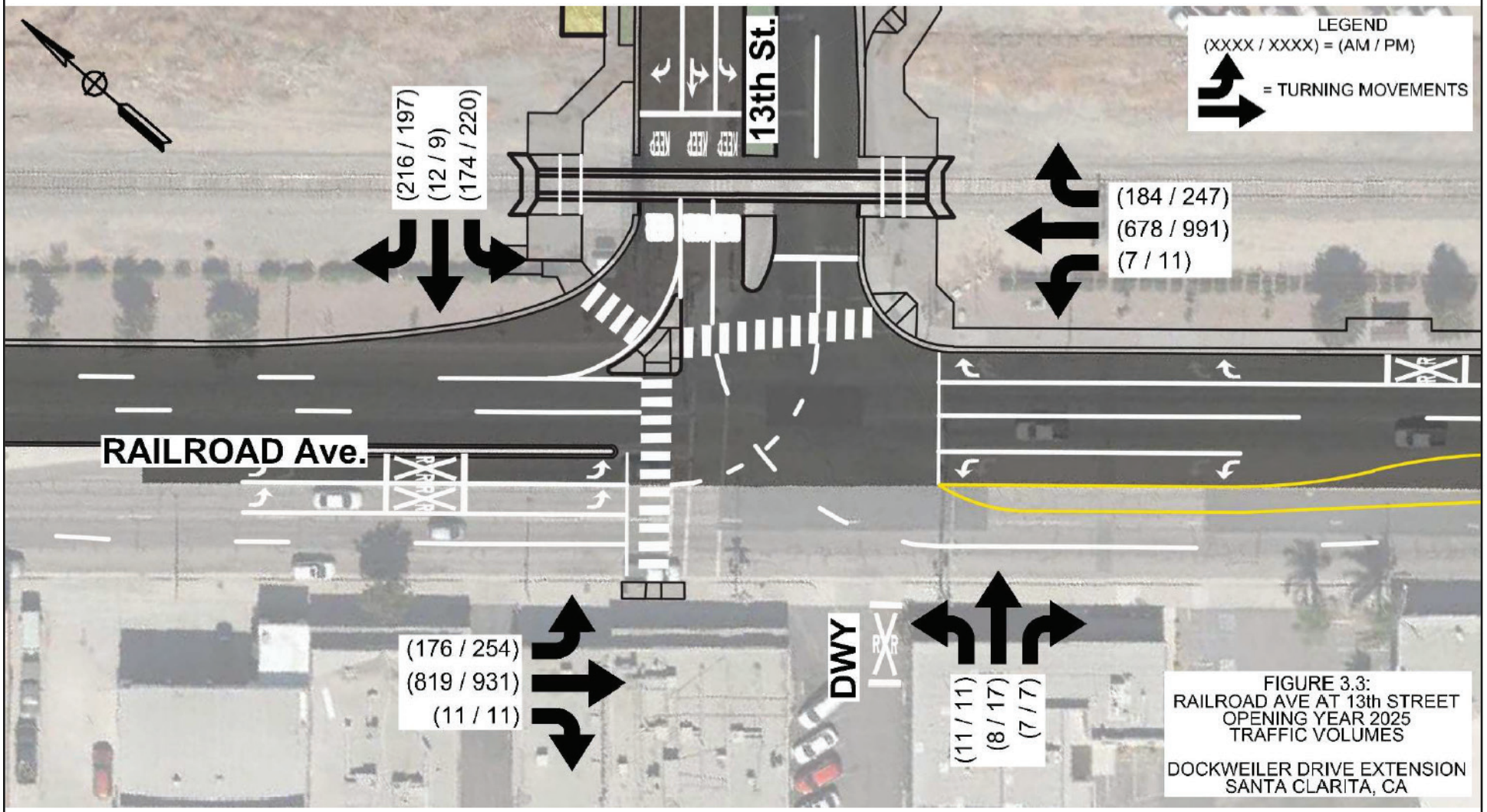
Intersection/Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	149	276	153	22	362	108
		EB		74		-	74	-
		SB	126	165		166	232	-
		WB	134	180[3]	226	134	204[3]	315
2	Dockweiler Drive/12th Street[2]	NB	-	174	-	-	81	-
		EB	-	32	-	-	32	-
		SB	-	134	-	-	202	-
		WB	-	76	-	-	80	-
3	Dockweiler Drive/Placerita Canyon Road	NB		99			92	-
		EB	-	-	-		-	-
		SB	97	-		72	-	-
		WB	-	-	124		-	76

Notes:
[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection
[3] Through/left turn lane
Source: Dockweiler Drive Extension Project Traffic Study, ADVANTEC Consulting Engineers, September 2020.

Table 4-6
Vehicle Delay Length Analysis – Opening Year 2025 Modified Project

Intersection/Delay per Vehicle			AM		PM	
			Delay[1]	Total	Delay[1]	Total
1	13th Street/Railroad Avenue	NB	17.4	20.7	21.4	20.5
		EB	57.4		36.2	
		SB	13.2		15.0	
		WB	44.0		30.7	
2	Dockweiler Drive/12th Street[2]	NB	4.4	4.4	4.3	4.3
		EB	3.2		2.3	
		SB	5		4.6	
		WB	3.5		3.6	
3	Dockweiler Drive/Placerita Canyon Road	NB	7.3	4.2	6.4	4.5
		EB	-		-	
		SB	2.5		3.0	
		WB	5.5		5.2	

Notes:
[1] Total Delay/Vehicle – Seconds
[2] Unsignalized Intersection
Source: Dockweiler Drive Extension Project Traffic Study, ADVANTEC Consulting Engineers, September 2020.



Source: ADVANTEC Consulting Engineers, September 2020.

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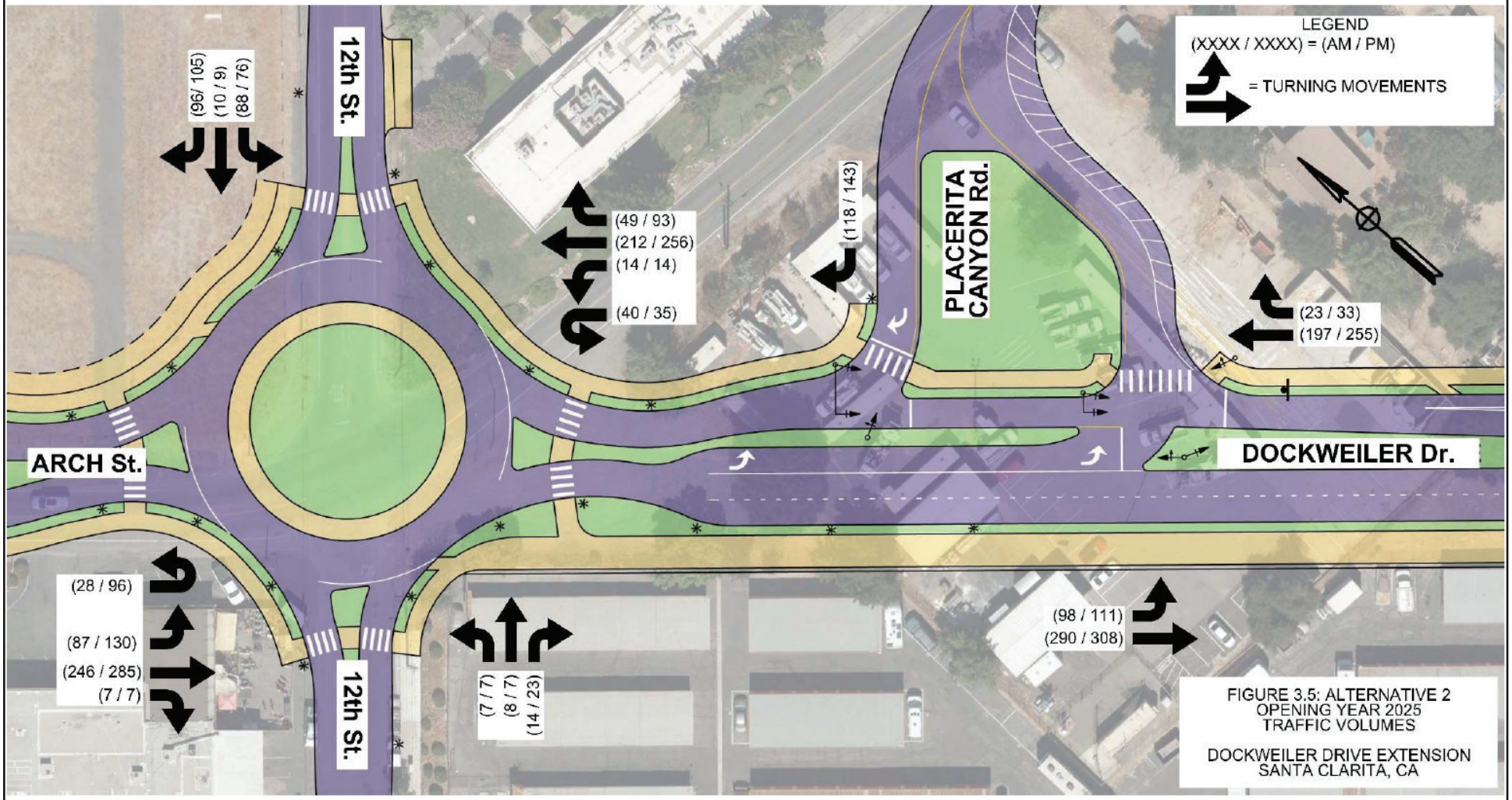
Figure 4-3
Railroad Avenue at 13th Street Opening Year 2025 Traffic Volumes



Source: ADVANTEC Consulting Engineers, September 2020.

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Figure 4-4
Modified Project Opening Year 2025 Traffic Volumes

Table 4-7
Vehicle Queue Length Analysis –Horizon Year 2035 Modified Project

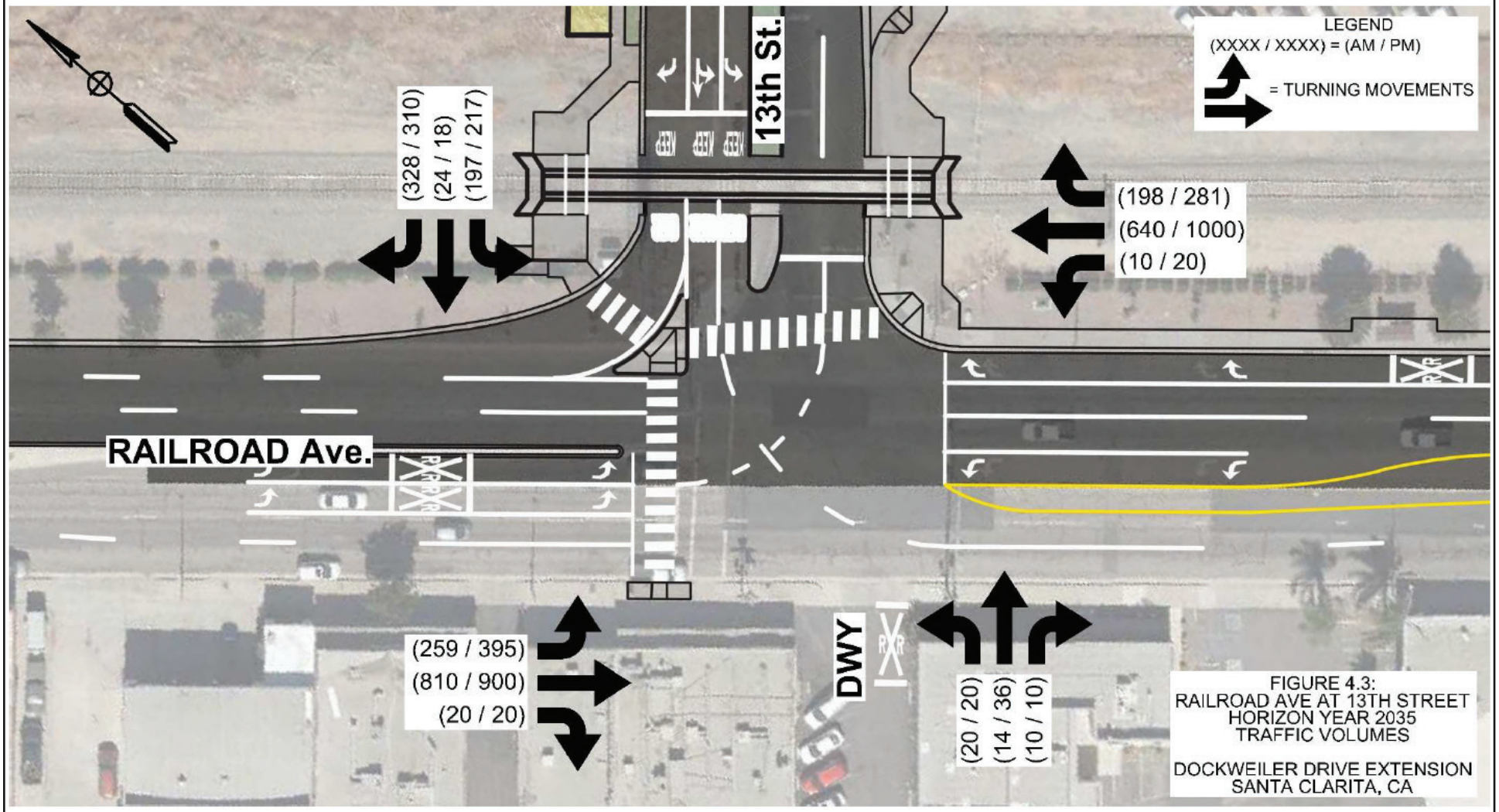
Intersection/Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	148	298	71	149	397	113
		EB	-	96	-	-	96	-
		SB	167	222	-	239	330	-
		WB	134	204[3]	175	134	206[3]	249
2	Dockweiler Drive/12th Street[2]	NB	-	100	-	-	156	-
		EB	-	53	-	-	53	-
		SB	-	153	-	-	228	-
		WB	-	74	-	-	78	-
3	Dockweiler Drive/Placerita Canyon Road	NB		117		-	190	-
		EB	-	-	-	-	-	-
		SB	74	-		116	-	-
		WB	-	-	91	-	-	96

Notes:
[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection
[3] Through/left turn lane
Source: Dockweiler Drive Extension Project Traffic Study, ADVANTEC Consulting Engineers, September 2020.

Table 4-8
Vehicle Delay Length Analysis – Horizon Year 2035 Modified Project

Intersection/Delay per Vehicle			AM		PM	
			Delay[1]	Total	Delay[1]	Total
1	13th Street/Railroad Avenue	NB	19.5	20.4	21.9	24.0
		EB	62.7		55.9	
		SB	18.0		23.5	
		WB	22.7		26.8	
2	Dockweiler Drive/12th Street[2]	NB	5.1	5.3	7.4	11.3
		EB	4.6		7.6	
		SB	6.2		17.2	
		WB	4.0		5.4	
3	Dockweiler Drive/Placerita Canyon Road	NB	8.6	5.0	10.1	5.8
		EB	-		-	
		SB	2.3		3.2	
		WB	5.5		8.6	

Notes:
[1] Total Delay/Vehicle – Seconds
[2] Unsignalized Intersection
Source: Dockweiler Drive Extension Project Traffic Study, ADVANTEC Consulting Engineers, September 2020.



Source: ADVANTEC Consulting Engineers, September 2020.

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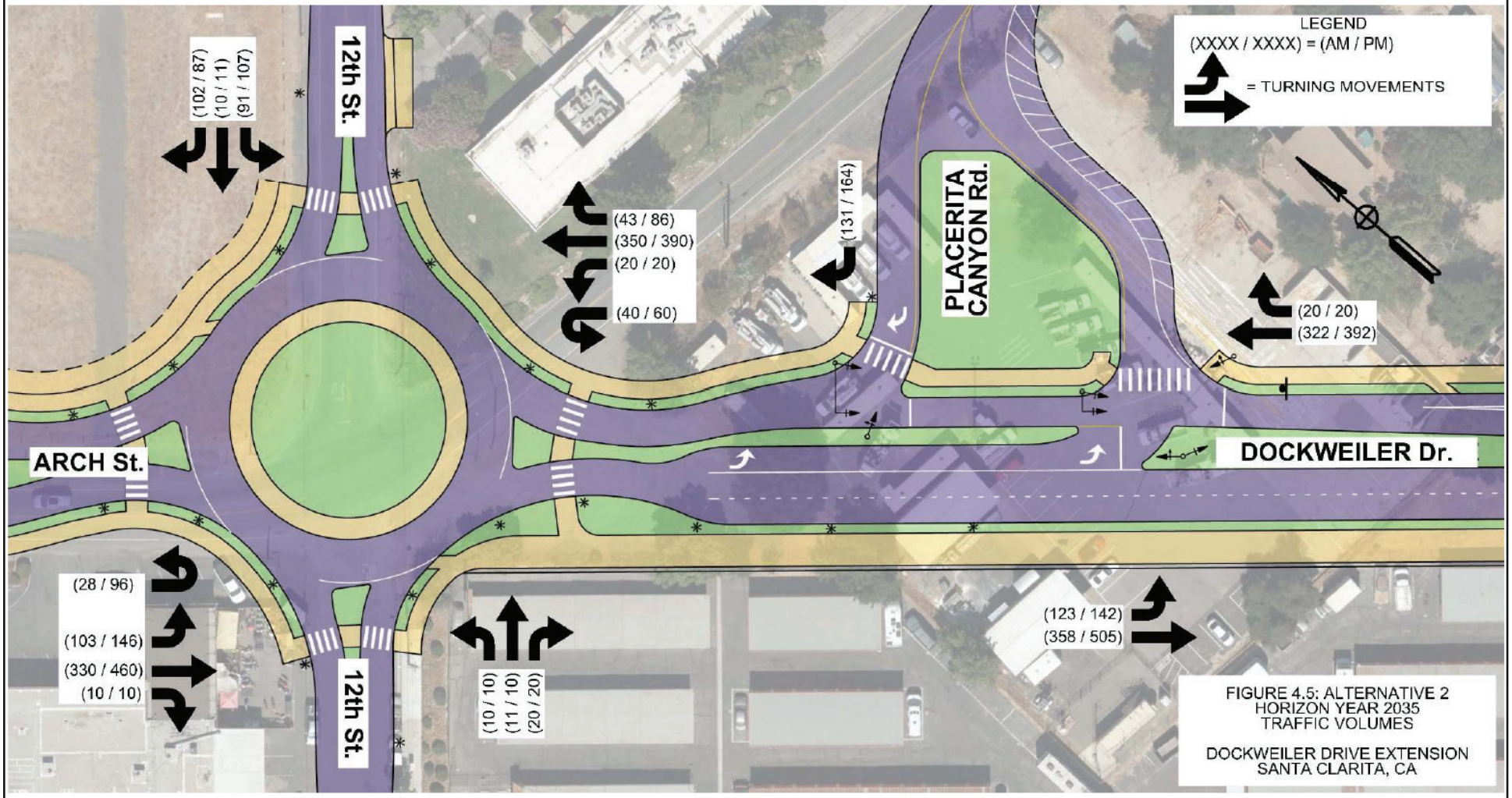
Figure 4-5
Railroad Avenue at 13th Street Horizon Year 2035 Traffic Volumes



Source: ADVANTEC Consulting Engineers, September 2020.

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Figure 4-6
Modified Project Horizon Year 2035 Traffic Volumes

Railroad Crossing Analysis

The Approved Project would result in 3,370 fewer railroad crossings as compared to the No Build condition, and 6,230 fewer crossings than the Original Project for future year 2035 (as analyzed in the EIR for Alternative 2). As the Modified Project is generally consistent with the roadway improvements and configurations identified in the Final EIR for the Approved Project it is reasonable to assume that Modified Project would result in a similar number of railroad crossings at the Railroad Avenue and 13th Street as compared to the Approved Project. Therefore, it is reasonable to assume that the Modified Project's traffic impacts from railroad crossings would be similar as those identified for the Approved Project and would not result in new or more severe impacts as those analyzed in the Final EIR under the Approved Project.

Bicycle and Pedestrian Facilities

Additionally, as shown in Figure 2-10 the Modified Project would include a bicycle and pedestrian pathway and bridge south of Dockweiler Drive, that spans Newhall Creek, to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive extension. The additional bicycle and pedestrian access would promote non-auto travel and connectivity from Old Town Newhall and the Metrolink Station to The Master's University. Similar to the Approved Project, the Modified Project would comply with Santa Clarita's circulation goals and enhancing the circulation system by providing bicycle lanes and accessibility to bicycle paths that are fundamental for a comprehensive transportation network.

Construction Traffic

Construction of the Modified Project would require the addition of a temporary roadway along 13th Street between Railroad Avenue and Arch Street. The temporary roadway would provide a detour for vehicles during construction of the roadway improvements to 13th Street. The temporary roadway would be located on the north side of 13th Street, running parallel to 13th Street. The temporary roadway would be located within the Modified Project's limits. Implementation of Mitigation Measure 4.16 would require the submittal of a Construction Management Plan City of Santa Clarita Public Works Department (Traffic and Transportation Division) and LASD Santa Clarita Valley Station for review and approval prior to the commencement of any construction. The plans would show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties, and if applicable, the location of off-site staging areas for haul trucks and construction vehicles, and provide one or more emergency lane through the Project Site at all times. The County of Los Angeles Sheriff's Department Santa Clarita Valley Station shall receive advance notice prior to any changes in temporary lane closures or realignments. Therefore, impacts associated with construction traffic would be less than significant, similar to the Approved Project.

Vehicle Miles Traveled

On January 20, 2016, the Governor's Office of Planning and Research released the Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA. In November 2018, the California Natural Resources Agency finalized the updates to the CEQA Guidelines and the updated guidelines became effective on December 28, 2018.

Subsequent to the adoption of the Final EIR, on April 10, 2018, the City of Santa Clarita adopted transportation thresholds to adhere to the new CEQA transportation requirements and to implement SB 743. In an effort to reduce greenhouse gas (GHG) emissions, SB 743 changes the focus of transportation impact analysis in CEQA from measuring impacts based on vehicle delay, LOS and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant traffic impacts, to measuring the traffic impacts based on VMT. The justification for this paradigm shift is that auto delay/LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and GHG emissions.

As concluded in the Final EIR, the Approved Project is recognized as part of the regional strategy that is consistent with SCAG's policies to reduce VMTs.[17] As the Modified Project is substantially consistent with the roadway alignment identified in the Final EIR for the Approved Project, the Modified Project would also be consistent with the City's Circulation Element as an additional route of travel connecting Railroad Avenue to Dockweiler Drive. Like the Approved Project, because no new land uses are being proposed, the Modified Project would not generate any new vehicle trips, but instead would provide an alternative and more direct route for motorists to get to and from their destination. As such, the Modified Project would not have the potential to increase VMTs on a per capita basis.

Like the Approved Project, the Modified Project would include upgrades to the at-grade railroad crossing at the intersection of Railroad Avenue and 13th street, new turn lanes, roadway widening, and median improvements. To improve traffic control, the Modified Project would also introduce a roundabout at the 12th Street/ Arch Street/ Dockweiler Drive intersection and modify the roadway connection from Dockweiler Drive to Placerita Canyon Road. These roadway improvements would improve traffic operations and enhance the safety of pedestrians and bicyclists. Additionally, the extension of Dockweiler Drive would promote non-auto travel by including a bicycle and pedestrian pathway south of Dockweiler Drive, that spans Newhall Creek, to connect with the northwest end of the Newhall Metrolink Station parking lot, located to the south of the proposed Dockweiler Drive extension. These improvements would provide connectivity from Old Town Newhall and the Metrolink Station to The Master's University. Therefore, based on the City's newly adopted VMT Analysis thresholds and screening criteria, the Modified

[17] *Southern California Association of Governments, Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), Technical Report, Project List, Table 1, FTIP Projects, page 27.*

Project is exempt from requiring further VMT analysis.[18] Impacts with respect to VMT would remain less than significant, similar to the Approved Project.

4.11 TRIBAL CULTURAL RESOURCES

Approved Project

As concluded in the Final EIR (see Section 4.4, Cultural Resources), the Approved Project would not have a direct impact upon known tribal cultural resources. Nevertheless, provisions for the identification and evaluation of accidentally discovered archeological resources would be implemented in accordance with Mitigation Measure 4.4-1. With the incorporation of Mitigation Measure 4.4-1, impacts upon tribal resources would be less than significant.

Modified Project

The southeastern grading limits for the Modified Project (between Arch Street and The Master's University project limits) are generally within the grading limits that were analyzed for both the Original Project and the Approved Project. The Modified Project would include a larger grading footprint on the northern portion of the Project Site (approximately seven acres), as compared to the Original Project and Approved Project, to accommodate the roadway improvements at Arch Street, 13th Street and Placerita Canyon Road, the intersection improvements at 13th Street and Railroad Avenue, grading improvements along the UP/Metrolink railroad line between 13th Street and 15th Street, and the addition of two new stormwater treatment basins. Like the Approved Project, provisions for the identification and evaluation of accidentally discovered archeological resources under the Modified Project would be implemented through Mitigation Measure 4.4-1, which would reduce impacts related to the accidental discovery of archeological resources to less than significant. Therefore, impacts related to tribal cultural resources would be the same as compared to the Approved Project.

4.12 WILDFIRE

Approved Project

Subsequent to the adoption of the Final EIR, the State CEQA Guidelines have been amended to require lead agencies to determine a project's potential risks to wildfires. A significant impact may occur if a project is located in proximity to wildland areas and poses a potential fire hazard, which could affect persons or structures in the area in the event of a fire, or exacerbate wildfire risk.

[18] *City of Santa Clarita, Transportation Analysis Updates in Santa Clarita, May 19, 2020.*

Modified Project

Like the Approved Project, the Modified Project includes the development of a roadway alignment. Although the Project Site is located within a very high fire hazard severity zone (VHFHSZ)[19], the Modified Project does not include the construction of any habitable structures and would therefore not expose people or structures to significant risks associated with wildfire.

Additionally, the Modified Project would be subject to the City's property development standards as specified in Chapter 17.51 of the Santa Clarita Municipal Code, which would require a fuel modification plan. The Modified project would also comply with applicable landscaping and brush abatement requirements for development within a VHFHSZ as determined by the Los Angeles County Fire Department. Therefore, with implementation of regulatory code compliance, impacts would be less than significant, and no further analysis of this issue is warranted.

[19] *State of California, Department of Forestry and Fire Protection (CAL FIRE). Map of CAL FIRE's Fire Hazard Severity Zones in State Responsibility Areas (Santa Clarita). Website: https://osfm.fire.ca.gov/media/5842/santa_clarita.pdf. Accessed July 2020.*

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5.0 IMPACTS DETERMINED TO BE LESS THAN SIGNIFICANT

Like the Approved Project, it has been determined that there is no evidence that the Modified Project would cause significant environmental effects in the following areas discussed below, and that no further environmental review of these issues is necessary. This section contains an assessment and discussion of impacts associated with the environmental issues and subject areas identified in the Initial Study Checklist (Appendix G to the State CEQA Guidelines, (C.C.R. Title 14, Chapter 3, 15000-15387), as amended on January 1, 2019.

5.1 AGRICULTURAL RESOURCES

The Project Site is zoned for a mix of commercial and residential uses; therefore, the Modified Project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. Additionally, there are no known Williamson Act Contract agreements associated with the Project Site. Therefore, like the Approved Project, the Modified Project would have no impact associated with the conversion of agricultural uses or forested lands. No further analysis of this issue is required.

5.2 GREENHOUSE GAS EMISSIONS

As presented in the EIR, the City of Santa Clarita adopted a Climate Action Plan (CAP) on August 28, 2012, which provides policies and identifies actions intended to reduce GHG emissions within the City and assist in the fight against Climate Change. Overall, the goal of the CAP is to reduce Santa Clarita's community wide GHG emissions below the 2005 baseline emissions by 2020. The CAP includes a set of strategies the City can use to reduce the amount of greenhouse gas emissions produced in the community. Implementation of the measures proposed in the Proposed CAP would result in an annual community-wide reduction in GHG emissions of approximately 193,000 MTCO2e by 2020 from local measures and an additional reduction of approximately 148,952 MTCO2e by 2020 from statewide measures. This would reduce GHG emissions from the Business-as-usual projections for 2020 by 17 percent and would exceed the GHG reduction targets of 16 percent established by CARB in its revised scoping plan. Implementation of the strategies identified in the CAP would also exceed the City's goal to reduce 2020 GHG emissions to a level below the 2005 GHG emissions baseline by 4 percent.

The CAP defines a local threshold of significance for greenhouse gas emissions (GHG) for project level submittals that are subject to environmental review under CEQA. Goals, objectives and policies approved under the General Plan are forecast to meet the GHG emission reduction targets mandated by AB 32. Therefore, development projects that are able to demonstrate consistency with the General Plan and zoning ordinance are by association consistent with the CAP and are not subject to further environmental review. Development proposals that are not consistent with the City's General Plan and/or Unified Development Code (Zone Changes/General Plan Amendments) must demonstrate a 12 percent reduction in the GHG emissions from the Controlled 2020 Business as Usual Scenario, to be deemed consistent with the CAP. Development proposals that are not consistent with the City's General Plan and/or Unified Development

Code and that cannot demonstrate a 12 percent reduction in GHG emissions from the Controlled Business as Usual Scenario shall be deemed to have a significant impact on GHG emissions.

Like the Approved Project, the Modified Project is consistent with the Circulation Element of the General Plan and will not require a zone change or General Plan amendment. As such, the Modified Project's potential to generate GHGs will be less than significant with respect to consistency with all applicable plans, policies or regulations adopted for the purpose of reducing the emissions of greenhouse gases, and no further analysis of this issue is warranted.

5.3 HAZARDS AND HAZARDOUS MATERIALS

Like the Approved Project, the Modified Project would not require the transport, use, and/or disposal of potentially hazardous materials, the potential for an impact to occur is considered low. In addition, no properties within or immediately adjacent to the Project Site appear on the State's list of hazardous materials sites. Therefore, further analysis of this issue is not warranted.

5.4 MINERAL RESOURCES

There are no known economic mineral resources located beneath the Project Site. The Project Site is not within a known source area for aggregate or other mineral resources. Additionally, the Project Site is not located in an area of potential petroleum resources. Therefore, development of the Modified Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. The Modified Project would not result in any potentially significant impacts to mineral resources and no further analysis of this issue is warranted.

5.5 POPULATION AND HOUSING

Similar to the Approved Project, the Modified Project involves the buildout of a proposed roadway alignment that was identified within the City's Circulation Element of the General Plan. No residential, commercial, or industrial land uses are proposed. Therefore, the Modified Project would not have the potential to induce substantial population growth in the area. As such, the Modified Project would not significantly impact the existing housing stock. Additionally, the Modified Project would not displace any existing housing units, necessitating the construction of replacement housing elsewhere. Therefore, no impact would occur and no further analysis is required.

5.6 PUBLIC SERVICES

Like the Approved Project, the Modified Project would not directly increase the demands for fire and police protection as the Modified Project does not include any new housing units or commercial uses. Emergency access to the Placerita Canyon community would be facilitated through the Project's alignment, which is consistent with the City's adopted Circulation Element. The Project's alignment would be an improvement to the current access route into the Placerita Canyon community via 13th Street. The upgrade of the 13th Street at-grade crossing is a proposed safety feature aimed at reducing potential conflicts between

pedestrians, vehicles and trains. The Modified Project's impact upon fire and police services would be less than significant and no further analysis is warranted.

Like the Approved Project, there are no residential properties on the Project Site and none are planned as part of the development of the Modified Project. Therefore, development of the Modified Project would not result in a direct increase in the resident population which would in turn not result in any increase demand for schools, parks, recreational facilities, libraries or other governmental facilities. Therefore, with respect to local schools, park, recreation, libraries and other governmental facilities, no impact would occur, and no further analysis of this issue is warranted.

5.7 UTILITIES

Construction

The Modified Project's construction activities would require the conveyance of water for dust suppression activities during the demolition/grading/excavation phases. However, due to the relatively short duration of construction, water consumption and impacts to water conveyance infrastructure would not be considered excessive or substantial. Additionally, as discussed further in Section 4.5, Energy, of this Addendum, energy demands during construction would be typical of construction projects of this size and nature, and would not necessitate additional long-term energy facilities or distribution infrastructure, or cause wasteful, inefficient or unnecessary consumption of energy. Lastly, the temporary duration and scope of construction activities associated with the Modified Project would not result in a substantial increase in wastewater or solid waste generation, nor require telecommunication resources. Therefore, impacts related to the demand, and or consumption, of the aforementioned resources and facilities, would be less than significant.

Operation

Like the Approved Project, the Modified Project includes the development of a roadway alignment. The Modified Project does not include the development of residential, commercial or industrial uses. As such, during operation, the Modified Project's demand for potable water would be limited to landscaping associated with the roadway improvements and would be subject to applicable State and City regulatory code compliance for water consumption and conservation. Irrigation would ultimately connect to the City's expanding recycled water pipeline system. As such the Modified Project's limited use of potable water for landscaping would not be considered excessive or substantial and operational water demand on local water supplies and conveyance would be less than significant.

With respect to runoff discharge and stormwater drainage associated with the Modified Project, as discussed further in Section 4.7 Hydrology, of this Addendum, the Modified Project would include the addition of two basins for stormwater capture and treatment associated with the roadway improvements. The Modified Project would be required to have a Project-specific SUSMP in place during its operational life to address the management of runoff from the roadway extension in accordance with NPDES requirements. With implementation of the stormwater quality plans and regulatory code compliance as discussed in Section 4.7

Hydrology, of this Addendum, impacts to stormwater drainage facilities during operation would be less than significant. Lastly, operation of the Modified Project would not create demand for solid waste resources, telecommunications and natural gas services, or generate wastewater, and would therefore have no impact to these facilities or systems.

As presented in the Final EIR (see Section 2. Additions and Corrections to the EIR, pg. 2-2), the Modified Project would include MM 5.1-1 to ensure that locations of buried utility-owned lines are marked prior to commencement of excavation work for the Modified Project. Additionally, MM 5.1-2 would ensure that the abandonment and/or relocation and/or modification of any portion of an existing natural gas lines would be coordinated with Southern California Gas Company.

Therefore, like the Approved Project, impacts associated with the Modified Project, with respect to utilities, would be less than significant and no further analysis is warranted.

6.0 PREPARERS AND PERSONS CONSULTED

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7.0 REFERENCES AND ACRONYMS

7.1 REFERENCES

City of Santa Clarita. Lyons Avenue/Dockweiler Drive Extension Project Environmental Impact Report (SCH No. 2013082016). February 2018.

City of Santa Clarita, Municipal Code.

City of Santa Clarita, Transportation Analysis Updates in Santa Clarita. May 2020.

MNS Engineers, City of Santa Clarita Street Improvement Plan Dockweiler Drive Extension, Plan Set. September 2020.

Southern California Association of Governments, Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), Technical Report, Project List, Table 1, FTIP Projects, at page 27. September 2020.

State of California, Department of Forestry and Fire Protection (CAL FIRE). Map of CAL FIRE's Fire Hazard Severity Zones in State Responsibility Areas (Santa Clarita). Website: https://osfm.fire.ca.gov/media/5842/santa_clarita.pdf. Accessed July 2020.

US Environmental Protection Agency, Managing Wet Weather with Green Infrastructure: Green Streets 26, EPA-833-F-08-009, December 2008.

US Environmental Protection Agency, Managing Wet Weather with Green Infrastructure Municipal Handbook, Green Street, EPA-833-F-08-009, December 2008.

7.2 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BMPs	Best Management Practices
C/D	construction/demolition
CAA	Clean Air Act
CAAQS	California ambient air quality standards
Cal/EPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game

CDMG	California Division of Mines and Geology
CEC	California Energy Commission
CEQA	California Environmental Quality Act
Cf	Cubic feet
CFC	Chlorofluorocarbons
CH_4	Methane
CMP	Congestion Management Plan
CNEL	Community Noise Exposure Level
CO	carbon monoxide
CO_2	carbon dioxide
CO2e	carbon dioxide equivalent
COHb	carboxyhemoglobin
cy	cubic yards
dB	decibel
dBA	A-weighted decibel scale
d/D	flow level
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GHG	greenhouse gas
gpd	gallons per day
gpm	gallons per minute
HFC	hydrofluorocarbons
ITE	Institute of Transportation Engineers
km	kilometers
kV	kilovolt
kWh	kilowatt-hours
lbs/day	pounds per day
L_{dn}	day-night average noise level
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent energy noise level/ambient noise level
LOS	Level of Service
LST	localized significance thresholds
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transit Authority
mgd	million gallons per day
mi	miles
MS4	medium and large municipal separate storm sewer systems
msl	mean sea level
mm	millimeters
M_{max}	maximum moment magnitude
MWh	Mega-Watt hours
N_2O	nitrous oxide
NAAQS	National ambient air quality standards
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System

O_3	Ozone
OPR	Office of Planning and Research
Pb	lead
PFC	perfluorocarbons
PGA	peak horizontal ground acceleration
PM	particulate matter
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
ppd	pounds per day
ppm	parts per million
PRC	Public Resources Code
psi	pounds per square inch
RCP	Regional Comprehensive Plan
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCVCTM	Santa Clarita Valley Consolidated Traffic Model
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCG	Southern California Gas Company
SCH	State Clearinghouse
sf	square feet
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SO_4	sulfates
SOx	sulfur oxides
SRA	source receptor area
SWMP	stormwater management plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board
TAC	Toxic Air Contaminants
TPH	total petroleum hydrocarbons
TSD	Treatment, Storage, and Disposal
ULSD	Ultra Low Sulfur Diesel
USEPA/ U.S. EPA	United States Environmental Protection Agency
V/C	Volume-to-Capacity
VdB	Vibration decibels
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for ->	Dockweiler Drive Alignment Phase 1: Widening of 13th and Ex			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**CO2 (lbs/day)**
Grubbing/Land Clearing	1.8	16.6	17.2	70.7	0.7	70.0	15.2	0.7	14.6	3,739.7
Grading/Excavation	8.2	71.7	78.8	73.6	3.6	70.0	17.8	3.2	14.6	16,088.9
Drainage/Utilities/Sub-Grade	6.7	58.7	60.8	72.9	2.9	70.0	17.2	2.6	14.6	11,999.2
Paving	2.3	24.6	20.5	1.1	1.1	-	1.0	1.0	-	4,687.7
Maximum (pounds/day)	8.2	71.7	78.8	73.6	3.6	70.0	17.8	3.2	14.6	16,088.9
Total (tons/construction project)	0.6	5.3	5.5	6.2	0.3	6.0	1.5	0.2	1.2	1,106.6

Notes:	
Project Start Year ->	2022
Project Length (months) ->	9
Total Project Area (acres) ->	15
Maximum Area Disturbed/Day (acres) ->	7
Total Soil Imported/Exported (yd^3/day)->	2795

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for ->	Dockweiler Drive Alignment Phase 1: Widening of 13th and Ex			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	**ROG (kgs/day)**	**CO (kgs/day)**	**NOx (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**CO2 (kgs/day)**
Grubbing/Land Clearing	0.8	7.6	7.8	32.2	0.3	31.8	6.9	0.3	6.6	1,699.9
Grading/Excavation	3.7	32.6	35.8	33.5	1.6	31.8	8.1	1.5	6.6	7,313.1
Drainage/Utilities/Sub-Grade	3.1	26.7	27.6	33.2	1.3	31.8	7.8	1.2	6.6	5,454.2
Paving	1.1	11.2	9.3	0.5	0.5	-	0.5	0.5	-	2,130.8
Maximum (kilograms/day)	3.7	32.6	35.8	33.5	1.6	31.8	8.1	1.5	6.6	7,313.1
Total (megagrams/construction project)	0.5	4.8	5.0	5.6	0.2	5.4	1.3	0.2	1.1	1,003.7

Notes:	
Project Start Year ->	2022
Project Length (months) ->	9
Total Project Area (hectares) ->	6
Maximum Area Disturbed/Day (hectares) ->	3
Total Soil Imported/Exported ($meters^3$/day)->	2137

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Input Type

Project Name	Dockweiler Drive Alignment Phase	1: Widening of 13th and Extenison of Arch St to Dockweiler Dr.
Construction Start Year	2022	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	9.00	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.40	miles
Total Project Area	15.00	acres
Maximum Area Disturbed/Day	7.00	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	2795.00	yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing	1.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation	2.00	4.05	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade	5.00	2.70	0.00	0.00	0.00	0.00	0.00	0.00
Paving	1.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00
Totals	9.00	9.00						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip	1.00	30
Round trips/day	140.00	140
Vehicle miles traveled/day (calculated)		140

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.18	1.77	0.83	0.15	0.08	1546.69
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.06	0.55	0.26	0.05	0.03	476.95
Tons per contruction period	0.00	0.01	0.01	0.00	0.00	10.49

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		6
No. of employees: Grading/Excavation		26
No. of employees: Drainage/Utilities/Sub-Grade		24
No. of employees: Paving		15

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.097	0.112	1.056	0.047	0.020	441.772
Emission rate - Grading/Excavation (grams/mile)	0.097	0.112	1.056	0.047	0.020	441.772
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.097	0.112	1.056	0.047	0.020	441.772
Emission rate - Paving (grams/mile)	0.097	0.112	1.056	0.047	0.020	441.772
Emission rate - Grubbing/Land Clearing (grams/trip)	0.310	0.168	2.386	0.004	0.004	96.127
Emission rate - Grading/Excavation (grams/trip)	0.310	0.168	2.386	0.004	0.004	96.127
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.310	0.168	2.386	0.004	0.004	96.127
Emission rate - Paving (grams/trip)	0.310	0.168	2.386	0.004	0.004	96.127
Pounds per day - Grubbing/Land Clearing	0.062	0.066	0.647	0.026	0.011	245.913
Tons per const. Period - Grub/Land Clear	0.001	0.001	0.007	0.000	0.000	2.705
Pounds per day - Grading/Excavation	0.259	0.278	2.719	0.109	0.046	1032.835
Tons per const. Period - Grading/Excavation	0.006	0.006	0.060	0.002	0.001	22.722
Pounds per day - Drainage/Utilities/Sub-Grade	0.234	0.251	2.460	0.098	0.041	934.469
Tons per const. Period - Drain/Util/Sub-Grade	0.013	0.014	0.135	0.005	0.002	51.396
Pounds per day - Paving	0.148	0.159	1.554	0.062	0.026	590.191
Tons per const. Period - Paving	0.002	0.002	0.017	0.001	0.000	6.492
tons per construction period	0.021	0.022	0.219	0.009	0.004	83.315

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		2		80
Grading/Excavation - Exhaust		2		80
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.18	1.77	0.83	0.15	0.08	1546.69
Emission rate - Grading/Excavation (grams/mile)	0.18	1.77	0.83	0.15	0.08	1546.69
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.18	1.77	0.83	0.15	0.08	1546.69
Pounds per day - Grubbing/Land Clearing	0.06	0.62	0.29	0.05	0.03	545.09
Tons per const. Period - Grub/Land Clear	0.00	0.01	0.00	0.00	0.00	6.00
Pound per day - Grading/Excavation	0.06	0.62	0.29	0.05	0.03	545.09
Tons per const. Period - Grading/Excavation	0.00	0.01	0.01	0.00	0.00	11.99
Pound per day - Drainage/Utilities/Subgrade	0.02	0.16	0.07	0.01	0.01	136.27
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.01	0.00	0.00	0.00	7.49

Fugitive dust default values can be overridden in cells C110 through C112

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		7	70.0	0.8	14.6	0.2
Fugitive Dust - Grading/Excavation		7	70.0	3.1	14.6	0.6
Fugitive Dust - Drainage/Utilities/Subgrade		7	70.0	2.1	14.6	0.4

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	2	Crawler Tractors	1.01	8.92	11.76	0.44	0.41	1646.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	2	Excavators	0.44	5.58	3.67	0.18	0.16	1145.28
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.18	1.20	1.07	0.04	0.04	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	1.6	15.7	16.5	0.7	0.6	2948.7
	Grubbing/Land Clearing	tons per phase	0.0	0.2	0.2	0.0	0.0	32.4

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	1	Cranes	0.38	3.00	4.07	0.17	0.16	601.73
	2	Crawler Tractors	1.01	8.92	11.76	0.44	0.41	1646.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	4	Excavators	0.88	11.15	7.35	0.36	0.33	2290.55
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
	2	Graders	1.16	6.92	10.38	0.58	0.53	1334.25
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	3	Rollers	0.52	4.53	5.14	0.30	0.27	838.53
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rubber Tired Loaders	0.60	6.23	5.98	0.20	0.18	1325.74
	3	Scrapers	2.54	21.81	26.54	1.04	0.95	4834.14
	1	Signal Boards	0.18	1.20	1.07	0.04	0.04	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	0.52	4.71	5.05	0.27	0.25	1005.65
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	7.8	68.5	77.3	3.4	3.1	14034.0
	Grading	tons per phase	0.2	1.5	1.7	0.1	0.1	308.7

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	2	Air Compressors	0.76	6.55	5.25	0.31	0.29	1015.89
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	2	Generator Sets	0.53	5.76	4.72	0.24	0.23	974.13
	2	Graders	1.16	6.92	10.38	0.58	0.53	1334.25
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	2	Plate Compactors	0.08	0.42	0.50	0.02	0.02	68.90
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Pumps	0.46	4.75	3.90	0.21	0.19	792.28
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rough Terrain Forklifts	0.24	4.06	2.99	0.10	0.10	745.77
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	3	Scrapers	2.54	21.81	26.54	1.04	0.95	4834.14
	1	Signal Boards	0.18	1.20	1.07	0.04	0.04	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	0.52	4.71	5.05	0.27	0.25	1005.65
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	6.5	56.2	60.4	2.8	2.6	10928.4
	Drainage	tons per phase	0.4	3.1	3.3	0.2	0.1	601.1

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	2	Pavers	0.41	5.68	4.01	0.19	0.18	964.04
	2	Paving Equipment	0.36	5.39	3.39	0.17	0.15	852.33
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	4	Rollers	0.69	6.04	6.85	0.40	0.36	1118.04
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.18	1.20	1.07	0.04	0.04	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	0.52	4.71	5.05	0.27	0.25	1005.65
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	2.2	23.0	20.4	1.1	1.0	4097.5
	Paving	tons per phase	0.0	0.3	0.2	0.0	0.0	45.1
Total Emissions all Phases (tons per construction period) =>			0.6	5.0	5.4	0.2	0.2	987.3

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for ->	Dockweiler Drive Alignment Phase 2: Construction of 12 Street			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**CO2 (lbs/day)**
Grubbing/Land Clearing	0.9	8.9	7.8	20.3	0.3	20.0	4.5	0.3	4.2	1,835.7
Grading/Excavation	4.5	42.9	40.9	21.9	1.9	20.0	5.8	1.7	4.2	9,255.3
Drainage/Utilities/Sub-Grade	3.7	34.5	33.3	21.5	1.5	20.0	5.5	1.4	4.2	7,193.3
Paving	1.4	15.4	12.4	0.7	0.7	-	0.6	0.6	-	2,968.7
Maximum (pounds/day)	4.5	42.9	40.9	21.9	1.9	20.0	5.8	1.7	4.2	9,255.3
Total (tons/construction project)	0.1	1.1	1.0	0.9	0.0	0.9	0.2	0.0	0.2	233.8

Notes:

Project Start Year ->	2023
Project Length (months) ->	4
Total Project Area (acres) ->	2
Maximum Area Disturbed/Day (acres) ->	2
Total Soil Imported/Exported (yd^3/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for ->	Dockweiler Drive Alignment Phase 2: Construction of 12 Street			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	**ROG (kgs/day)**	**CO (kgs/day)**	**NOx (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**CO2 (kgs/day)**
Grubbing/Land Clearing	0.4	4.0	3.6	9.2	0.2	9.1	2.0	0.1	1.9	834.4
Grading/Excavation	2.0	19.5	18.6	9.9	0.8	9.1	2.6	0.8	1.9	4,207.0
Drainage/Utilities/Sub-Grade	1.7	15.7	15.2	9.8	0.7	9.1	2.5	0.6	1.9	3,269.7
Paving	0.6	7.0	5.6	0.3	0.3	-	0.3	0.3	-	1,349.4
Maximum (kilograms/day)	2.0	19.5	18.6	9.9	0.8	9.1	2.6	0.8	1.9	4,207.0
Total (megagrams/construction project)	0.1	1.0	0.9	0.8	0.0	0.8	0.2	0.0	0.2	212.0

Notes:

Project Start Year ->	2023
Project Length (months) ->	4
Total Project Area (hectares) ->	1
Maximum Area Disturbed/Day (hectares) ->	1
Total Soil Imported/Exported ($meters^3$/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type		
Project Name	Dockweiler Drive Alignment Phase 2: Construction of 12 Street Roundabout	
Construction Start Year	2023	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	4.00	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.10	miles
Total Project Area	2.00	acres
Maximum Area Disturbed/Day	2.00	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	0.00	yd^3/day
Average Truck Capacity	0	yd^3 (assume 20 if unknown)

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing	1.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation	1.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade	1.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00
Paving	1.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00
Totals	4.00	4.00						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip	0.00	30
Round trips/day	0.00	#DIV/0!
Vehicle miles traveled/day (calculated)		0

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.17	1.35	0.77	0.15	0.08	1541.90
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		4
No. of employees: Grading/Excavation		16
No. of employees: Drainage/Utilities/Sub-Grade		14
No. of employees: Paving		10

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.093	0.105	0.999	0.047	0.020	441.716
Emission rate - Grading/Excavation (grams/mile)	0.093	0.105	0.999	0.047	0.020	441.716
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.093	0.105	0.999	0.047	0.020	441.716
Emission rate - Paving (grams/mile)	0.093	0.105	0.999	0.047	0.020	441.716
Emission rate - Grubbing/Land Clearing (grams/trip)	0.292	0.154	2.207	0.004	0.004	96.196
Emission rate - Grading/Excavation (grams/trip)	0.292	0.154	2.207	0.004	0.004	96.196
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.292	0.154	2.207	0.004	0.004	96.196
Emission rate - Paving (grams/trip)	0.292	0.154	2.207	0.004	0.004	96.196
Pounds per day - Grubbing/Land Clearing	0.036	0.037	0.366	0.016	0.007	147.531
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.004	0.000	0.000	1.623
Pounds per day - Grading/Excavation	0.154	0.161	1.588	0.067	0.028	639.300
Tons per const. Period - Grading/Excavation	0.002	0.002	0.017	0.001	0.000	7.032
Pounds per day - Drainage/Utilities/Sub-Grade	0.130	0.137	1.344	0.057	0.024	540.946
Tons per const. Period - Drain/Util/Sub-Grade	0.001	0.002	0.015	0.001	0.000	5.950
Pounds per day - Paving	0.095	0.099	0.977	0.041	0.017	393.415
Tons per const. Period - Paving	0.001	0.001	0.011	0.000	0.000	4.328
tons per construction period	0.005	0.005	0.047	0.002	0.001	18.933

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.17	1.35	0.77	0.15	0.08	1541.90
Emission rate - Grading/Excavation (grams/mile)	0.17	1.35	0.77	0.15	0.08	1541.90
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.17	1.35	0.77	0.15	0.08	1541.90
Pounds per day - Grubbing/Land Clearing	0.01	0.12	0.07	0.01	0.01	135.85
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	1.49
Pound per day - Grading/Excavation	0.01	0.12	0.07	0.01	0.01	135.85
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	1.49
Pound per day - Drainage/Utilities/Subgrade	0.01	0.12	0.07	0.01	0.01	135.85
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	1.49

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		2	20.0	0.2	4.2	0.0
Fugitive Dust - Grading/Excavation		2	20.0	0.4	4.2	0.1
Fugitive Dust - Drainage/Utilities/Subgrade		2	20.0	0.3	4.2	0.1

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.45	4.45	5.02	0.19	0.18	822.18
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Excavators	0.20	2.79	1.60	0.08	0.07	572.74
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.17	1.19	1.04	0.04	0.03	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	0.8	8.4	7.7	0.3	0.3	1552.4
	Grubbing/Land Clearing	tons per phase	0.0	0.1	0.1	0.0	0.0	17.1

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.45	4.45	5.02	0.19	0.18	822.18
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	0.61	8.37	4.80	0.24	0.22	1718.22
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
	1	Graders	0.51	3.46	4.46	0.25	0.23	666.98
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.32	3.02	3.20	0.18	0.16	559.03
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rubber Tired Loaders	0.28	3.12	2.62	0.09	0.08	662.75
	2	Scrapers	1.63	14.54	16.39	0.64	0.59	3222.40
	1	Signal Boards	0.17	1.19	1.04	0.04	0.03	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.32	3.14	3.09	0.15	0.14	671.18
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	4.3	41.3	40.6	1.8	1.6	8480.2
	Grading	tons per phase	0.0	0.5	0.4	0.0	0.0	93.3

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Air Compressors	0.36	3.27	2.43	0.14	0.13	507.95
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.25	2.87	2.20	0.11	0.10	487.07
	1	Graders	0.51	3.46	4.46	0.25	0.23	666.98
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pumps	0.22	2.37	1.81	0.09	0.08	396.14
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rough Terrain Forklifts	0.11	2.03	1.41	0.05	0.04	372.94
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	2	Scrapers	1.63	14.54	16.39	0.64	0.59	3222.40
	1	Signal Boards	0.17	1.19	1.04	0.04	0.03	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.32	3.14	3.09	0.15	0.14	671.18
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	3.6	33.1	33.1	1.5	1.4	6516.5
	Drainage	tons per phase	0.0	0.4	0.4	0.0	0.0	71.7

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.19	2.84	1.80	0.08	0.08	481.98
	1	Paving Equipment	0.17	2.69	1.56	0.08	0.07	426.16
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	3	Rollers	0.48	4.53	4.80	0.26	0.24	838.54
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.17	1.19	1.04	0.04	0.03	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.32	3.14	3.09	0.15	0.14	671.18
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	1.3	14.4	12.3	0.6	0.6	2575.3
	Paving	tons per phase	0.0	0.2	0.1	0.0	0.0	28.3
Total Emissions all Phases (tons per construction period) =>			0.1	1.1	1.0	0.0	0.0	210.4

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for ->	Dockweiler Drive Alignment Phase 3: Reconstruction of 13th S			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**CO2 (lbs/day)**
Grubbing/Land Clearing	0.9	8.9	7.8	20.3	0.3	20.0	4.5	0.3	4.2	1,835.7
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	3.7	34.5	33.3	21.5	1.5	20.0	5.5	1.4	4.2	7,193.3
Paving	1.4	15.4	12.4	0.7	0.7	-	0.6	0.6	-	2,968.7
Maximum (pounds/day)	3.7	34.5	33.3	21.5	1.5	20.0	5.5	1.4	4.2	7,193.3
Total (tons/construction project)	0.1	0.6	0.6	0.6	0.0	0.5	0.1	0.0	0.1	125.7

Notes:		
	Project Start Year ->	2023
	Project Length (months) ->	3
	Total Project Area (acres) ->	2
	Maximum Area Disturbed/Day (acres) ->	2
	Total Soil Imported/Exported (yd^3/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for ->	Dockweiler Drive Alignment Phase 3: Reconstruction of 13th S			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	**ROG (kgs/day)**	**CO (kgs/day)**	**NOx (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**CO2 (kgs/day)**
Grubbing/Land Clearing	0.4	4.0	3.6	9.2	0.2	9.1	2.0	0.1	1.9	834.4
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	1.7	15.7	15.2	9.8	0.7	9.1	2.5	0.6	1.9	3,269.7
Paving	0.6	7.0	5.6	0.3	0.3	-	0.3	0.3	-	1,349.4
Maximum (kilograms/day)	1.7	15.7	15.2	9.8	0.7	9.1	2.5	0.6	1.9	3,269.7
Total (megagrams/construction project)	0.1	0.6	0.5	0.5	0.0	0.5	0.1	0.0	0.1	114.1

Notes:		
	Project Start Year ->	2023
	Project Length (months) ->	3
	Total Project Area (hectares) ->	1
	Maximum Area Disturbed/Day (hectares) ->	1
	Total Soil Imported/Exported ($meters^3$/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model
Data Entry Worksheet

Version 7.1.5.1

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Input Type		
Project Name	Dockweiler Drive Alignment Phase 3: Reconstruction of 13th St to Arch St	
Construction Start Year	2023	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	3.00	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.20	miles
Total Project Area	2.00	acres
Maximum Area Disturbed/Day	2.00	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	0.00	yd^3/day
Average Truck Capacity	0	yd^3 (assume 20 if unknown)

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing	1.50	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade	1.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.50	0.45	0.00	0.00	0.00	0.00	0.00	0.00
Totals	3.00	3.00						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip	0.00	30
Round trips/day	0.00	#DIV/0!
Vehicle miles traveled/day (calculated)	0	

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		4
No. of employees: Grading/Excavation		16
No. of employees: Drainage/Utilities/Sub-Grade		14
No. of employees: Paving		10

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.093	0.105	0.999	0.047	0.020	441.716
Emission rate - Grading/Excavation (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.093	0.105	0.999	0.047	0.020	441.716
Emission rate - Paving (grams/mile)	0.093	0.105	0.999	0.047	0.020	441.716
Emission rate - Grubbing/Land Clearing (grams/trip)	0.292	0.154	2.207	0.004	0.004	96.196
Emission rate - Grading/Excavation (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.292	0.154	2.207	0.004	0.004	96.196
Emission rate - Paving (grams/trip)	0.292	0.154	2.207	0.004	0.004	96.196
Pounds per day - Grubbing/Land Clearing	0.036	0.037	0.366	0.016	0.007	147.531
Tons per const. Period - Grub/Land Clear	0.001	0.001	0.006	0.000	0.000	2.434
Pounds per day - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Drainage/Utilities/Sub-Grade	0.130	0.137	1.344	0.057	0.024	540.946
Tons per const. Period - Drain/Util/Sub-Grade	0.001	0.002	0.015	0.001	0.000	5.950
Pounds per day - Paving	0.095	0.099	0.977	0.041	0.017	393.415
Tons per const. Period - Paving	0.001	0.001	0.005	0.000	0.000	2.164
tons per construction period	0.003	0.003	0.026	0.001	0.000	10.548

Water Truck Emissions

	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.17	1.35	0.77	0.15	0.08	1541.90
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.17	1.35	0.77	0.15	0.08	1541.90
Pounds per day - Grubbing/Land Clearing	0.01	0.12	0.07	0.01	0.01	135.85
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	2.24
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00
Pound per day - Drainage/Utilities/Subgrade	0.01	0.12	0.07	0.01	0.01	135.85
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	1.49

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust

	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		2	20.0	0.3	4.2	0.1
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0
Fugitive Dust - Drainage/Utilities/Subgrade		2	20.0	0.2	4.2	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.45	4.45	5.02	0.19	0.18	822.18
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Excavators	0.20	2.79	1.60	0.08	0.07	572.74
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.17	1.19	1.04	0.04	0.03	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	0.8	8.4	7.7	0.3	0.3	1552.4
	Grubbing/Land Clearing	tons per phase	0.0	0.1	0.1	0.0	0.0	25.6

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
	1	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	2	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Air Compressors	0.36	3.27	2.43	0.14	0.13	507.95
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.25	2.87	2.20	0.11	0.10	487.07
	1	Graders	0.51	3.46	4.46	0.25	0.23	666.98
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pumps	0.22	2.37	1.81	0.09	0.08	396.14
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rough Terrain Forklifts	0.11	2.03	1.41	0.05	0.04	372.94
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	2	Scrapers	1.63	14.54	16.39	0.64	0.59	3222.40
	1	Signal Boards	0.17	1.19	1.04	0.04	0.03	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.32	3.14	3.09	0.15	0.14	671.18
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	3.6	33.1	33.1	1.5	1.4	6516.5
	Drainage	tons per phase	0.0	0.4	0.4	0.0	0.0	71.7

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.19	2.84	1.80	0.08	0.08	481.98
	1	Paving Equipment	0.17	2.69	1.56	0.08	0.07	426.16
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	3	Rollers	0.48	4.53	4.80	0.26	0.24	838.54
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.17	1.19	1.04	0.04	0.03	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.32	3.14	3.09	0.15	0.14	671.18
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	1.3	14.4	12.3	0.6	0.6	2575.3
	Paving	tons per phase	0.0	0.1	0.1	0.0	0.0	14.2
Total Emissions all Phases (tons per construction period) =>			0.1	0.6	0.6	0.0	0.0	111.5

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		205		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for ->	Dockweiler Drive Alignment Phase 4 - Landscaping, Lighting,			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**CO2 (lbs/day)**
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	3.9	35.8	34.4	21.6	1.6	20.0	5.6	1.4	4.2	7,399.9
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	3.9	35.8	34.4	21.6	1.6	20.0	5.6	1.4	4.2	7,399.9
Total (tons/construction project)	0.1	0.8	0.8	0.2	0.0	0.1	0.1	0.0	0.0	162.8

Notes:	
Project Start Year ->	2023
Project Length (months) ->	2
Total Project Area (acres) ->	7
Maximum Area Disturbed/Day (acres) ->	2
Total Soil Imported/Exported (yd^3/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for ->	Dockweiler Drive Alignment Phase 4 - Landscaping, Lighting,			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	**ROG (kgs/day)**	**CO (kgs/day)**	**NOx (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**CO2 (kgs/day)**
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	1.8	16.3	15.6	9.8	0.7	9.1	2.5	0.6	1.9	3,363.6
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	1.8	16.3	15.6	9.8	0.7	9.1	2.5	0.6	1.9	3,363.6
Total (megagrams/construction project)	0.1	0.7	0.7	0.2	0.0	0.1	0.1	0.0	0.0	147.7

Notes:	
Project Start Year ->	2023
Project Length (months) ->	2
Total Project Area (hectares) ->	3
Maximum Area Disturbed/Day (hectares) ->	1
Total Soil Imported/Exported ($meters^3$/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Input Type		
Project Name	Dockweiler Drive Alignment Phase 4 - Landscaping, Lighting, Signing, Striping	
Construction Start Year	2023	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	2.00	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.00	mile
Total Project Area	7.00	acres
Maximum Area Disturbed/Day	2.00	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	0.00	yd^3/day
Average Truck Capacity	0	yd^3 (assume 20 if unknown)

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade	2.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Totals	2.00	2.00						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip	0.00	30
Round trips/day	0.00	#DIV/0!
Vehicle miles traveled/day (calculated)	0	

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		5
No. of employees: Grading/Excavation		18
No. of employees: Drainage/Utilities/Sub-Grade		15
No. of employees: Paving		11

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.093	0.105	0.999	0.047	0.020	441.716
Emission rate - Paving (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grubbing/Land Clearing (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.292	0.154	2.207	0.004	0.004	96.196
Emission rate - Paving (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grubbing/Land Clearing	0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Drainage/Utilities/Sub-Grade	0.142	0.149	1.466	0.062	0.026	590.123
Tons per const. Period - Drain/Util/Sub-Grade	0.003	0.003	0.032	0.001	0.001	12.983
Pounds per day - Paving	0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Paving	0.000	0.000	0.000	0.000	0.000	0.000
tons per construction period	0.003	0.003	0.032	0.001	0.001	12.983

Water Truck Emissions

	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.17	1.35	0.77	0.15	0.08	1541.90
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00
Pound per day - Drainage/Utilities/Subgrade	0.01	0.12	0.07	0.01	0.01	135.85
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	2.99

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust

	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0
Fugitive Dust - Drainage/Utilities/Subgrade		2	20.0	0.1	4.2	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing

Override of Default Number of Vehicles	Default Number of Vehicles Program-estimate	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

Grading/Excavation

Override of Default Number of Vehicles	Default Number of Vehicles Program-estimate	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
	1	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	2	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

Drainage/Utilities/Subgrade

Override of Default Number of Vehicles	Default Number of Vehicles Program-estimate	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Air Compressors	0.36	3.27	2.43	0.14	0.13	507.95
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.25	2.87	2.20	0.11	0.10	487.07
	1	Graders	0.51	3.46	4.46	0.25	0.23	666.98
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pumps	0.22	2.37	1.81	0.09	0.08	396.14
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rough Terrain Forklifts	0.11	2.03	1.41	0.05	0.04	372.94
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	2	Scrapers	1.63	14.54	16.39	0.64	0.59	3222.40
	2	Signal Boards	0.33	2.37	2.09	0.07	0.07	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.32	3.14	3.09	0.15	0.14	671.18
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	3.8	34.3	34.1	1.5	1.4	6674.0
	Drainage	tons per phase	0.1	0.8	0.8	0.0	0.0	146.8

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.1	0.8	0.8	0.0	0.0	146.8

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

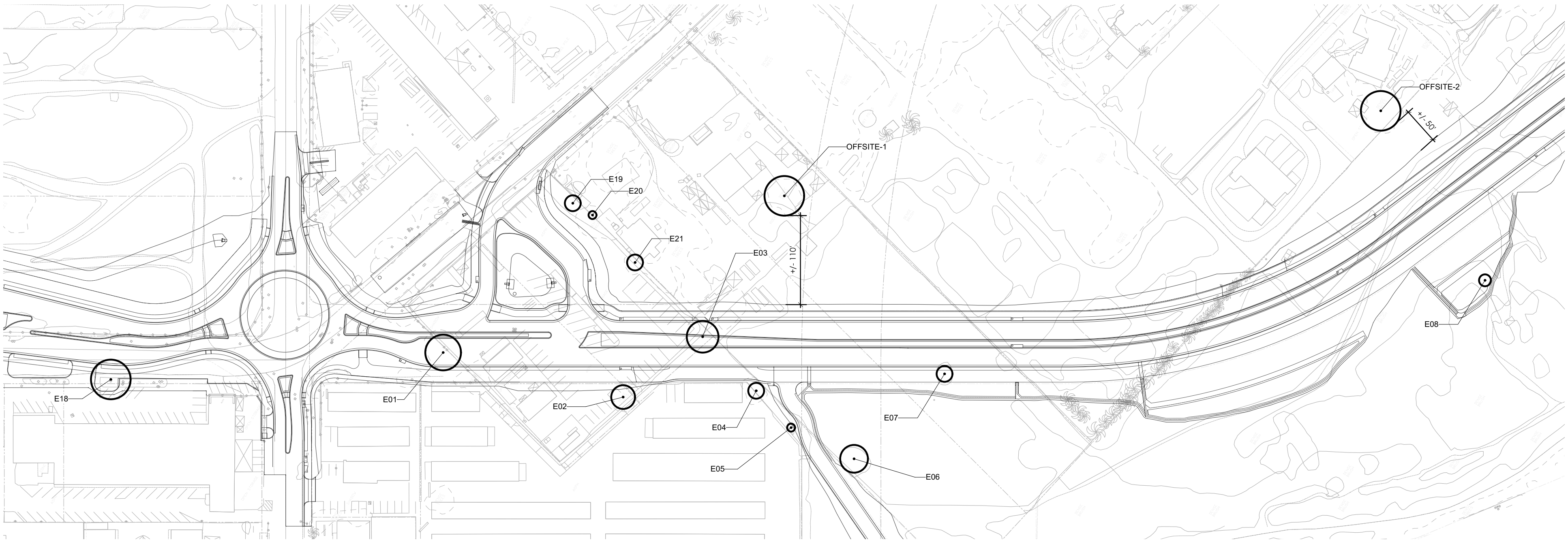
Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

APPENDIX B

Existing Oak Tree Inventory



EXISTING TREES AT INTERSECTION

Scale: 1:60

EXISTING TREE SCHEDULE - INTERSECTION

SYMBOL	LATIN NAME	COMMON NAME
EXISTING - REMAIN		
E02	*Quercus agrifolia*	Coast Live Oak
E04	*Quercus agrifolia*	Coast Live Oak
E05	*Quercus berberidifolia*	Scrub Oak
E06	*Quercus agrifolia*	Coast Live Oak
E18	*Quercus agrifolia*	Coast Live Oak
E19	*Quercus agrifolia*	Coast Live Oak
E20	*Quercus agrifolia*	Coast Live Oak
E21	*Quercus agrifolia*	Coast Live Oak
OFFSITE-1	*Quercus agrifolia*	Coast Live Oak
OFFSITE-2	*Quercus agrifolia*	Coast Live Oak
EXISTING - REMOVE		
E01	*Quercus agrifolia*	Coast Live Oak
E03	*Quercus agrifolia*	Coast Live Oak
E08	*Quercus agrifolia*	Coast Live Oak
E07	*Quercus berberidifolia*	Scrub Oak

DIGALERT
DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NOT FOR CONSTRUCTION

City of SANTA CLARITA CAPITAL IMPROVEMENTS

PLANS PREPARED BY:

PLANS PREPARED UNDER THE DIRECTION OF:

<NAME> <LICENSE #> <PLAN DATE> DATE

LICENSED LANDSCAPE ARCHITECT
MICHAEL ZIEGLER
#6041
NOT FOR CONSTRUCTION
STATE OF CALIFORNIA

REVIEWED BY:

PLAN CHECKER — DATE OF EXECUTION

APPROVED FOR CONSTRUCTION BY:

MIKE HENNAWY
CITY ENGINEER — DATE OF EXECUTION

IN ACCORDANCE WITH RESOLUTION No. 19-6, AS A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA CLARITA DELEGATING DISCRETIONARY AUTHORITY TO THE DIRECTOR OF PUBLIC WORKS, DIRECTOR OF RECREATION AND COMMUNITY SERVICES, DIRECTOR OF NEIGHBORHOOD SERVICES, CITY ENGINEER, AND ASSISTANT CITY ENGINEERS TO APPROVE PLANS AND DESIGNS FOR THE CONSTRUCTION OF OR IMPROVEMENTS TO PUBLIC PROPERTY FOR PURPOSES OF DESIGN IMMUNITY PURSUANT TO GOVERNMENT CODE SECTION 830.6 FOR THE CITY OF SANTA CLARITA, I DO HEREBY EXERCISE THE DISCRETION DELEGATED TO ME AND APPROVE THE PLAN OR DESIGN, OR AMENDMENT OR MODIFICATION TO THE PLAN OR DESIGN, OR A CONSTRUCTION OF, OR AN IMPROVEMENT TO THE PUBLIC FACILITY, STRUCTURE, OR PROPERTY TO WHICH THIS STATEMENT, MY SIGNATURE AND DATE IS AFFIXED.

	REVISION	REVISED BY	CITY APPROVALS	DATE

CITY OF SANTA CLARITA

STREET IMPROVEMENT PLAN

EXISTING OAK TREE INVENTORY

SCALE: AS SHOWN
DATE: 11/5/2020
JOB NO: 19-013
DRAWN BY: RS, CH
SHEET: EX-1.02

Addendum to the
Lyons Avenue/Dockweiler Drive Extension Project
Final Environmental Impact Report

APPENDIX C

Noise Calculation Worksheets

PARKER
ENVIRONMENTAL CONSULTANTS

Table 12-1. Construction Equipment Noise Emission Levels

EQUIPMENT	Typical Noise Level at 50 feet from source	Quantities Used
Air Compressor	81	
Backhoe	80	3
Ballast Equalizer	82	
Ballast Tamper	83	
Compactor	82	
Concrete Mixer	85	
Concrete Pump	82	
Concrete Vibrator	76	
Crane, Derrick	88	
Crane, Mobile	83	1
Dozer	85	
Excavator	85	4
Generator	81	
Grader	85	2
Impact Wrench	85	
Jack Hammer	88	
Loader	85	2
Paver	89	
Pile-driver (Impact)	101	
Pile-driver (Sonic)	96	
Pneumatic Tool	85	
Pump	76	
Rail Saw	90	
Rock Drill	98	
Roller	74	3
Saw	76	
Scarifier	83	
Scraper	89	
Shovel	82	
Spike Driver	77	
Tie Cutter	84	
Tie Handler	80	
Tie Inserter	85	
Tractor	84	1
Truck	88	

Adding Equal Noise Sources

Refernce noise level	**units used**	**Noise Increase**	**Noise Impact**	
85	9	9.5	94.5	9.45
80	3	4.8	84.8	8.48
			89.0	8.90

Adding Unequal Noise Sources: **SPL:** 96.0

*Note: This equipment based on Phase 1 - Grading/Excavation phase, since this phase would utilize the most equipment.

FORMULA:
Leq(equip) = E.L. + 10 log(U.F.) – 20 log(D/50) – 10G log(D/50)

where: Leq (equip) is the Leq at a receiver resulting from the operation of a single piece of equipment over a specified time period
E.L. is the noise emission level of the particular piece of equipment at the reference distance of 50 feet, taken from Table 12-1
G is a constant that accounts for topography and ground effects, taken from Figure 6-5 (Chapter 6)
D is the distance from the receiver to the piece of equipment, and
U.F. is a usage factor that accounts for the fraction of time that the equipment is in use over the specified time period.

The combination of noise from several pieces of equipment operating during the same time period is obtained from decibel addition of the Leq of each single piece of equipment found from the above equation.
General Assessment
The approach can be as detailed as necessary to characterize the construction noise by specifying the various quantities in the equation. For projects in an early assessment stage when the equipment roster and schedule are undefined, only a rough estimate of construction noise levels is practical.
The following assumptions are adequate for a general assessment of each phase of construction:
• Full power operation for a time period of one hour is assumed because most construction equipment operates continuously for periods of one hour or more at some point in the construction period. Therefore, U.F. = 1, and 10 log(U.F.) = 0.
• Free-field conditions are assumed and ground effects are ignored. Consequently, G = 0.
• Emission level at 50 feet, E.L., is taken from Table 12-1.
• All pieces of equipment are assumed to operate at the center of the project, or centerline, in the case of a guideway or highway construction project.
The predictions include only the two noisiest pieces of equipment expected to be used in each construction phase.

Detailed Assessment
A more detailed approach can be used if warranted, such as when a large number of noise-sensitive sites are adjacent to a construction project or where contractors are faced with stringent local ordinances or heightened public concerns expressed in early outreach efforts. Additional details include:
• Duration. Long-term construction project noise impact is based on a 30-day average Ldn, the times of day of construction activity (nighttime noise is penalized by 10 dB in residential areas), and the percentage of time the equipment is to be used during a period of time which will affect U.F. For example, an 8-hour Leq is determined by making U.F. the percentage of time each individual piece of equipment operates under full power in that period. Similarly, the 30-day average Ldn is determined from the U.F. expressed by the percentage of time the equipment is used during the daytime hours (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.), separately over a 30-day period. However, to account for increased sensitivity to nighttime noise, the nighttime percentage is multiplied by 10 before performing the computation.
• Site Characteristics. Taking into account the site topography, natural and man-made barriers and ground effects will involve the factor G. Use Figure 6-5 (Chapter 6) to calculate G.
• Noise Sources. Measuring or certifying the emission level of each piece of equipment will refine E.L.
• Site Layout. Determining the location of each piece of equipment while it is working will specify the distance factor D more accurately.
•Combined Sources. Including all pieces of equipment in the computation of the 8-hour Leq and the 30-day average Ldn will determine the total noise levels using Table 6-11 (Chapter 6).

Construction Site Noise Level

SPL:	96.0

E.L.		96.0			
U.F	#REF!				NOISE LEVEL
(D/150)	SR 1	at 290 feet	0.17241379	0.01234326	76.9
	SR2	at 130 feet	0.38461538	0.09174167	85.6
	SR 3	at 490 feet	0.10204082	0.0033261	71.2
	SR 4	at 490 feet	0.10204082	0.0033261	71.2
	SR 5	at 245 feet	0.20408163	0.01881524	78.7
	SR 6	at 230 feet	0.2173913	0.02203461	79.4
	SR 7	at 160 feet	0.38461538	0.09174167	85.6
	SR 8	at 90 feet	0.55555556	0.23004815	89.6

PARKER
ENVIRONMENTAL CONSULTANTS

Reference Noise Level Worksheets (Drill Rig Only)

Table 12-1. Construction Equipment Noise Emission Levels

EQUIPMENT	Typical Noise Level at 50 feet from source	Quantities Used
Auger Drill Rig*	85	1
Air Compressor	81	
Backhoe	80	
Ballast Equalizer	82	
Ballast Tamper	83	
Compactor	82	
Concrete Mixer	85	
Concrete Pump	82	
Concrete Vibrator	76	
Crane, Derrick	88	
Crane, Mobile	83	
Dozer	85	
Excavator	85	
Generator	81	
Grader	85	
Impact Wrench	85	
Jack Hammer	88	
Loader	85	
Paver	89	
Pile-driver (Impact)	101	
Pile-driver (Sonic)	96	
Pneumatic Tool	85	
Pump	76	
Rail Saw	90	
Rock Drill	98	
Roller	74	
Saw	76	
Scarifier	83	
Scraper	89	
Shovel	82	
Spike Driver	77	
Tie Cutter	84	
Tie Handler	80	
Tie Inserter	85	
Tractor	84	
Truck	88	

Adding Equal Noise Sources

Reference noise level	units used	Noise Increase	Noise Impact	
85	1	0.0	85.0	8.50

Adding Unequal Noise Sources: **SPL:** 85.0

*Note: This equipment is based solely on drill rig activities. It assumes an auser drill rig would be utilized. Source for drill rig reference noise level from FHA (2006).

Noise Calculations (Drill Rig Only)

FORMULA:
Leq(equip) = E.L. + 10 log(U.F.) – 20 log(D/50) – 10G log(D/50)

where: Leq (equip) is the Leq at a receiver resulting from the operation of a single piece of equipment over a specified time period
E.L. is the noise emission level of the particular piece of equipment at the reference distance of 50 feet, taken from Table 12-1
G is a constant that accounts for topography and ground effects, taken from Figure 6-5 (Chapter 6)
D is the distance from the receiver to the piece of equipment, and
U.F. is a usage factor that accounts for the fraction of time that the equipment is in use over the specified time period.

The combination of noise from several pieces of equipment operating during the same time period is obtained from decibel addition of the Leq of each single piece of equipment found from the above equation.
General Assessment
The approach can be as detailed as necessary to characterize the construction noise by specifying the various quantities in the equation. For projects in an early assessment stage when the equipment roster and schedule are undefined, only a rough estimate of construction noise levels is practical.
The following assumptions are adequate for a general assessment of each phase of construction:
• Full power operation for a time period of one hour is assumed because most construction equipment operates continuously for periods of one hour or more at some point in the construction period. Therefore, U.F. = 1, and 10 log(U.F.) = 0.
• Free-field conditions are assumed and ground effects are ignored. Consequently, G = 0.
• Emission level at 50 feet, E.L., is taken from Table 12-1.
• All pieces of equipment are assumed to operate at the center of the project, or centerline, in the case of a guideway or highway construction project.
The predictions include only the two noisiest pieces of equipment expected to be used in each construction phase.

Detailed Assessment
A more detailed approach can be used if warranted, such as when a large number of noise-sensitive sites are adjacent to a construction project or where contractors are faced with stringent local ordinances or heightened public concerns expressed in early outreach efforts. Additional details include:
• Duration. Long-term construction project noise impact is based on a 30-day average Ldn, the times of day of construction activity (nighttime noise is penalized by 10 dB in residential areas), and the percentage of time the equipment is to be used during a period of time which will affect U.F. For example, an 8-hour Leq is determined by making U.F. the percentage of time each individual piece of equipment operates under full power in that period. Similarly, the 30-day average Ldn is determined from the U.F. expressed by the percentage of time the equipment is used during the daytime hours (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.), separately over a 30-day period. However, to account for increased sensitivity to nighttime noise, the nighttime percentage is multiplied by 10 before performing the computation.
• Site Characteristics. Taking into account the site topography, natural and man-made barriers and ground effects will involve the factor G. Use Figure 6-5 (Chapter 6) to calculate G.
• Noise Sources. Measuring or certifying the emission level of each piece of equipment will refine E.L.
• Site Layout. Determining the location of each piece of equipment while it is working will specify the distance factor D more accurately.
•Combined Sources. Including all pieces of equipment in the computation of the 8-hour Leq and the 30-day average Ldn will determine the total noise levels using Table 6-11 (Chapter 6).

Construction Site Noise Level

SPL:	85.0

E.L.		85.0			
U.F		0			NOISE LEVEL
(D/150)	SR 1	at 500 feet	0.1	0.00316228	60.0
	SR2	at 650 feet	0.07692308	0.00164112	57.2
	SR 3	at 1500 feet	0.03333333	0.00020286	48.1
	SR 4	at 700 feet	0.07142857	0.00136358	56.3
	SR 5	at 1200 feet	0.04166667	0.00035438	50.5
	SR 6	at 230 feet	0.2173913	0.02203461	68.4
	SR 7	at 800 feet	0.0625	0.00097656	54.9
	SR 8	at 2200 feet	0.02272727	7.787E-05	43.9

*Distances are from sensitive receptor to the closest pile driving location (one of two locations).

DOCKWEILER DRIVE EXTENSION TRAFFIC IMPACT STUDY

Prepared By:
ADVANTEC Consulting Engineers
21700 Copley Drive, Suite 350
Diamond Bar, CA 91765

September 2020

Contents

FIGURES

TABLES

1. INTRODUCTION

1.1 Background

ADVANTEC Consulting Engineers (ADVANTEC) prepared this report to document the traffic study findings for the proposed extension of Dockweiler Drive from the existing terminus of Dockweiler Drive to the intersection of 12th Street and Placerita Canyon Road. The City of Santa Clarita is proposing to designate Dockweiler Drive as a Secondary Highway consisting of four (4) travel lanes. ***Figure 1.1*** presents a vicinity map of the project and ***Figures 1.2*** and ***1.3*** present the existing intersection configurations for Railroad Avenue at 13th Street and 12th Street at Placerita Canyon Road, respectively.

The following sections will evaluate three (3) intersection design alternatives for the Dockweiler Drive extension project at the Dockweiler Drive/12th Street/Placerita Canyon Road intersection for the following conditions:

- Existing (2019)
- Opening Year without Project Alternatives (2025)
- Opening Year + Project Alternatives (2025)
- Horizon Year without Project Alternatives (2035)
- Horizon Year + Project Alternatives (2035)

Level of Service analysis was performed for AM and PM peak hours. The scope and methodologies used in this traffic impact study were developed in consultation with the City of Santa Clarita.

1.2 Design Alternatives

This report examines the traffic impact for the following three (3) intersection alternatives:

Alternative 1

Alternative 1 proposes to extend Dockweiler Drive from its existing terminus, westward to intersect with Arch Street, 12th Street, and Placerita Canyon Road, providing a 5-legged roundabout intersection as illustrated in ***Figure 1.4***. The roundabout will have one (1) main lane in the circle, with one (1) lane approach from Arch Street, Dockweiler Drive, 12th Street, and Placerita Canyon Road with a right turn bypass from Dockweiler Drive to Placerita Canyon Road.

Alternative 2

Alternative 2 proposes to extend Dockweiler Drive from its existing terminus, westward to intersect with Arch Street, and 12th Street providing a 4-legged roundabout with a signalized offset T-intersection with Placerita Canyon Road as illustrated in ***Figure 1.5***. The

roundabout will have one (1) main lane in the circle, with one (1) lane approach from Arch Street, Dockweiler Drive, and 12th Street.

Alternative 3

Alternative 3 proposes to extend Dockweiler Drive from its existing terminus, westward to intersect with Arch Street, and 12th Street providing a standard 4-leg signalized intersection and a continuous green T-intersection with Placerita Canyon Road as illustrated in ***Figure 1.6***.

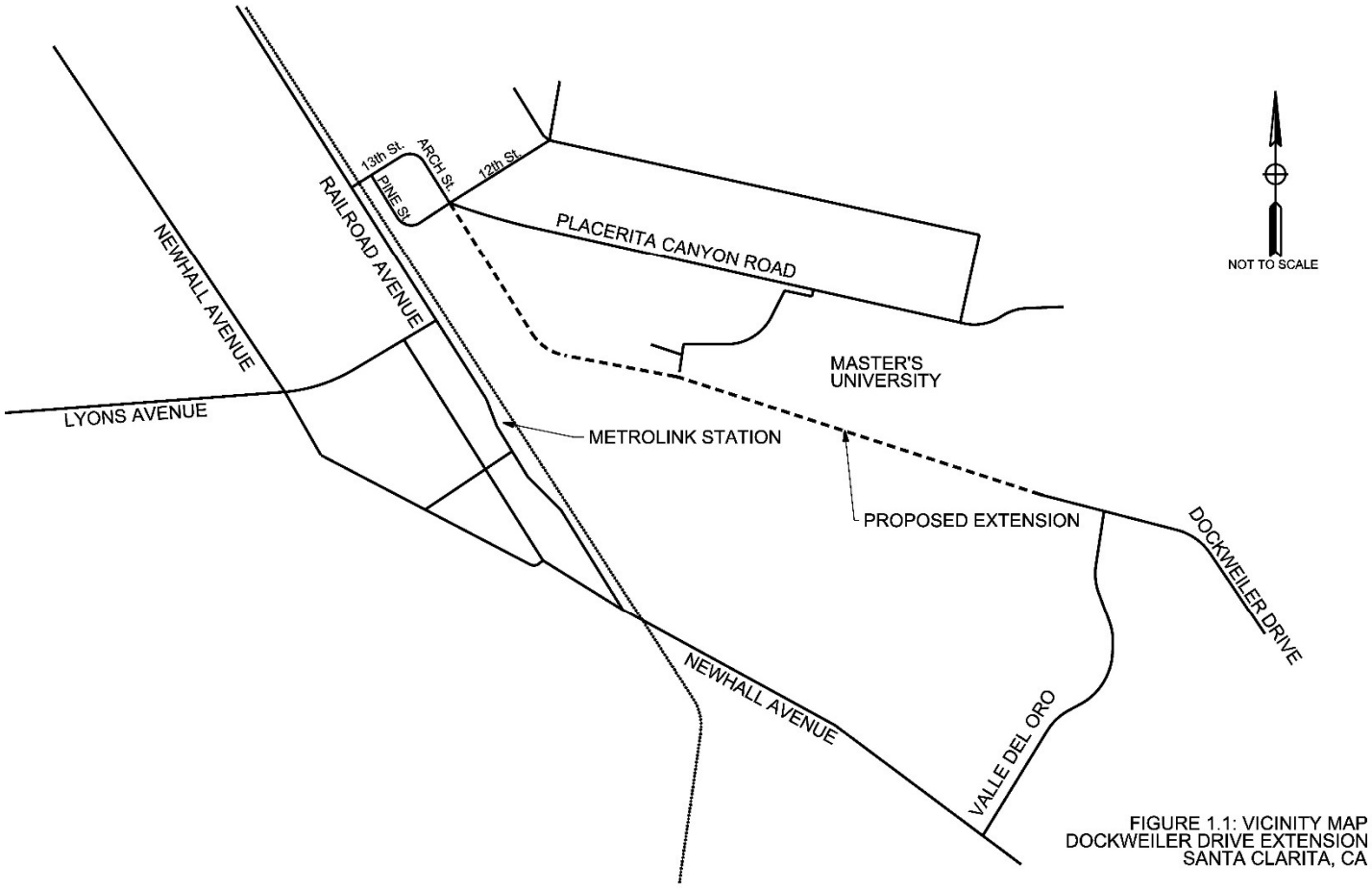


FIGURE 1.1: VICINITY MAP
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

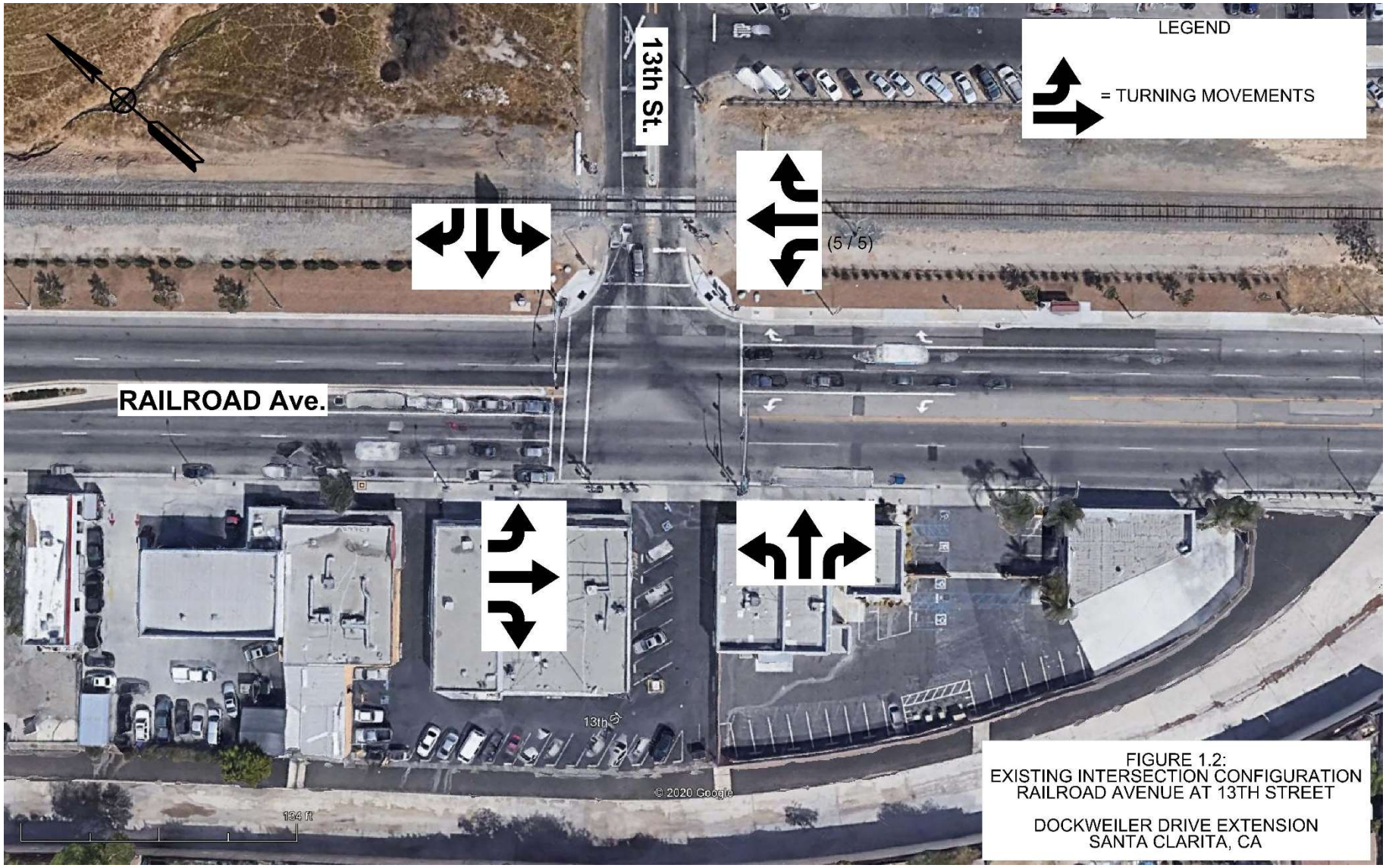


FIGURE 1.2:
EXISTING INTERSECTION CONFIGURATION
RAILROAD AVENUE AT 13TH STREET

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

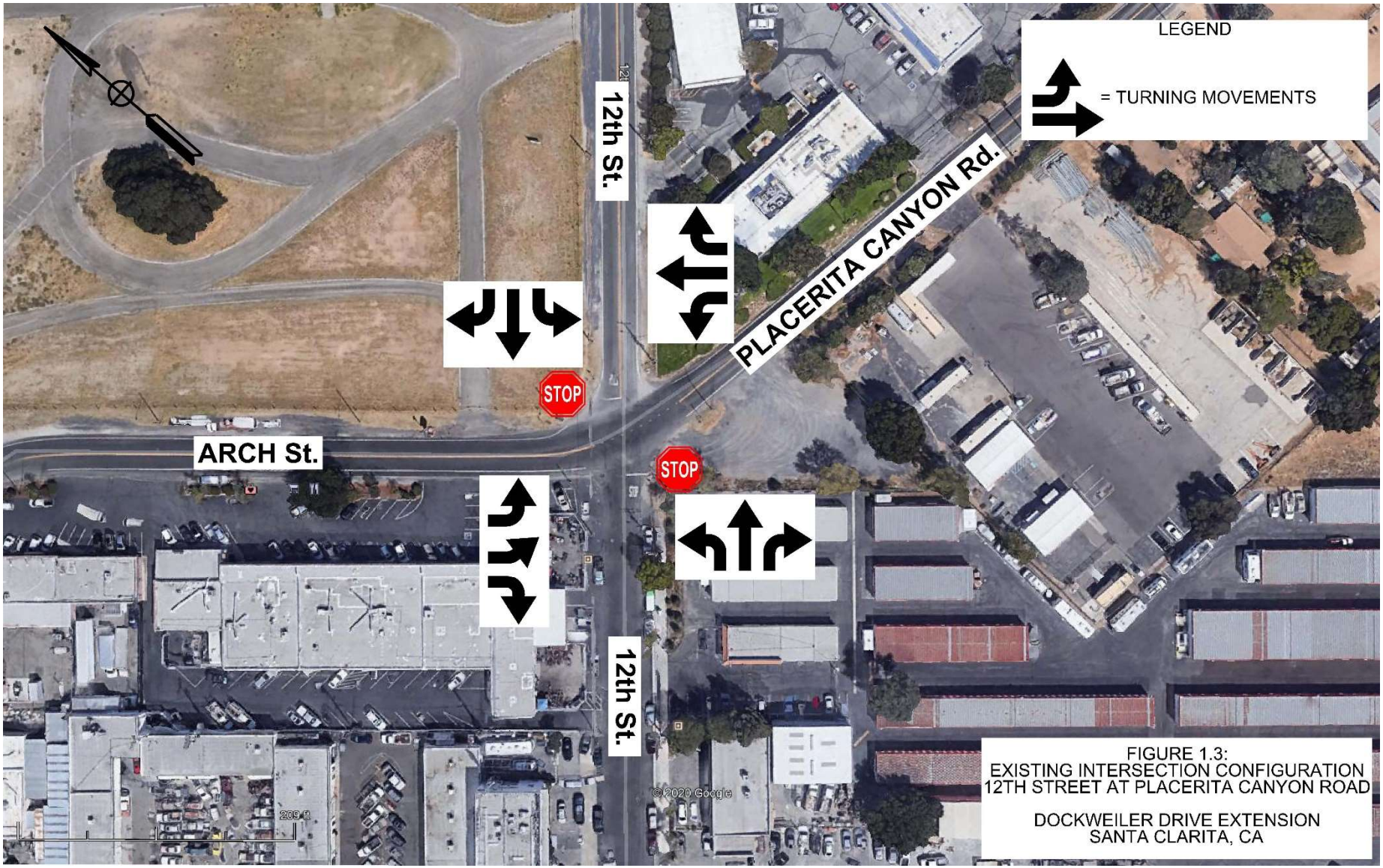
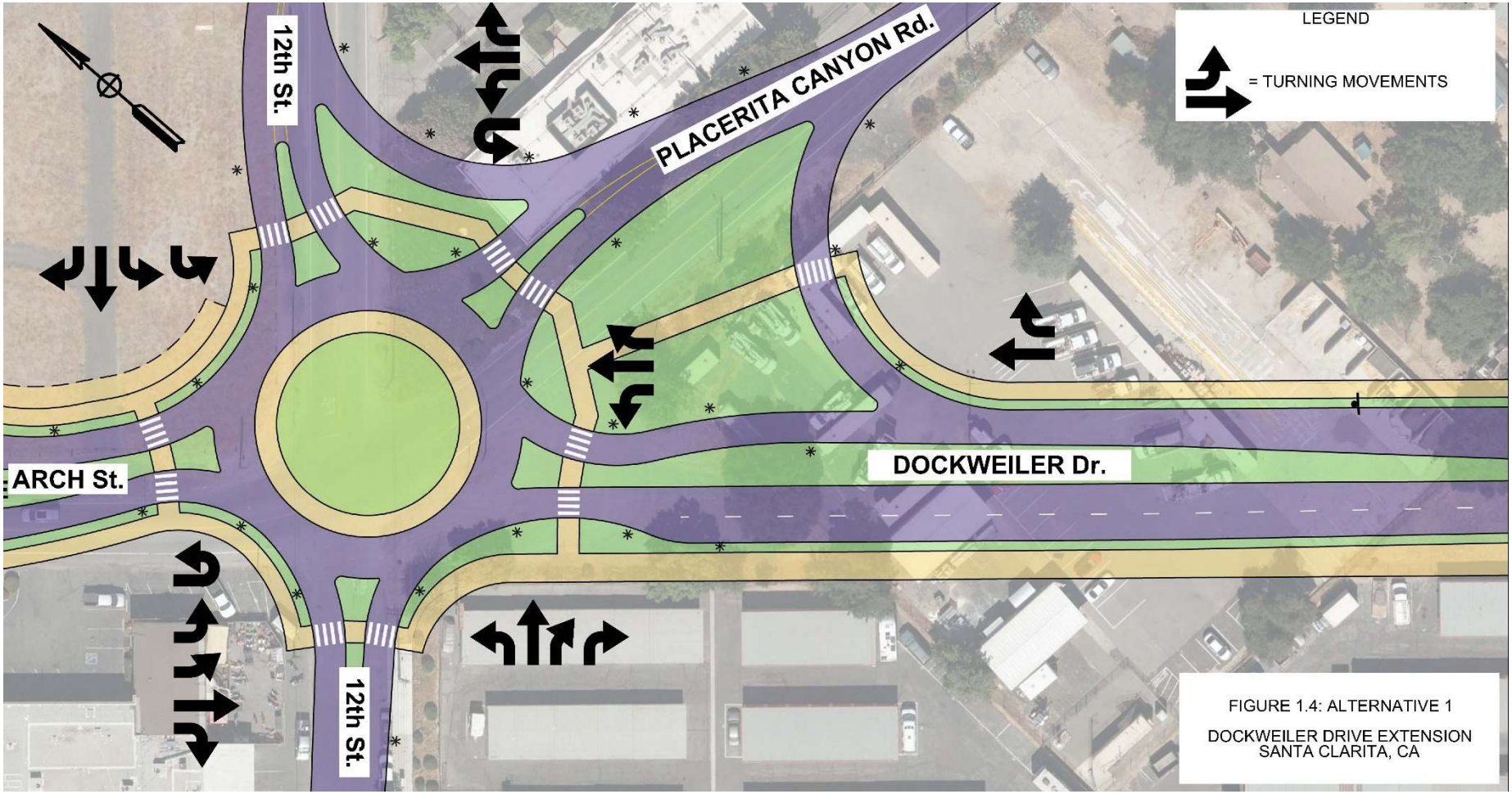


FIGURE 1.3:
EXISTING INTERSECTION CONFIGURATION
12TH STREET AT PLACERITA CANYON ROAD

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
= TURNING MOVEMENTS
12th St.
PLACERITA CANYON Rd.
ARCH St.
DOCKWEILER Dr.
12th St.
FIGURE 1.4: ALTERNATIVE 1
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

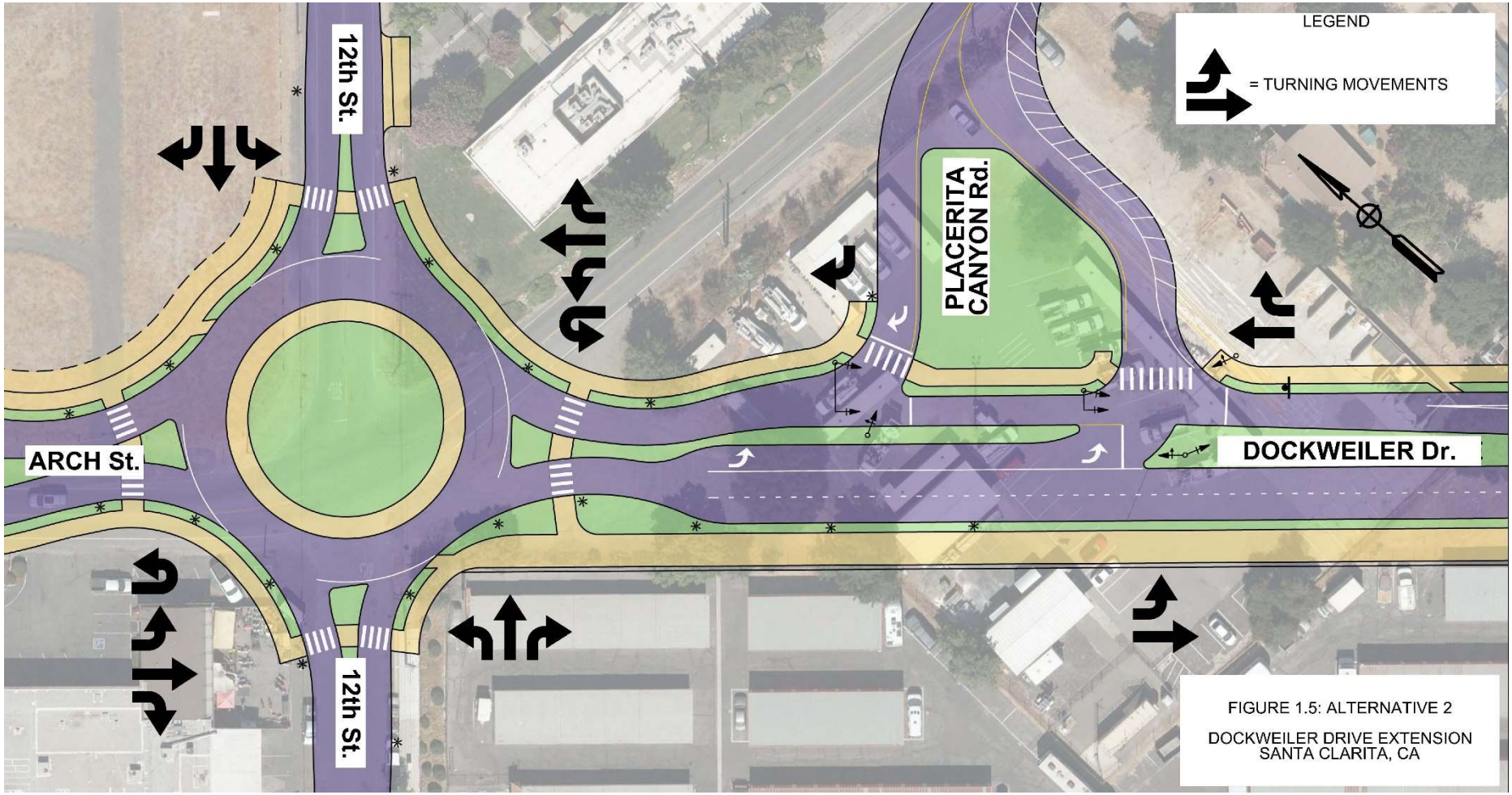


FIGURE 1.5: ALTERNATIVE 2

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

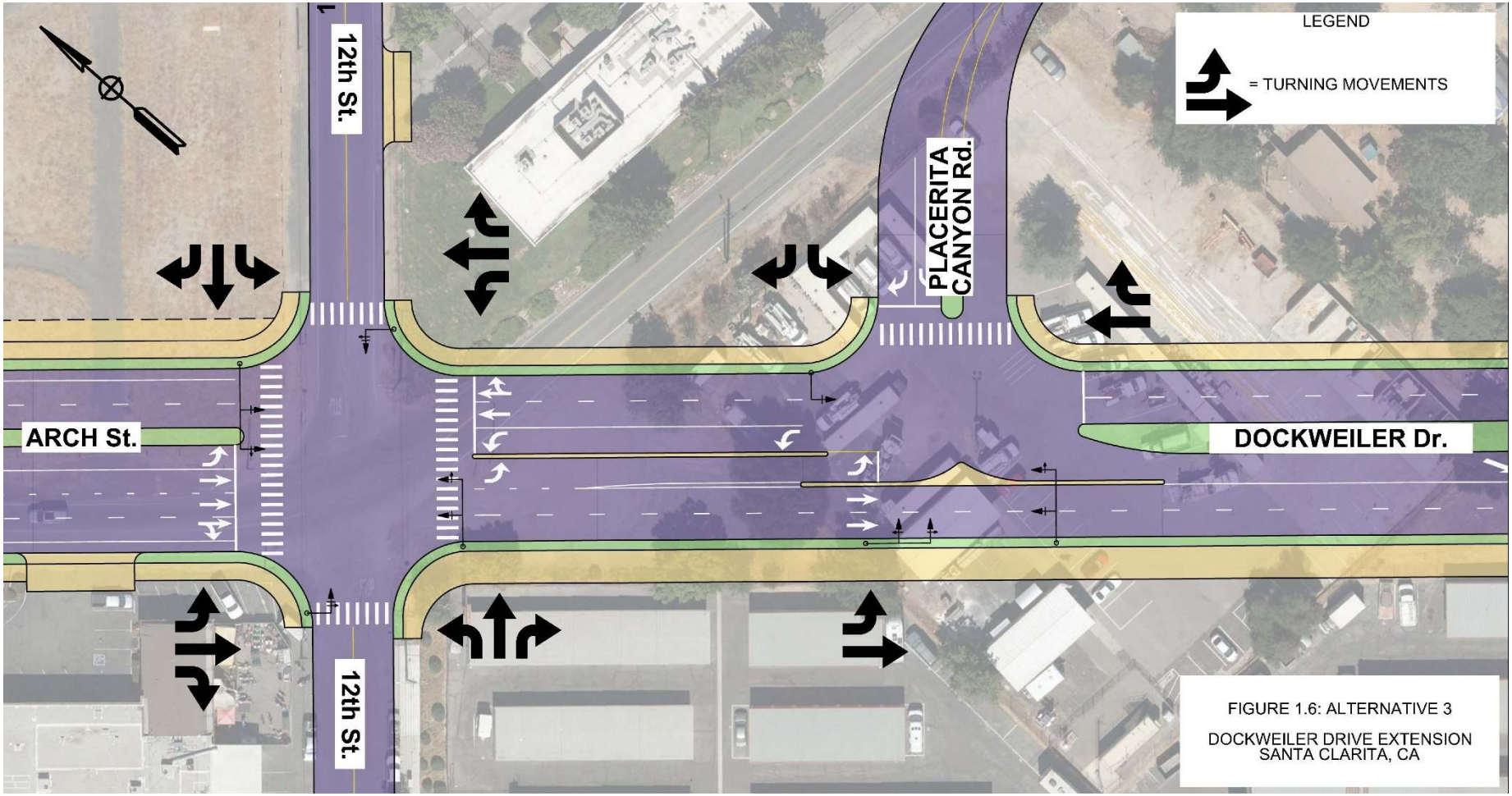


FIGURE 1.6: ALTERNATIVE 3
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

1.3 Capacity Analysis Methodologies

Based upon the proposed intersection alternatives and discussion with the City of Santa Clarita, it was determined that comparing Level of Service (LOS) would not be appropriate, as roundabouts and standard intersections operate differently, and the LOS obtained would not truly show how one alternative operates better than the other. Therefore, it was concurred that Vehicle Queue Lengths and Vehicle Delay at the approaches of the Dockweiler Drive/12th Street/Placerita Canyon Road study intersection would be estimated to determine how each alternative performs.

Synchro/Simtraffic simulation was used to estimate vehicle queue lengths and vehicle delay for all scenarios. A 30-minute simulation was run for each alternative and scenario using the peak hour volumes (AM and PM) for 2025 and 2035. A 2019 No-Build simulation was also created using existing traffic volumes. All vehicle and driver parameters, such as aggressiveness and reaction time factors, were constant in each of the models. The simulations were then used to record the maximum queue (feet) and total delay (seconds per vehicle) experienced. The maximum queue was reported per lane group (i.e., exclusive lefts, through/shared, or exclusive rights). The total delay was reported per intersection approach.

Traffic volumes for year 2019 and 2035 were obtained from the Traffic Impact Study for the Lyons Avenue/Dockweiler Drive Extension Project Final Environmental Impact Report. The EIR's Year 2035 scenarios (Alternative 2 and No Build) traffic volumes were then adjusted to remove the traffic volumes corresponding to the Traffic Analysis Zone that represents the currently undeveloped area north of 13th Street/Arch Street. The removed traffic volumes were then replaced with the projected volumes for the Placerita Meadows development, with access points at 13th Street and at 12th Street. The Placerita Meadows development was assumed to be fully built by Year 2025.

A project year of 2025 was identified as the opening year for the Dockweiler Drive Extension project. Traffic volumes for year 2025 were calculated by interpolation between the EIR Alternative-2 Year 2019 and Year 2035 traffic volumes.

2. EXISTING YEAR CONDITIONS (2019)

2.1 Existing Roadways

The project study area is bound by Valle Del Oro to the east, Railroad Avenue to the south, 13th Street to the west, and Placerita Canyon Road to the north. The following is a description of the streets within the project study limits:

Railroad Avenue – Railroad Avenue is a designated major north-south highway from Magic Mountain Parkway to Lyons Avenue and a secondary highway from Lyons Avenue to Newhall Avenue. This roadway provides two lanes in each direction and limited parking throughout the study limits.

Dockweiler Drive – Dockweiler Drive is an east-west two-lane road with a 14-foot-wide raised landscaped median, which provides access to residential neighborhoods.

13th Street/Arch Street – 13th Street is an east-west two-lane local roadway. This roadway provides access to 12th Street and Placerita Canyon Road via its intersection with Railroad Avenue.

12th Street/Pine Street – 12th Street is a north-south two-lane local roadway. This roadway provides access to The Master's College and the Placerita Canyon neighborhood.

Placerita Canyon Road – Placerita Canyon Road is an east-west local roadway. This roadway has a gated entrance towards the west. The gate provides restrictive access to residents of Placenta Canyon neighborhood.

Valle Del Oro – Valle Del Oro is a two-lane road with limited parking and provides access to residences.

2.2 Intersections

Based on potential impacts of the Dockweiler Drive extension to the area roadways, two (2) intersections have been identified for analysis:

1. 13th Street/Railroad Avenue Intersection
2. Dockweiler Drive/12th Street/Placerita Canyon Road Intersection

Figures 2.1 and ***2.2*** below present study intersections 1 and 2 respectively with existing traffic volumes.

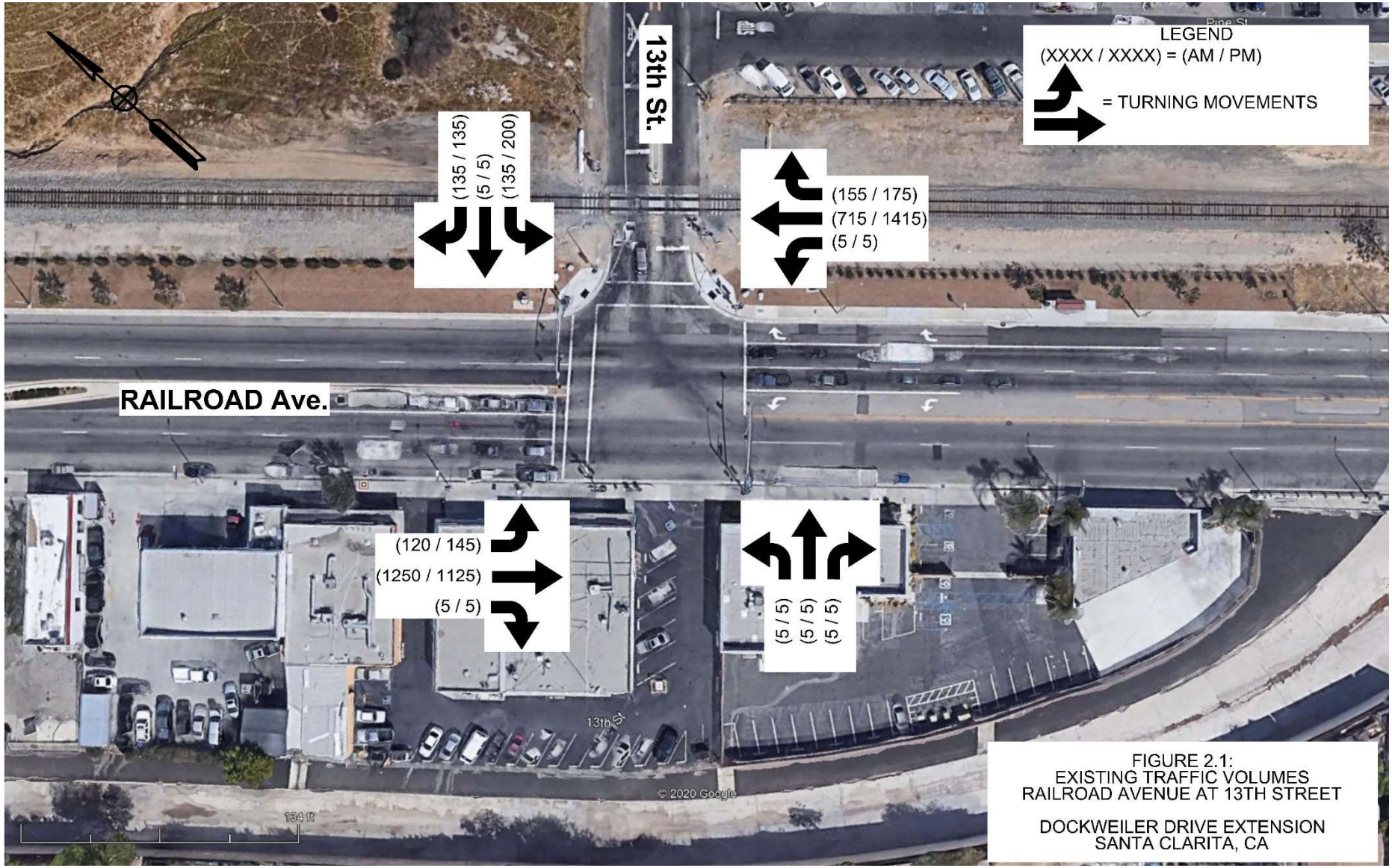


FIGURE 2.1:
EXISTING TRAFFIC VOLUMES
RAILROAD AVENUE AT 13TH STREET

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

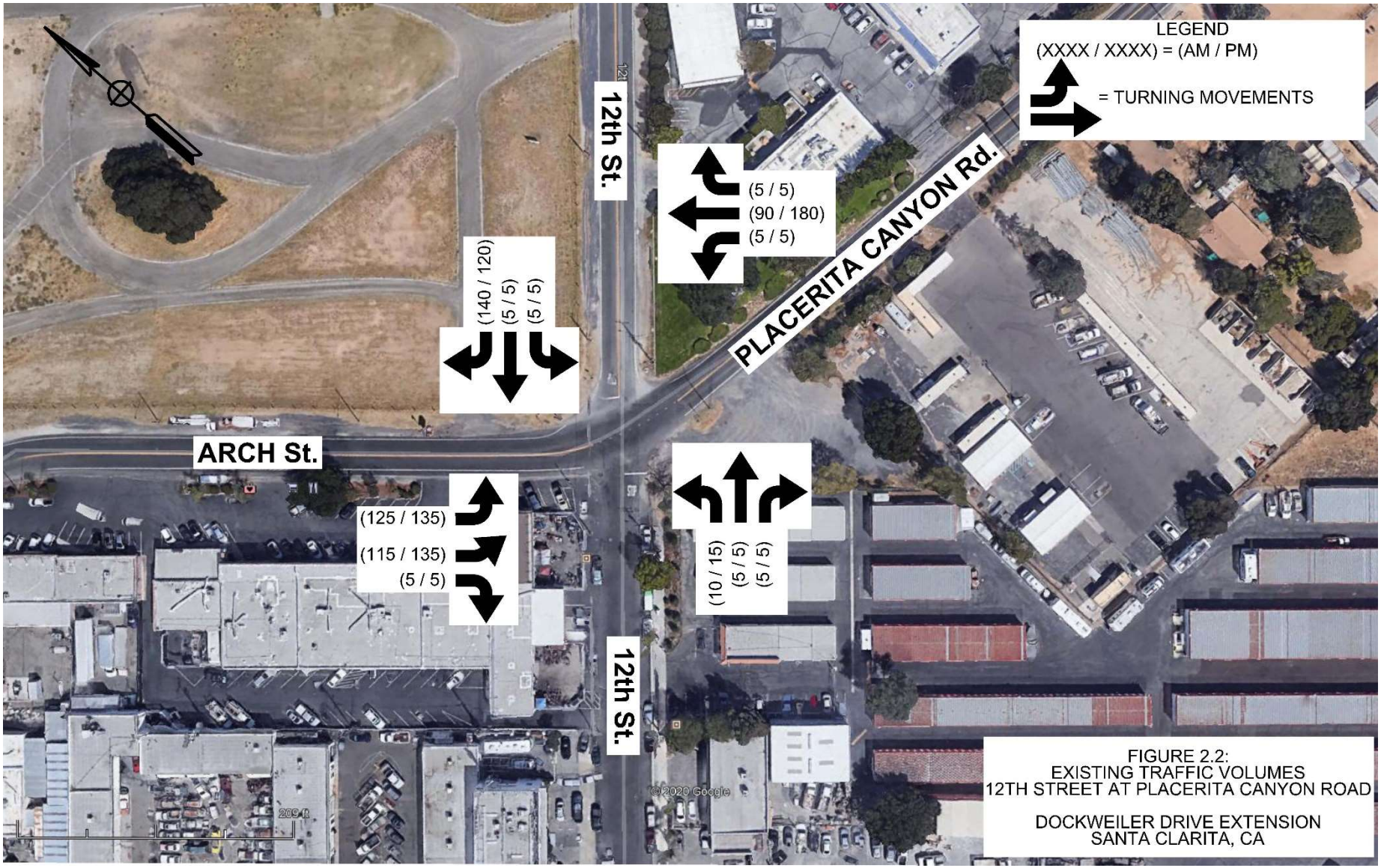


FIGURE 2.2:
EXISTING TRAFFIC VOLUMES
12TH STREET AT PLACERITA CANYON ROAD

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

2.3 Existing Conditions Traffic Analysis

To determine the impacts of the project on the study intersections, existing traffic intersection capacity analysis was conducted. The results are summarized in ***Table 2.1*** and **Table 2.2** below.

Table 2.1: Vehicle Queue Length Analysis – Existing Year Without Project (2019)

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	30	340	53	49	518	92
		EB	-	70	-	-	53	-
		SB	124	260	-	239	291	-
		WB	-	342	135	-	358	135
2	12th Street/ Placerita Canyon Road [2]	NB	-	0	-	-	0	-
		EB	-	50	-	-	26	-
		SB	-	74	-	-	99	-
		WB	-	38	-	-	80	-

[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection

Table 2.2: Vehicle Delay Analysis – Existing Year Without Project (2019)

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	17.8	24.3
		EB	63.0	32.6
		SB	12.9	16.4
		WB	52.5	50.8
2	12th Street/ Placerita Canyon Road [2]	NB	1.0	1.3
		EB	8.4	8.1
		SB	2.1	3.0
		WB	4.4	4.7

[1] Delay per Vehicle – Seconds
[2] Unsignalized Intersection

3. OPENING YEAR CONDITIONS 2025

A project year of 2025 has been identified as the opening year for the Dockweiler Drive Extension project. Utilizing interpolation between the EIR Alternative 2 2019 and 2035 traffic volumes, traffic volumes were calculated for the Year 2025. Three intersection alternatives were analyzed: 5-leg roundabout, 4-leg roundabout with offset T, and 4-leg signalized intersection with offset T.

3.1 No Build Condition

Figure 3.1 provides the No Build Opening Year 2025 traffic volume with the planned improvements of the Railroad Avenue and 13th Street intersection. ***Figures 3.2*** provides the No Build Opening Year 2025 traffic volumes for 12th Street and Placerita Canyon Road intersection.

3.1.1 No Build Traffic Analysis

Tables 3.1 and ***Table 3.2*** summarize the No Build opening year 2025 maximum queue length and delay per vehicle for the study intersections.

Table 3.1: Vehicle Queue Length Analysis – Opening Year 2025 No Build

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	22	300	52	149	339	165
		EB	-	51	-	-	53	-
		SB	143	187	-	234	220	-
		WB	134	281 [3]	135	134	405 [3]	135
2	Dockweiler Drive/12th Street/Placerita Canyon Road [2]	NB	-	89	-	-	129	-
		EB	-	41	-	-	85	-
		SB	187	56	-	214	75	-
		WB	-	65	-	-	79	-

[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection
[3] Through/left turn lane

Table 3.2: Vehicle Delay Analysis – Opening Year 2025 No Build

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	16.2	20.2
		EB	73.6	72.1
		SB	14.4	15.4
		WB	31.2	40.3
2	Dockweiler Drive/12th Street/Placerita Canyon Road [2]	NB	8.8	12.8
		EB	4.7	8.1
		SB	7.2	8.8
		WB	4.2	6.0

[1] Delay per Vehicle – Seconds - [2] Unsignalized Intersection

3.2 Build Condition

Figure 3.3 provides the Opening Year 2025 traffic volumes for Railroad Avenue and 13th Street intersection for all Alternatives.

3.2.1 Alternative 1 Traffic Analysis

Figure 3.4 provides the Alternative 1 Opening Year 2025 traffic volumes. ***Tables 3.3*** and ***3.4*** below summarize the Opening Year 2025 Alternative 1 maximum queue length and delay per vehicle for the study intersections.

Table 3.3: Vehicle Queue Length Analysis – Opening Year 2025 Alternative 1

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	18	227	53	149	330	97
		EB	-	92	-	-	94	-
		SB	125	166	-	162	206	-
		WB	134	138 [3]	184	134	245 [3]	201
2	12th Street/ Placerita Canyon Road [2]	NB	-	74	-	-	95	-
		NW	-	183	-	-	96	-
		EB	-	32	-	-	32	-
		SB	-	150	-	-	208	-
		WB	-	79	-	-	77	-

[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection
[3] Through/left turn lane

Table 3.4: Vehicle Delay Analysis – Opening Year 2025 Alternative 1

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	13.4	19.6
		EB	55.0	43.2
		SB	10.9	15.2
		WB	30.6	36.7
2	12th Street/Placerita Canyon Road [2]	NB	4.6	4.4
		NW	5.8	4.0
		EB	2.5	3.4
		SB	4.6	5.5
		WB	2.8	3.6

[1] Total Delay/Vehicle – Seconds
[2] Unsignalized Intersection

3.2.2 Alternative 2 Traffic Analysis

Figure 3.5 provides the Alternative 2 Opening Year 2025 traffic volumes. ***Tables 3.5*** and ***3.6*** below summarize the Opening Year 2025 Alternative 2 maximum queue length and delay per vehicle for the study intersections.

Table 3.5: Vehicle Queue Length Analysis – Opening Year 2025 Alternative 2

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	149	276	153	22	362	108
		EB		74		-	74	-
		SB	126	165		166	232	-
		WB	134	180 [3]	226	134	204 [3]	315
2	Dockweiler Drive/12th Street [2]	NB	-	174	-	-	81	-
		EB	-	32	-	-	32	-
		SB	-	134	-	-	202	-
		WB	-	76	-	-	80	-
3	Dockweiler Drive/Placerita Canyon Road	NB		99		-	92	-
		EB	-	-	-	-	-	-
		SB	97	-		72	-	-
		WB	-	-	124	-	-	76

[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection
[3] Through/left turn lane

Table 3.6: Vehicle Delay Analysis – Opening Year 2025 Alternative 2

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	17.4	21.4
		EB	57.4	36.2
		SB	13.2	15.0
		WB	44.0	30.7
2	Dockweiler Drive/12th Street [2]	NB	4.4	4.3
		EB	3.2	2.3
		SB	5.0	4.6
		WB	3.5	3.6
3	Dockweiler Drive/Placerita Canyon Road	NB	7.3	6.4
		EB	-	-
		SB	2.5	3.0
		WB	5.5	5.2

[1] Total Delay/Vehicle – Seconds
[2] Unsignalized Intersection

3.2.3 Alternative 3 Traffic Analysis

Figure 3.6 provides the Alternative 3 Opening Year 2025 traffic volumes. ***Tables 3.7*** and ***3.8*** below summarize the Opening Year 2025 Alternative 3 maximum queue length and delay per vehicle and for the study intersections.

Table 3.7: Vehicle Queue Length Analysis – Opening Year 2025 Alternative 3

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	148	289	93	149	352	90
		EB	-	53	-	-	75	-
		SB	122	192	-	181	212	-
		WB	134	160 [2]	328	134	276 [2]	164
2	Dockweiler Drive/12th Street	NB	29	67	-	29	72	-
		EB	-	52	-	-	52	-
		SB	131	94	-	187	267	-
		WB	-	213	-	-	96	-
3	Dockweiler Drive/Placerita Canyon Road	NB		98		-	140	-
		EB	-	-	-	-	-	-
		SB	119	-		95	-	-
		WB	51	-	101	30	-	74

[1] Maximum Queue Observed – Feet
[2] Through/left turn lane

Table 3.8: Vehicle Delay Analysis – Opening Year 2025 Alternative 3

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	14.1	21.8
		EB	40.5	52.9
		SB	13.0	16.4
		WB	43.2	31.2
2	Dockweiler Drive/12th Street	NB	10.3	11.0
		EB	20.0	16.0
		SB	13.8	14.9
		WB	15.2	12.6
3	Dockweiler Drive/Placerita Canyon Road	NB	15.7	13.9
		EB	-	-
		SB	8.2	5.6
		WB	6.9	7.0

[1] Total Delay/Vehicle – Seconds

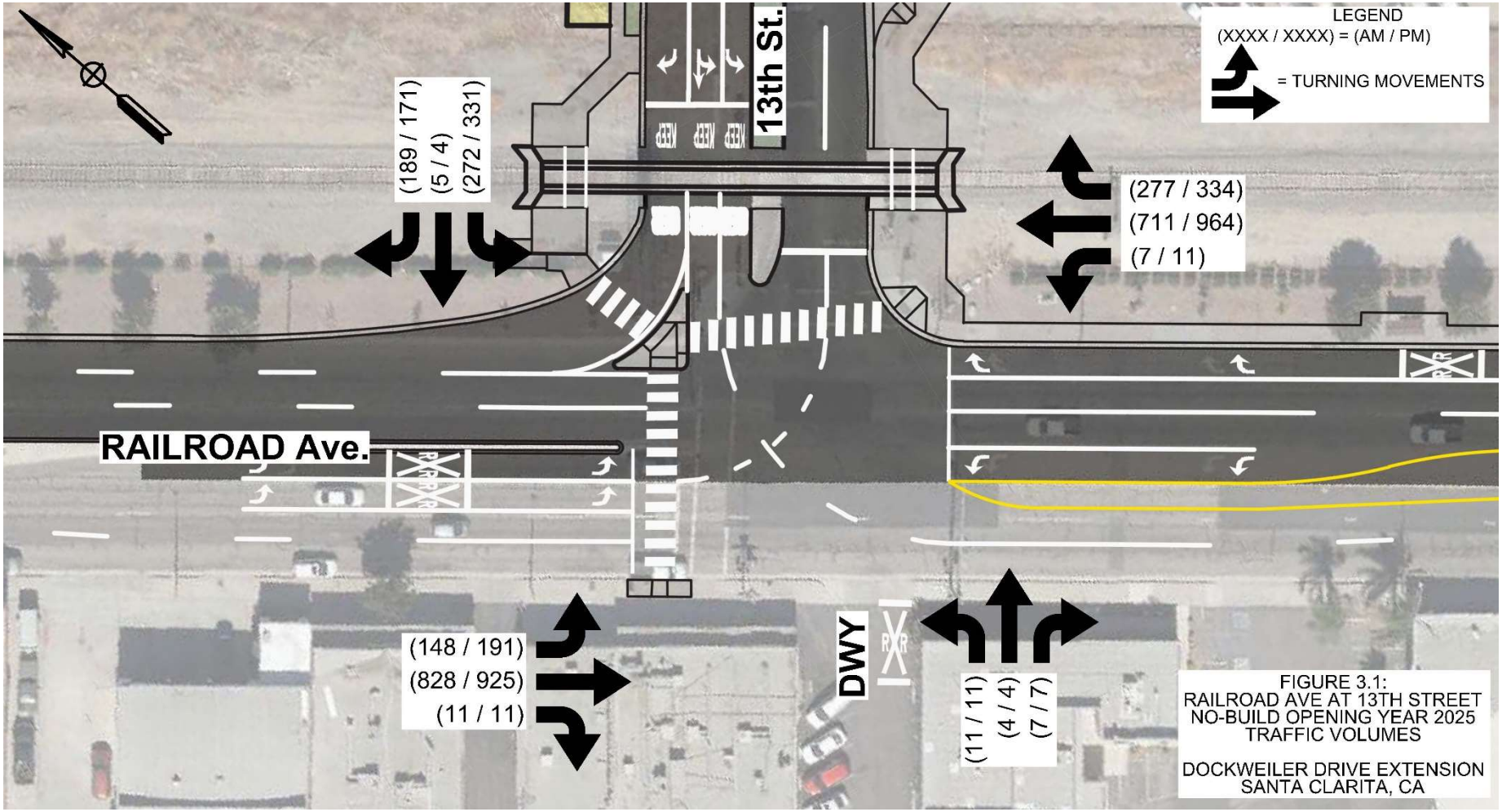


FIGURE 3.1:
RAILROAD AVE AT 13TH STREET
NO-BUILD OPENING YEAR 2025
TRAFFIC VOLUMES

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

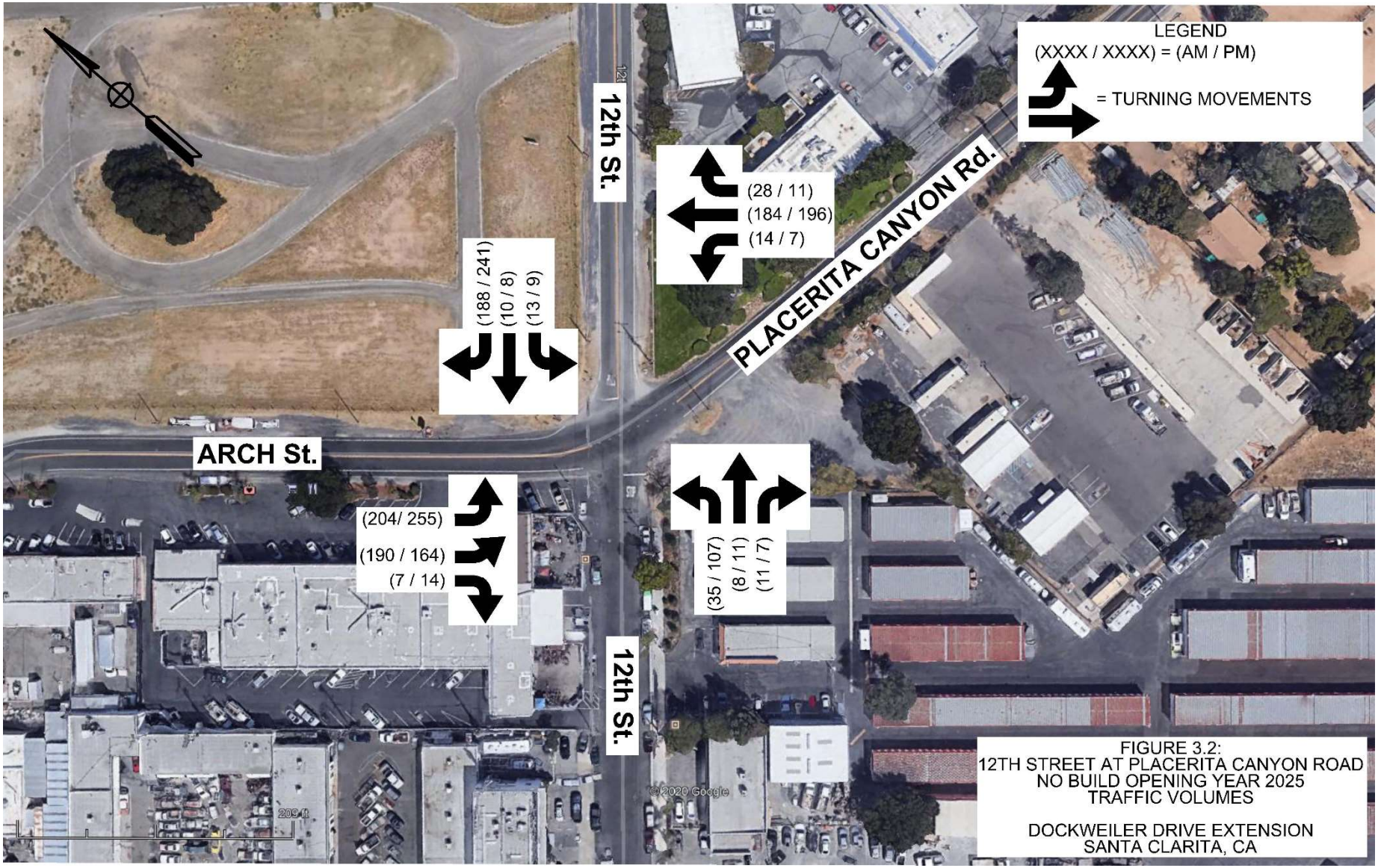
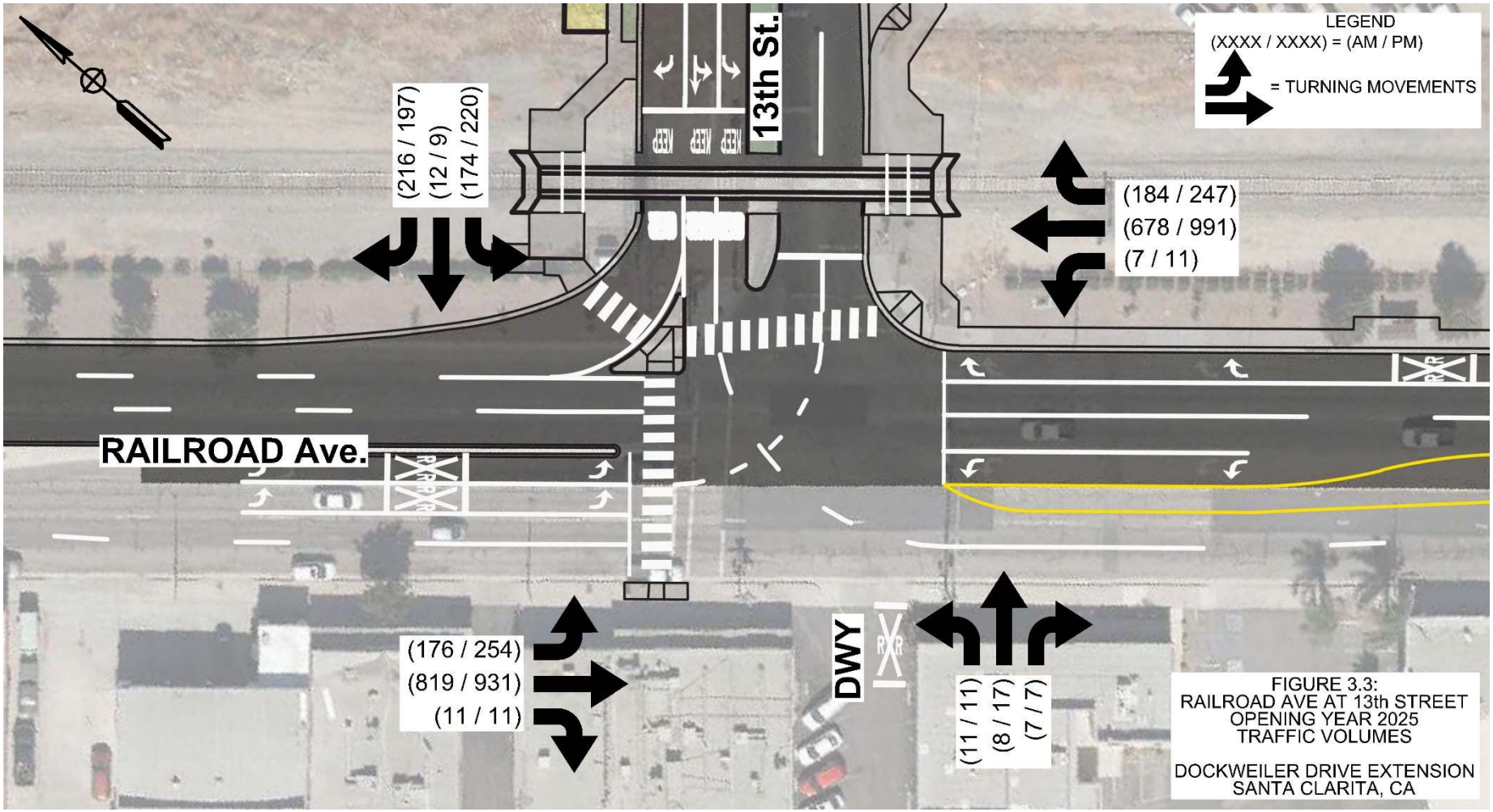
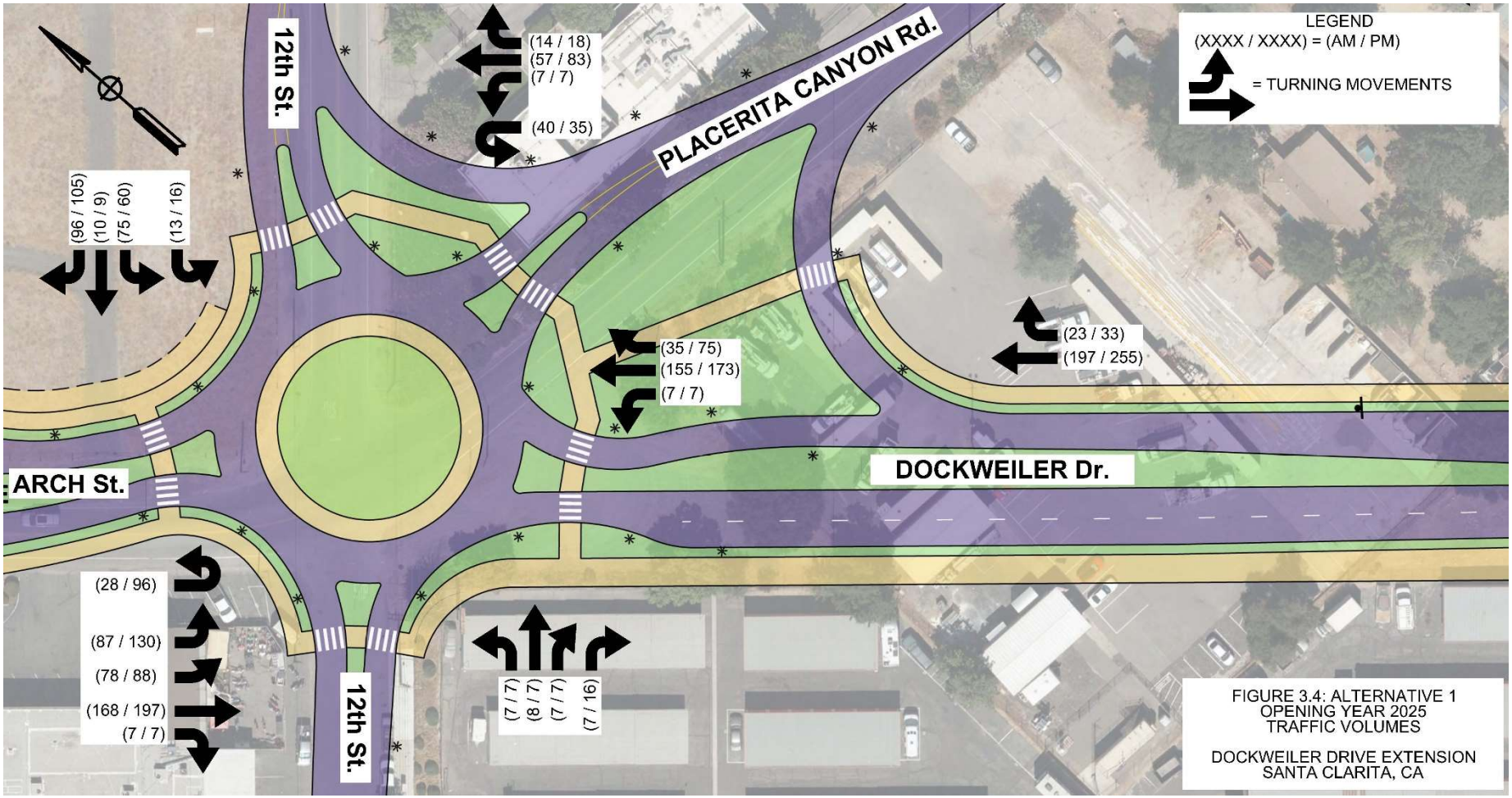
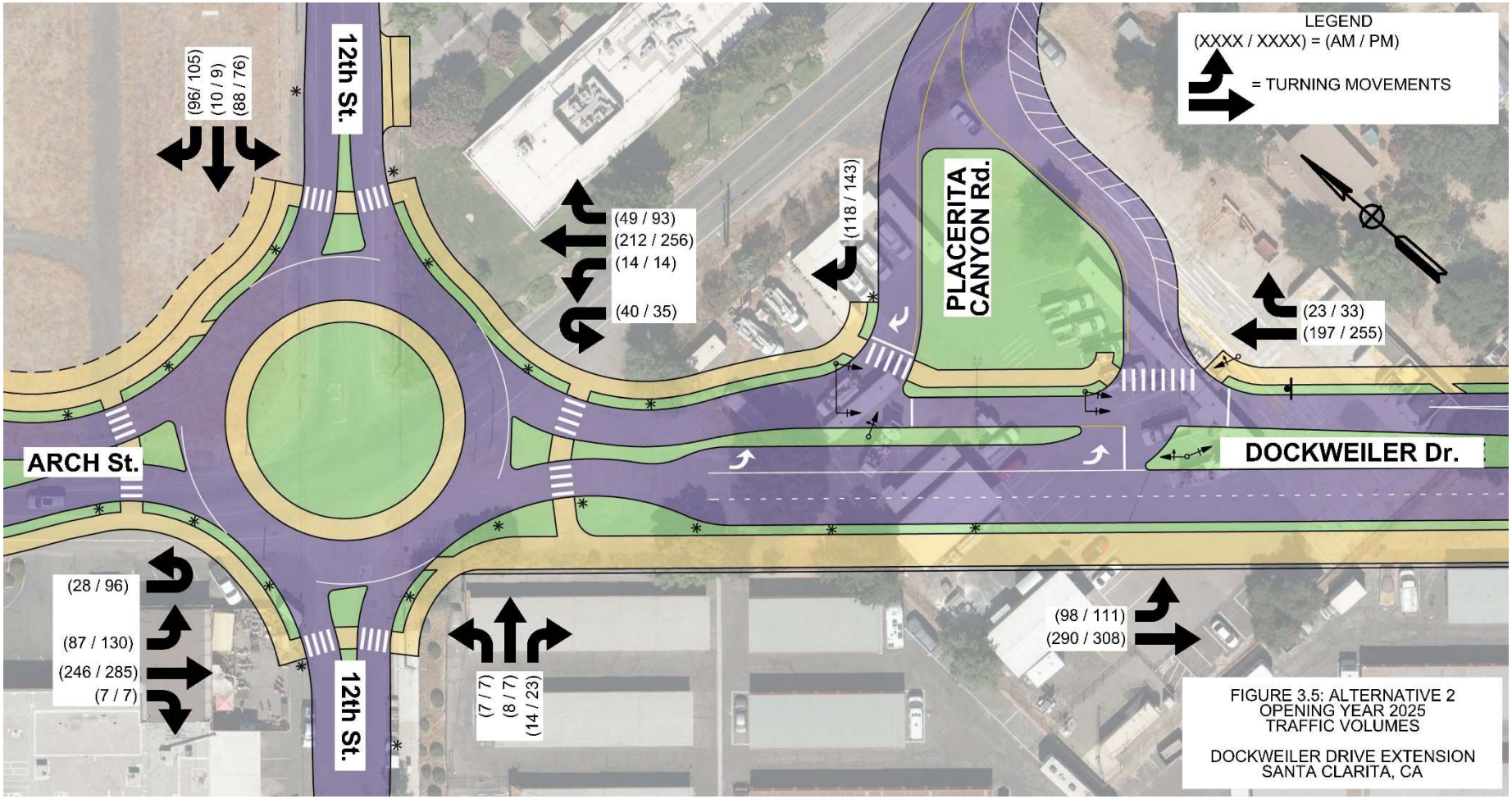


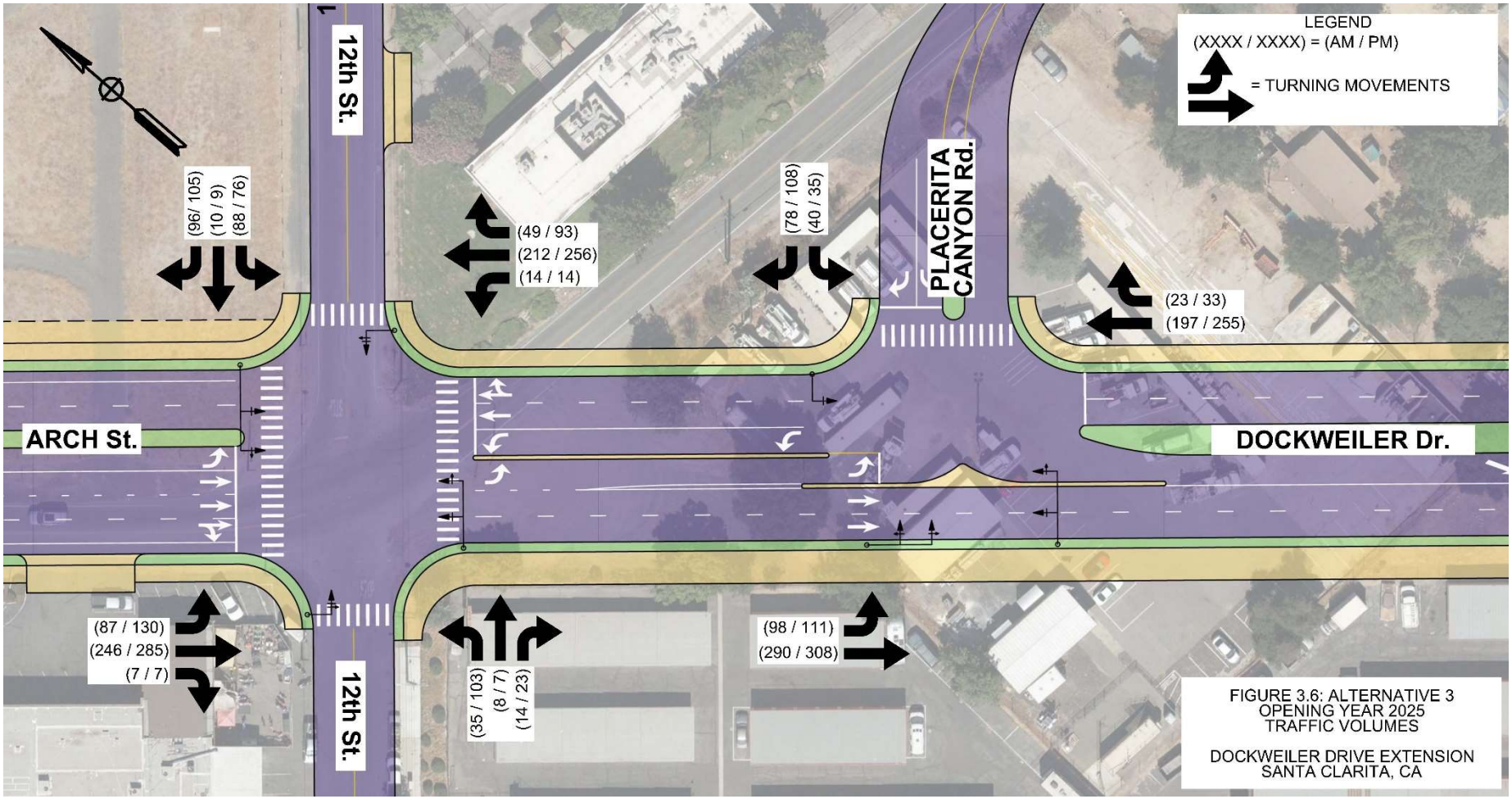
FIGURE 3.2:
12TH STREET AT PLACERITA CANYON ROAD
NO BUILD OPENING YEAR 2025
TRAFFIC VOLUMES

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
(XXXX / XXXX) = (AM / PM)
= TURNING MOVEMENTS
13th St.
RAILROAD Ave.
DWY
(216 / 197)
(12 / 9)
(174 / 220)
(184 / 247)
(678 / 991)
(7 / 11)
(176 / 254)
(819 / 931)
(11 / 11)
(11 / 11)
(8 / 17)
(7 / 7)
FIGURE 3.3:
RAILROAD AVE AT 13th STREET
OPENING YEAR 2025
TRAFFIC VOLUMES
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
(XXXX / XXXX) = (AM / PM)
= TURNING MOVEMENTS
12th St.
PLACERITA CANYON Rd.
(14 / 18)
(57 / 83)
(7 / 7)
(40 / 35)
(96 / 105)
(10 / 9)
(75 / 60)
(13 / 16)
(35 / 75)
(155 / 173)
(7 / 7)
(23 / 33)
(197 / 255)
ARCH St.
DOCKWEILER Dr.
(28 / 96)
(87 / 130)
(78 / 88)
(168 / 197)
(7 / 7)
(7 / 7)
(8 / 7)
(7 / 7)
(7 / 16)
12th St.
FIGURE 3.4: ALTERNATIVE 1
OPENING YEAR 2025
TRAFFIC VOLUMES
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
(XXXX / XXXX) = (AM / PM)
= TURNING MOVEMENTS
12th St.
ARCH St.
PLACERITA CANYON Rd.
DOCKWEILER Dr.
(96/ 105)
(10 / 9)
(88 / 76)
(49 / 93)
(212 / 256)
(14 / 14)
(40 / 35)
(118 / 143)
(23 / 33)
(197 / 255)
(28 / 96)
(87 / 130)
(246 / 285)
(7 / 7)
(7 / 7)
(8 / 7)
(14 / 23)
(98 / 111)
(290 / 308)
FIGURE 3.5: ALTERNATIVE 2
OPENING YEAR 2025
TRAFFIC VOLUMES
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
(XXXX / XXXX) = (AM / PM)
= TURNING MOVEMENTS
12th St.
PLACERITA CANYON Rd.
ARCH St.
DOCKWEILER Dr.
(96/ 105)
(10 / 9)
(88 / 76)
(49 / 93)
(212 / 256)
(14 / 14)
(78 / 108)
(40 / 35)
(23 / 33)
(197 / 255)
(87 / 130)
(246 / 285)
(7 / 7)
(35 / 103)
(8 / 7)
(14 / 23)
(98 / 111)
(290 / 308)
FIGURE 3.6: ALTERNATIVE 3
OPENING YEAR 2025
TRAFFIC VOLUMES
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

4. HORIZON YEAR CONDITIONS 2035

A project year of 2035 has been identified as the Horizon year for the Dockweiler Drive Extension project. Traffic volumes were identified from the Environmental Impact Report Traffic Study. Three intersection alternatives were analyzed: 5-leg roundabout, 4-leg roundabout with off-set T, and 4-leg signalized intersection with offset T.

4.1 No Build Condition

Figure 4.1 provides the No Build Horizon Year 2035 traffic volumes with the planned improvements of the Railroad Avenue and 13th Street intersection. ***Figure 4.2*** provides the No Build Horizon Year 2035 traffic volume for 12th Street and Placerita Canyon Road intersection.

4.1.1 No Build Traffic Analysis

Tables 4.1 and ***4.2*** summarize the Opening Year 2035 delay per vehicle and maximum queue length for the study intersections without Project.

Table 4.1: Vehicle Queue Length Analysis – Horizon Year 2035 No Build

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	22	294	52	148	484	420
		EB	-	51	-	-	52	-
		SB	95	217	-	145	202	-
		WB	134	429 [3]	135	134	304 [3]	135
2	12th Street/ Placerita Canyon Road [2]	NB	-	69	-	-	47	-
		EB	-	46	-	-	71	-
		SB	57	55	-	91	76	-
		WB	-	41	-	-	62	-

[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection
[3] Through/left turn lane

Table 4.2: Vehicle Delay Analysis – Horizon Year 2035 No Build

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	15.3	18.9
		EB	46.8	35.5
		SB	9.5	15.0
		WB	47.3	33.2
2	12th Street/Placerita Canyon Road [2]	NB	7.3	7.7
		EB	3.9	5.9
		SB	4.8	6.2
		WB	3.4	5.0

[1] Total Delay/Vehicle – Seconds - [2] Unsignalized Intersection

4.2 Build Condition

Figure 4.3 provides the Horizon Year 2035 traffic volumes for Railroad Avenue and 13th Street intersection for all alternatives.

4.2.1 Alternative 1 Traffic Analysis

Figure 4.2 provides the Alternative 1 Horizon Year 2035 traffic volumes. ***Tables 4.3*** and ***4.4*** below summarize the Horizon Year 2035 Alternative maximum queue length and delay per vehicle and for the study intersections.

Table 4.3: Vehicle Queue Length Analysis – Horizon Year 2035 Alternative 1

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	22	222	90	149	412	136
		EB	-	76	-	-	96	-
		SB	232	200	-	240	330	-
		WB	134	140 [3]	314	134	238 [3]	264
2	Dockweiler Drive/12th Street/Placerita Canyon Road [2]	NB	-	97	-	-	159	-
		NW	-	51	-	-	68	-
		EB	-	32	-	-	32	-
		SB	-	227	-	-	244	-
		WB	-	100	-	-	78	-

[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection
[3] Through/left turn lane

Table 4.4: Vehicle Delay Analysis – Horizon Year 2035 Alternative 1

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	17.8	25.7
		EB	41.7	46.5
		SB	17.5	26.1
		WB	26.7	33.2
2	Dockweiler Drive/12th Street/ Placerita Canyon Road [2]	NB	5.9	9.2
		NW	2.7	5.2
		EB	6.0	6.1
		SB	7.1	16.4
		WB	4.0	4.0

[1] Total Delay/Vehicle – Seconds
[2] Unsignalized Intersection

4.2.2 Alternative 2 Traffic Analysis

Figure 4.5 provides the Alternative 2 Horizon Year 2035 traffic volumes. ***Tables 4.5*** and ***4.6*** below summarize the Horizon Year 2035 Alternative 2 maximum queue length and delay per vehicle and for the study intersections.

Table 4.5: Vehicle Queue Length Analysis – Horizon Year 2035 Alternative 2

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	148	298	71	149	397	113
		EB	-	96	-	-	96	-
		SB	167	222	-	239	330	-
		WB	134	204 [3]	175	134	206 [3]	249
2	Dockweiler Drive/12th Street [2]	NB	-	100	-	-	156	-
		EB	-	53	-	-	53	-
		SB	-	153	-	-	228	-
		WB	-	74	-	-	78	-
3	Dockweiler Drive/Placerita Canyon Road	NB	-	117	-	-	190	-
		EB	-	-	-	-	-	-
		SB	74	-		116	-	-
		WB	-	-	91	-	-	96

[1] Maximum Queue Observed – Feet
[2] Unsignalized Intersection
[3] Through/left turn lane

Table 4.6: Vehicle Delay Analysis – Horizon Year 2035 Alternative 2

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	19.5	21.9
		EB	62.7	55.9
		SB	18.0	23.5
		WB	22.7	26.8
2	Dockweiler Drive/12th Street [2]	NB	5.1	7.4
		EB	4.6	7.6
		SB	6.2	17.2
		WB	4.0	5.4
3	Dockweiler Drive/Placerita Canyon Road	NB	8.6	10.1
		EB	-	-
		SB	2.3	3.2
		WB	5.5	8.6

[1] Total Delay/Vehicle – Seconds
[2] Unsignalized Intersection

4.2.3 Alternative 3 Traffic Analysis

Figure 4.6 provides the Alternative 3 Horizon Year 2035 traffic volumes. ***Tables 4.7*** and ***4.8*** below summarize the Horizon Year 2035 Alternative 3 maximum queue length and delay per vehicle and for the study intersections.

Table 4.7: Vehicle Queue Length Analysis – Horizon Year 2035 Alternative 3

Intersection / Maximum Queue Length			AM			PM		
			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right
1	13th Street/Railroad Avenue	NB	41	306	96	65	425	115
		EB		94		-	119	-
		SB	232	257		181	209	-
		WB	135	206 [2]	370	134	350 [2]	410
2	Dockweiler Drive/12th Street	NB	49	53	-	29	139	-
		EB	-	116	-	-	69	-
		SB	116	158	-	159	121	-
		WB	-	136	-	-	137	-
3	Dockweiler Drive/ Placerita Canyon Road	NB		116		-	171	-
		EB	-	-	-	-	-	-
		SB	99	-		119	-	-
		WB	72	-	52	93	-	94

[1] Maximum Queue Observed – Feet
[2] Through/left turn lane

Table 4.8: Vehicle Delay Analysis – Horizon Year 2035 Alternative 3

Intersection / Delay per Vehicle			AM	PM
			Delay[1]	Delay[1]
1	13th Street/Railroad Avenue	NB	20.1	24.2
		EB	55.3	50.6
		SB	19.9	21.2
		WB	31.7	43.3
2	Dockweiler Drive/12th Street	NB	7.8	16.5
		EB	22.1	23.4
		SB	12.0	18.1
		WB	15.6	22.1
3	Dockweiler Drive/Placerita Canyon Road	NB	11.5	21.1
		EB	-	-
		SB	7.4	9.3
		WB	9.0	8.9

[1] Total Delay/Vehicle – Seconds

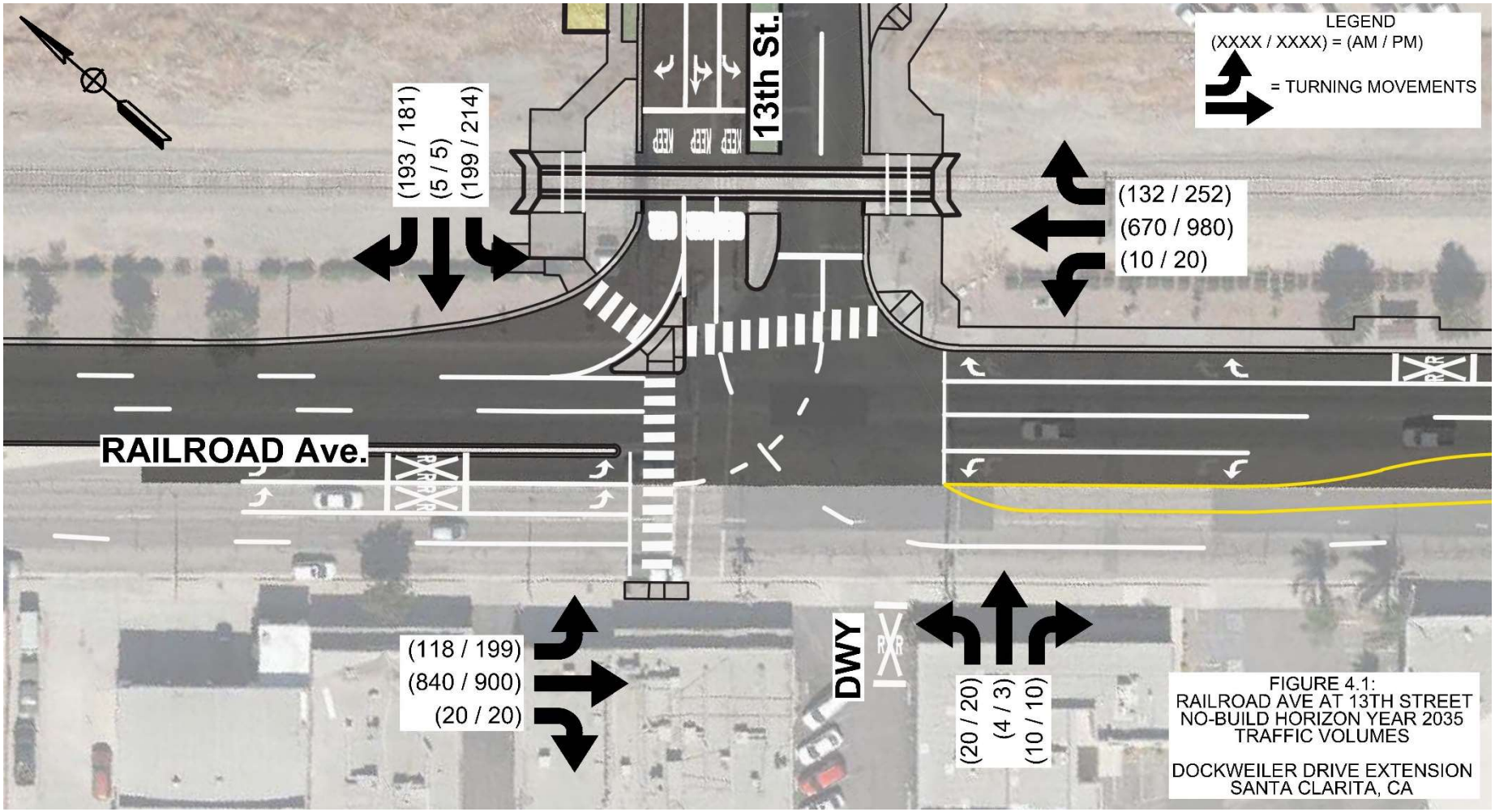
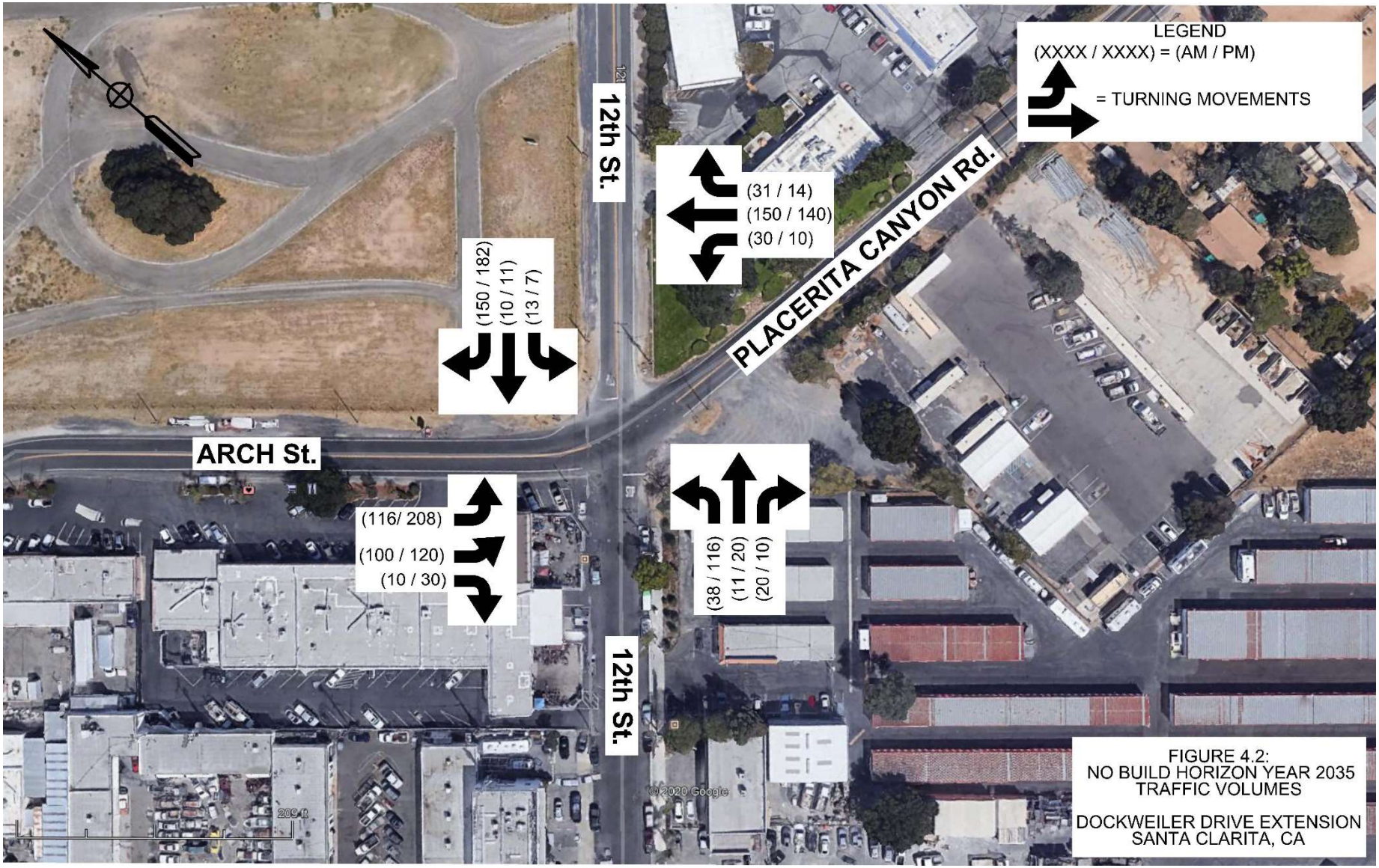


FIGURE 4.1:
RAILROAD AVE AT 13TH STREET
NO-BUILD HORIZON YEAR 2035
TRAFFIC VOLUMES

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
(XXXX / XXXX) = (AM / PM)
= TURNING MOVEMENTS
12th St.
PLACERITA CANYON Rd.
ARCH St.
12th St.
(150 / 182)
(10 / 11)
(13 / 7)
(31 / 14)
(150 / 140)
(30 / 10)
(116/ 208)
(100 / 120)
(10 / 30)
(38 / 116)
(11 / 20)
(20 / 10)
© 2020 Google
FIGURE 4.2:
NO BUILD HORIZON YEAR 2035
TRAFFIC VOLUMES
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

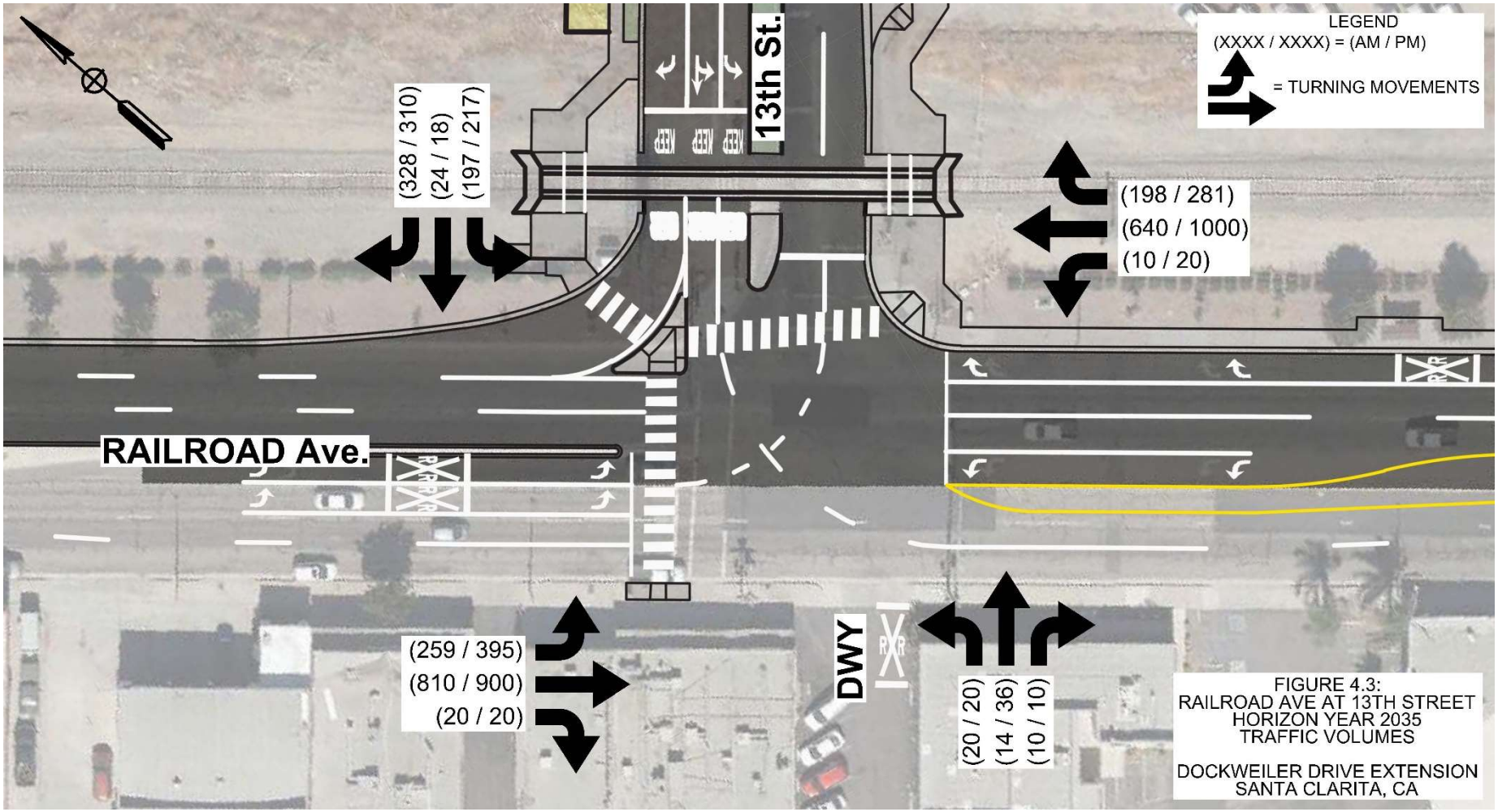
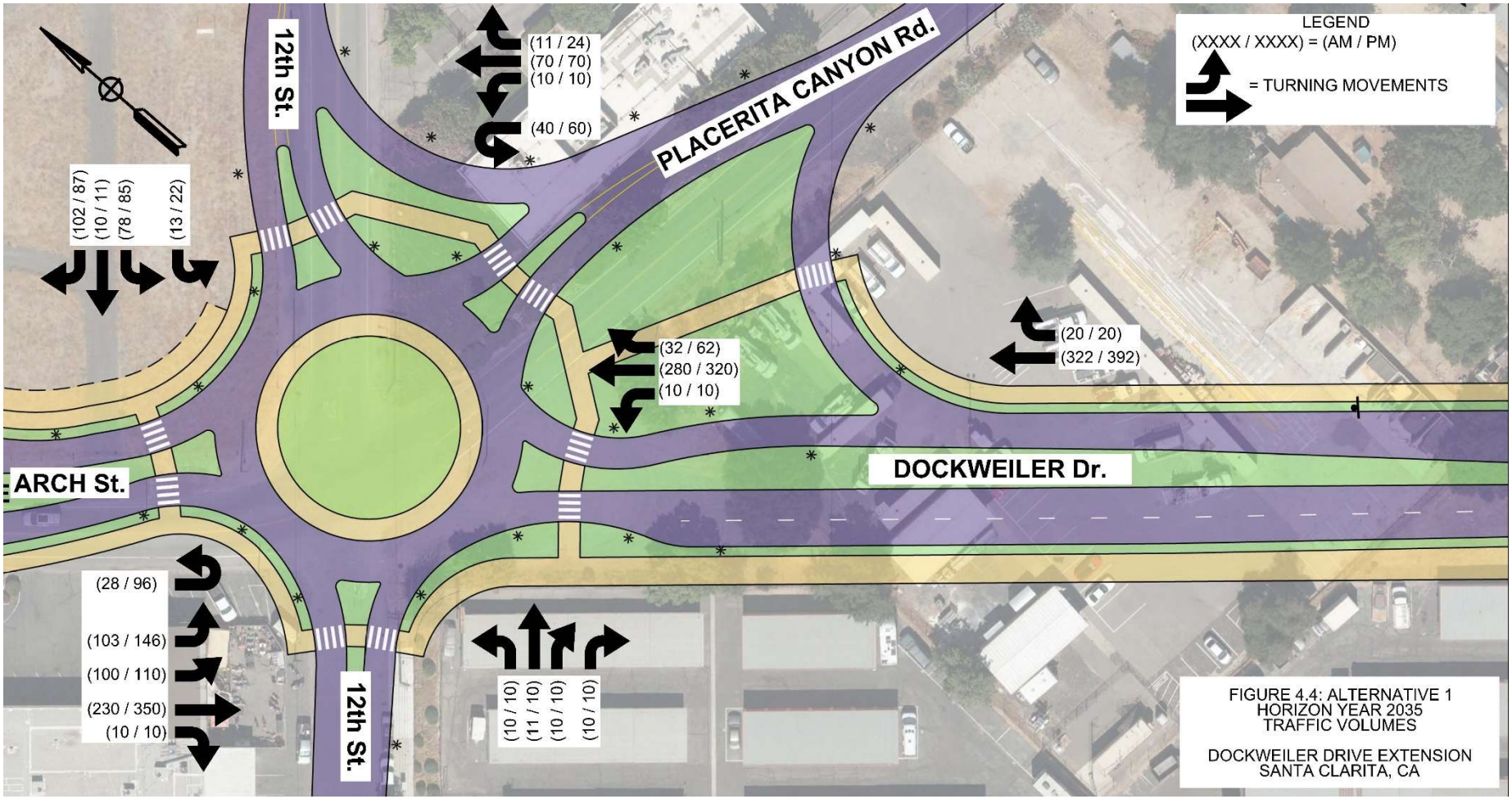
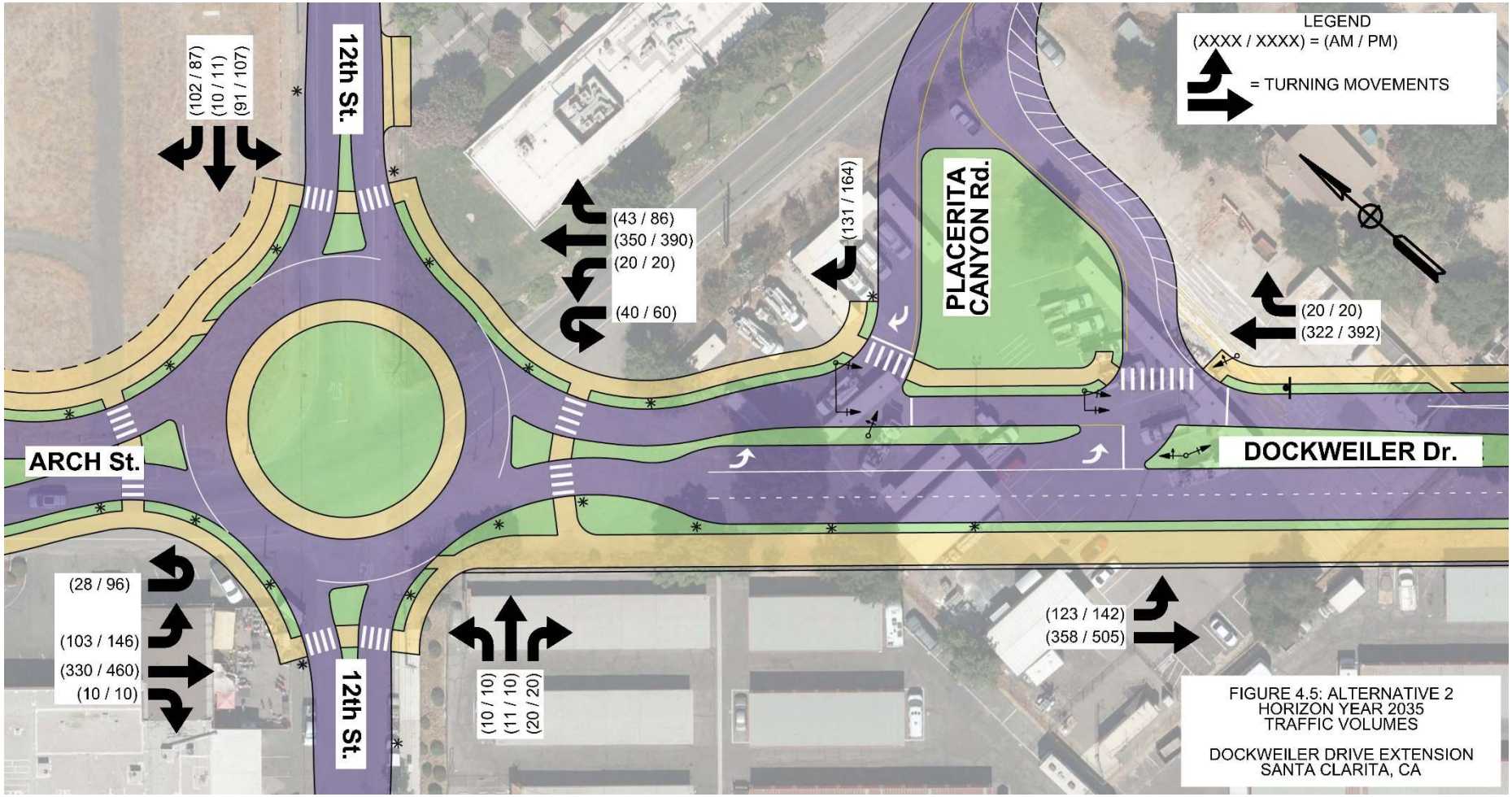
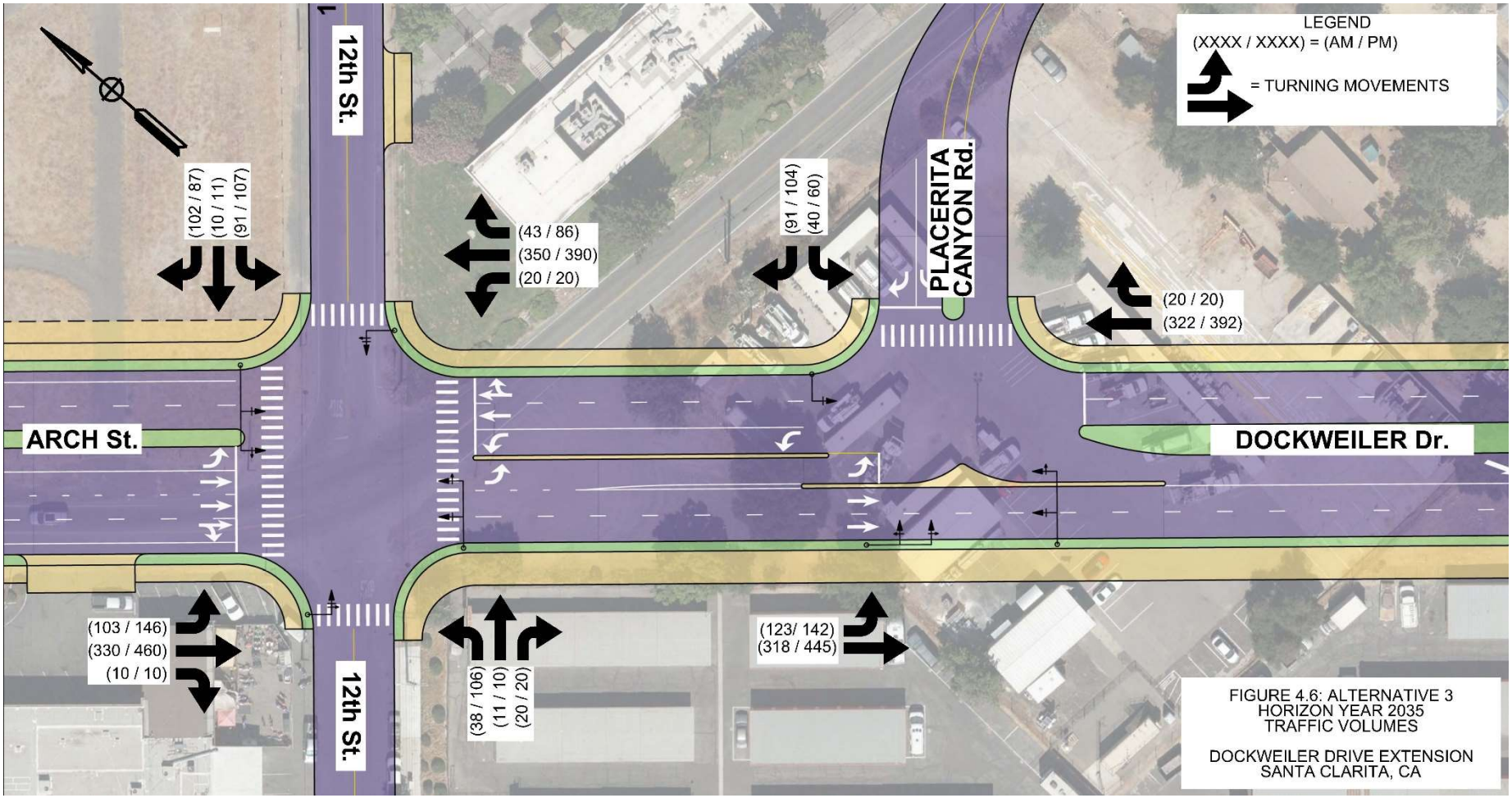


FIGURE 4.3:
RAILROAD AVE AT 13TH STREET
HORIZON YEAR 2035
TRAFFIC VOLUMES

DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
(XXXX / XXXX) = (AM / PM)
= TURNING MOVEMENTS
12th St.
PLACERITA CANYON Rd.
(11 / 24)
(70 / 70)
(10 / 10)
(40 / 60)
(102 / 87)
(10 / 11)
(78 / 85)
(13 / 22)
(32 / 62)
(280 / 320)
(10 / 10)
(20 / 20)
(322 / 392)
ARCH St.
DOCKWEILER Dr.
(28 / 96)
(103 / 146)
(100 / 110)
(230 / 350)
(10 / 10)
12th St.
(10 / 10)
(11 / 10)
(10 / 10)
(10 / 10)
FIGURE 4.4: ALTERNATIVE 1
HORIZON YEAR 2035
TRAFFIC VOLUMES
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
(XXXX / XXXX) = (AM / PM)
= TURNING MOVEMENTS
12th St.
ARCH St.
PLACERITA CANYON Rd.
DOCKWEILER Dr.
(102 / 87)
(10 / 11)
(91 / 107)
(43 / 86)
(350 / 390)
(20 / 20)
(40 / 60)
(131 / 164)
(20 / 20)
(322 / 392)
(28 / 96)
(103 / 146)
(330 / 460)
(10 / 10)
(10 / 10)
(11 / 10)
(20 / 20)
(123 / 142)
(358 / 505)
FIGURE 4.5: ALTERNATIVE 2
HORIZON YEAR 2035
TRAFFIC VOLUMES
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA


LEGEND
(XXXX / XXXX) = (AM / PM)
= TURNING MOVEMENTS
12th St.
PLACERITA CANYON Rd.
ARCH St.
DOCKWEILER Dr.
(102 / 87)
(10 / 11)
(91 / 107)
(43 / 86)
(350 / 390)
(20 / 20)
(91 / 104)
(40 / 60)
(20 / 20)
(322 / 392)
(103 / 146)
(330 / 460)
(10 / 10)
(38 / 106)
(11 / 10)
(20 / 20)
(123/ 142)
(318 / 445)
FIGURE 4.6: ALTERNATIVE 3
HORIZON YEAR 2035
TRAFFIC VOLUMES
DOCKWEILER DRIVE EXTENSION
SANTA CLARITA, CA

5. SUMMARY

5.1 Intersection Analysis

Table 5.1: Vehicle Queue Length Analysis Summary (AM)

Maximum Queue Length (feet) AM Period			13th Street / Railroad Avenue			Dockweiler Drive / 12th Street			Dockweiler Drive/ Placerita Canyon Road		
Year	Alt.	Dir.	Lane-Group Queue[1]			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right	Left	Through	Right
2019	NO BUILD	NB	30	340	53	-	0	-	-	-	-
		EB	-	70	-	-	50	-	-	-	-
		SB	124	260	-	-	74	-	-	-	-
		WB	-	342	135	-	38	-	-	-	-
2025	NO BUILD	NB	22	300	52	-	89	-	-	-	-
		EB	-	51	-	-	41	-	-	-	-
		SB	143	187	-	187	56	-	-	-	-
		WB	134	281 [2]	135	-	65	-	-	-	-
	ALT 1	NB	18	227	53	-	74	-	-	-	-
		NW	-	-	-	-	183	-	-	-	-
		EB	-	92	-	-	32	-	-	-	-
		SB	125	166	-	-	150	-	-	-	-
		WB	134	138 [2]	184	-	79	-	-	-	-
	ALT 2	NB	149	276	153	-	174	-	-	99	-
		EB		74		-	32	-	-	-	-
		SB	126	165		-	134	-	97	-	-
		WB	134	180 [2]	226	-	76	-	-	-	124
	ALT 3	NB	148	289	93	29	67	-	-	98	-
		EB	-	53	-	-	52	-	-	-	-
		SB	122	192	-	131	94	-	119	-	-
		WB	134	160 [2]	328	-	213	-	51	-	101
2035	NO BUILD	NB	22	294	52	-	69	-	-	-	-
		EB	-	51	-	-	46	-	-	-	-
		SB	95	217	-	57	55	-	-	-	-
		WB	134	429 [2]	135	-	41	-	-	-	-
	ALT 1	NB	22	222	90	-	97	-	-	-	-
		NW	-	-	-	-	51	-	-	-	-
		EB	-	76	-	-	32	-	-	-	-
		SB	232	200	-	-	227	-	-	-	-
		WB	134	140 [2]	314	-	100	-	-	-	-
	ALT 2	NB	148	298	71	-	100	-	-	117	-
		EB		96		-	53	-	-	-	-
		SB	167	222		-	153	-	74	-	-
		WB	134	204 [2]	175	-	74	-	-	-	91
	ALT 3	NB	41	306	96	49	53	-	-	116	-
		EB	-	94	-	-	116	-	-	-	-
		SB	232	257	-	116	158	-	99	-	-
		WB	135	206 [2]	370	-	136	-	72	-	52

[1] Maximum Queue Observed – Feet - [2] Through/left turn lane

Table 5.2: Vehicle Queue Length Analysis Summary (PM)

Maximum Queue Length (feet) PM Period			13th Street / Railroad Avenue			Dockweiler Drive / 12th Street			Dockweiler Drive/ Placerita Canyon Road		
Year	Alt.	Dir.	Lane-Group Queue[1]			Lane-Group Queue[1]			Lane-Group Queue[1]		
			Left	Through	Right	Left	Through	Right	Left	Through	Right
2019	NO BUILD	NB	49	518	92	-	0	-	-	-	-
		EB	-	53	-	-	26	-	-	-	-
		SB	239	291	-	-	99	-	-	-	-
		WB	-	358	135	-	80	-	-	-	-
2025	NO BUILD	NB	149	339	165	-	129	-	-	-	-
		EB	-	53	-	-	85	-	-	-	-
		SB	234	220	-	214	75	-	-	-	-
		WB	134	405 [2]	135	-	79	-	-	-	-
	ALT 1	NB	149	330	97	-	95	-	-	-	-
		NW	-	-	-	-	96	-	-	-	-
		EB	-	94	-	-	32	-	-	-	-
		SB	162	206	-	-	208	-	-	-	-
		WB	134	245 [2]	201	-	77	-	-	-	-
	ALT 2	NB	22	362	108	-	81	-	-	92	-
		EB	-	74	-	-	32	-	-	-	-
		SB	166	232	-	-	202	-	72	-	-
		WB	134	204 [2]	315	-	80	-	-	-	76
	ALT 3	NB	149	352	90	29	72	-	-	140	-
		EB	-	75	-	-	52	-	-	-	-
		SB	181	212	-	187	267	-	95	-	-
		WB	134	276 [2]	164	-	96	-	30	-	74
2035	NO BUILD	NB	148	484	420	-	47	-	-	-	-
		EB	-	52	-	-	71	-	-	-	-
		SB	145	202	-	91	76	-	-	-	-
		WB	134	304 [2]	135	-	62	-	-	-	-
	ALT 1	NB	149	412	136	-	159	-	-	-	-
		NW	-	-	-	-	68	-	-	-	-
		EB	-	96	-	-	32	-	-	-	-
		SB	240	330	-	-	244	-	-	-	-
		WB	134	238 [2]	264	-	78	-	-	-	-
	ALT 2	NB	149	397	113	-	156	-	-	190	-
		EB	-	96	-	-	53	-	-	-	-
		SB	239	330	-	-	228	-	116	-	-
		WB	134	206 [2]	249	-	78	-	-	-	96
	ALT 3	NB	65	425	115	29	139	-	-	171	-
		EB	-	119	-	-	69	-	-	-	-
		SB	181	209	-	159	121	-	119	-	-
		WB	134	350 [2]	410	-	137	-	93	-	94

[1] Maximum Queue Observed – Feet - [2] Through/left turn lane

Table 5.3: Vehicle Delay Analysis Summary

Vehicle Delay (seconds/vehicle)			13th Street / Railroad Avenue				Dockweiler Drive / 12th Street				Dockweiler Drive/ Placerita Canyon Rd			
Year	Alt.	Dir.	AM		PM		AM		PM		AM		PM	
			appr.	total	appr.	total	appr.	total	appr.	total	appr.	total	appr.	total
2019	NO BUILD	NB	17.8	18.9	24.3	24.3	1.0	2.8	1.3	3.0	-	-	-	-
		EB	63.0		32.6		8.4		8.1		-		-	
		SB	12.9		16.4		2.1		3.0		-		-	
		WB	52.5		50.8		4.4		4.7		-		-	
2025	NO BUILD	NB	16.2	18.8	20.2	22.4	8.8	6.6	12.8	8.9	-	-	-	-
		EB	73.6		72.1		4.7		8.1		-		-	
		SB	14.4		15.4		7.2		8.8		-		-	
		WB	31.2		40.3		4.2		6.0		-		-	
	ALT 1	NB	13.4	16.0	19.6	20.6	4.6	4.3	4.4	4.7	-	-	-	-
		NW	-		-		5.8		4.0		-		-	
		EB	55.0		43.2		2.5		3.4		-		-	
		SB	10.9		15.2		4.6		5.5		-		-	
		WB	30.6		36.7		2.8		3.6		-		-	
	ALT 2	NB	17.4	20.7	21.4	20.5	4.4	4.4	4.3	4.3	7.3	4.2	6.4	4.5
		EB	57.4		36.2		3.2		2.3		-		-	
		SB	13.2		15.0		5.0		4.6		2.5		3.0	
		WB	44.0		30.7		3.5		3.6		5.5		5.2	
	ALT 3	NB	14.1	19.6	21.8	21.2	10.3	13.2	11.0	13.3	15.7	10.4	13.9	9.0
		EB	40.5		52.9		20.0		16.0		-		-	
		SB	13.0		16.4		13.8		14.9		8.2		5.6	
		WB	43.2		31.2		15.2		12.6		6.9		7.0	
2035	NO BUILD	NB	15.3	18.5	18.9	19.6	7.3	5.1	7.7	6.1	-	-	-	-
		EB	46.8		35.5		3.9		5.9		-		-	
		SB	9.5		15.0		4.8		6.2		-		-	
		WB	47.3		33.2		3.4		5.0		-		-	
	ALT 1	NB	17.8	20.0	25.7	27.6	5.9	5.8	9.2	11.5	-	-	-	-
		NW	-		-		2.7		5.2		-		-	
		EB	41.7		46.5		6.0		6.1		-		-	
		SB	17.5		26.1		7.1		16.4		-		-	
		WB	26.7		33.2		4.0		4.0		-		-	
	ALT 2	NB	19.5	20.4	21.9	24.0	5.1	5.3	7.4	11.7	8.6	5.0	10.1	5.8
		EB	62.7		55.9		4.6		7.6		-		-	
		SB	18.0		23.5		6.2		17.2		2.3		3.2	
		WB	22.7		26.8		4.0		5.4		5.5		8.6	
	ALT 3	NB	20.1	23.3	24.2	27.1	7.8	11.4	16.5	18.2	11.5	9.3	21.1	13.6
		EB	55.3		50.6		22.1		23.4		-		-	
		SB	19.9		21.2		12.0		18.1		7.4		9.3	
		WB	31.7		43.3		15.6		22.1		9.0		8.9	

6. CONCLUSION

The results of the Vehicle Queue Length analysis for Dockweiler Drive/12th Street intersection show that all design alternatives produced maximum queue lengths between 32 feet and 227 feet during AM period and between 32 feet and 267 feet during PM period, for both, 2025 and 2035 scenarios. Similarly, the maximum queue lengths at Dockweiler Drive/ Placerita Canyon Road intersection, varied between 52 feet and 124 feet during AM period, and between 72 feet and 190 feet during PM period. These results represent low maximum queue lengths and indicate that the average queues expected to be experienced by drivers at the various scenarios, should be substantially lower, and should not cause blockage of turn pockets or through lanes.

The maximum queue lengths for each approach of 13th Street / Railroad Avenue are expected to be similar for all three alternatives within 2025 and 2035, since traffic volumes and lane geometry do not change between alternatives. The different queue lengths shown in Tables 5.1 and 5.2 between Alternatives 1,2 and 3, for a given year scenario, reflect the randomness of the simulation process used to estimate the queue lengths. The queue length values shown should be interpreted as a range of possible outcomes and suggest that an average of the three Alternatives would better reflect expected queue lengths at 13th Street / Railroad Avenue intersection. Overall, maximum queue lengths for turning movements are expected to vary between 70 feet and 290 feet during AM period, and between 90 feet and 310 feet during PM period, for both 2025 and 2035 scenarios. Through movement queue lengths are expected to vary between 70 feet and 275 feet during AM, and between 80 feet and 410 feet during PM period. These results represent low maximum queue lengths and indicate that the average queues expected to be experienced by drivers at the various scenarios, should be substantially lower, and should not cause blockage of turn pockets or through lanes.

Traffic volumes for this study were based on results of the City of Santa Clarita Traffic Impact Study for the Lyons Avenue/Dockweiler Drive Extension Project Final Environmental Impact Report and its assumptions for traffic forecast modeling. According to the Model Plots supplied in Appendix A of the Traffic Study, the No Build 2035 model assumes that there will be an additional roadway link extending from the existing Dockweiler Drive terminus to Master's University. This assumption in the No Build 2035 model alters the traffic distribution in the area and reduces the volumes at the intersection of 13th Street / Railroad Avenue intersection. The model plot for No Build 2019 does not assume the additional link. For this reason, traffic volumes at 13th Street /Railroad show a decrease from 2019 to 2035, which in turn causes a decrease in delay in future year (2035) when compared to existing (2019) and opening year (2025).

Traffic volumes for 2035 horizon year were updated with more recent information on the Placerita Meadows development and the Traffic Analysis Zone it lies in. This caused volumes to decrease substantially on the segment between Railroad Ave & 13th Street and 12th Street & Dockweiler. The decrease in volumes caused delays to also decrease. The Vehicle Delay analysis results show that the intersection of Dockweiler Drive/12th Street under Alternative 2 produced the lowest total intersection delays per vehicle (sum of all approaches) on Year 2025 and 2035 for both AM and PM periods, followed by Alternative 1 and Alternative 3.

While both Alternative 1 and 2 have adequate queueing and delay per vehicle, Alternative 2 has been chosen by the City of Santa Clarita and by the Placerita Canyon Property Owners Association (PCPOA) due to its minimal project footprint and right of way takes as compared to Alternative 1, and more suitable aesthetics as compared to Alternative 3. Based on analysis results, no adverse effects are anticipated to traffic operations under Alternative 2 as compared to "No Build" conditions.