

APPENDIX E:
49-Unit Project Environmental Analysis



1.0 INTRODUCTION

The purpose of this Appendix is to provide an analysis of the potential environmental consequences that are anticipated to occur with implementation of the West 17th Street & Superior Avenue Live/Work 49-Unit Project (modified project). The modified project involves expanding the development area (from approximately 1.5 acres to 2.5 acres) to include the parcel located at the southwest corner of 17th Street and Superior Avenue (corner parcel, Assessor's Parcel Number [APN] APN 424-301-08), and modifying the site plan to include a total of 49 units. The specific characteristics of the 49-unit project are described below. The existing conditions, potential impacts, standard conditions, and mitigation measures identified for the proposed 29-unit Project, as specified in Initial Study/Mitigated Negative Declaration (IS/MND) Section 4.0, are applicable to the 49-unit modified project, unless otherwise noted.

2.0 MODIFIED PROJECT DESCRIPTION

IS/MND Section 2.0, Project Description, describes the location, environmental setting, applicable General Plan and Zoning regulations, surrounding land uses, and background/history associated with the proposed Project. These descriptions apply also to the modified project, with various notable exceptions, as discussed below.

2.1 ENVIRONMENTAL SETTING

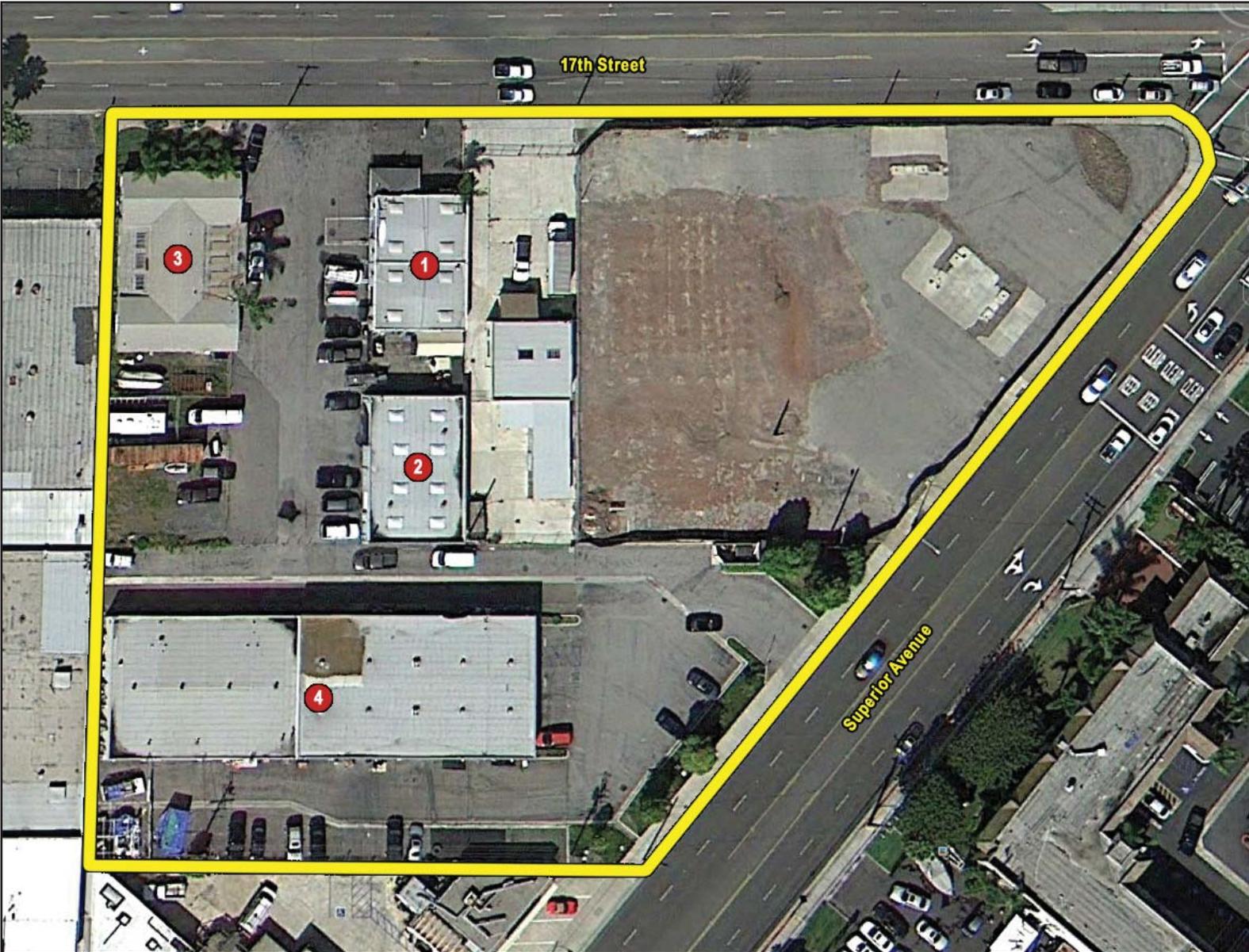
ONSITE CONDITIONS

The 2.55-acre modified project site (Assessor's Parcel Numbers 424-301-01, 424-301-04, and 424-301-08 [corner parcel]) consists of three parcels located at 635 and 643-651 West 17th Street and 1677 and 1695 Superior Avenue. The corner parcel is vacant, except for one approximately 1,190 square-foot (SF) unoccupied structure located along the western border; refer to Exhibit 2-1, Existing Modified Site Conditions. The modified project site contains approximately 20,749 SF of commercial/industrial uses (inclusive of the approximately 19,559 square feet of uses on the 29-unit Project site specified in Table 2-1). The vacant portion of the corner parcel contains several asphalt and concrete pads. Historically, the vacant area has been utilized as a service station. This area has been disturbed by the previous land uses and is relatively level.

GENERAL PLAN AND ZONING

According to the Westside Urban Plan Areas Map, the modified project site is located within the 19 West Urban Plan.¹ However, because the modified project involves a live/work development, the development standards referenced in the Mesa West Urban Plan are applicable.

¹ City of Costa Mesa Website, Westside Urban Plan Areas Map, <http://www.costamesaca.gov/index.aspx?page=110>, Accessed August 23, 2013.



Source: Google Earth, August 2013.

- Structure number corresponds to Table 2-1, Onsite Uses.

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WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT
Existing Modified Site Conditions

Exhibit 2-1



According to the City of Costa Mesa General Plan Land Use Map, the modified project site is designated Light Industry and Neighborhood Commercial (approximately 1.6 acres and 1.0, respectively).² The Light Industry designation is intended for a variety of light and general industrial uses, while the Neighborhood Commercial designation is intended to serve convenience shopping and service needs of local residents.

According to the Official Zoning Map, the modified project site is zoned MG General Industrial District and C1 Local Business.³ Additionally, with adoption of the 19 West Urban Plan, the 19 West Village Mixed-Use Overlay District was applied to the property. Because urban plan standards are applied, the underlying zoning requirements of the base zoning districts are not applicable.

2.2 PROPOSED MODIFIED MASTER PLAN

The modified project involves a 49-unit development consisting of live/work units at 635 and 643-651 West 17th Street and 1677 and 1695 Superior Avenue. Exhibit 2-2, Modified Master Plan, illustrates the proposed development. As with the proposed Project, the required City approvals for the modified project are a Master Plan, Vesting Tentative Tract Map No. 17639, two deviations from the Urban Plan development standards/regulations, Demolition Permit, Grading Permit, and Building Permit(s).

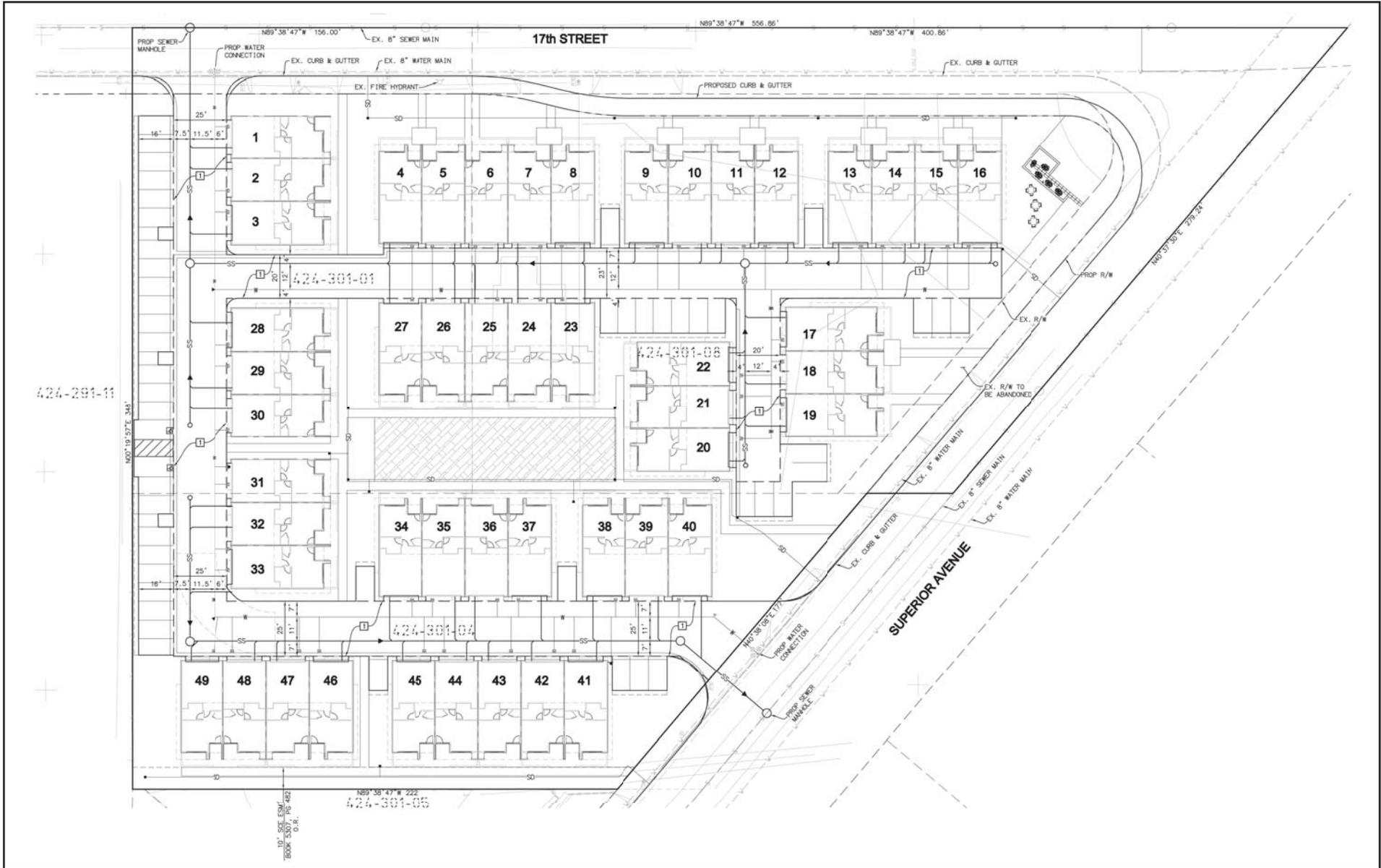
WEST 17TH STREET & SUPERIOR AVENUE MODIFIED LIVE/WORK DEVELOPMENT

The modified project involves an Urban Master Plan for development of a 49-unit live/work project at the site of existing commercial/light industrial uses within the 19th West Urban Plan area. The modified project consists of the development of 49 live/work units with a total gross density of 19.23 units per acre and an FAR of 0.85.

The buildings are designed in three-plex, four-plex, and five-plex clusters. The modified proposal includes an attached three-story development with roof decks, two-car garages, and open parking areas, commercial “work” space on the ground floor, and living space and bedrooms on the upper levels. The proposed units and their sizes are summarized in Table 2-1, Modified Project Summary, and illustrated on Exhibit 2-3, Modified Site Plan. The proposed live/work units are comprised of two floor plans with two bedrooms and 3.5 bathrooms, some including dens (1,941 and 1,999 square feet). A total of 147 parking spaces are proposed, including 98 garage spaces and 29 open spaces (or two resident garage spaces and one guest space per unit). The overall lot coverage, including buildings, driveways, and guest parking is approximately 68 percent of the site (74,890 square feet). As with the proposed Project, the modified project proposes permeable pavers on the driveways/open parking areas. The remaining 32 percent (34,972 square feet) consists of landscaping and common open space.

² City of Costa Mesa Website, City of Costa Mesa General Plan Map, <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=369>, Accessed August 23, 2013.

³ City of Costa Mesa Website, City of Costa Mesa Zoning Map, <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=367>, Accessed August 23, 2013.



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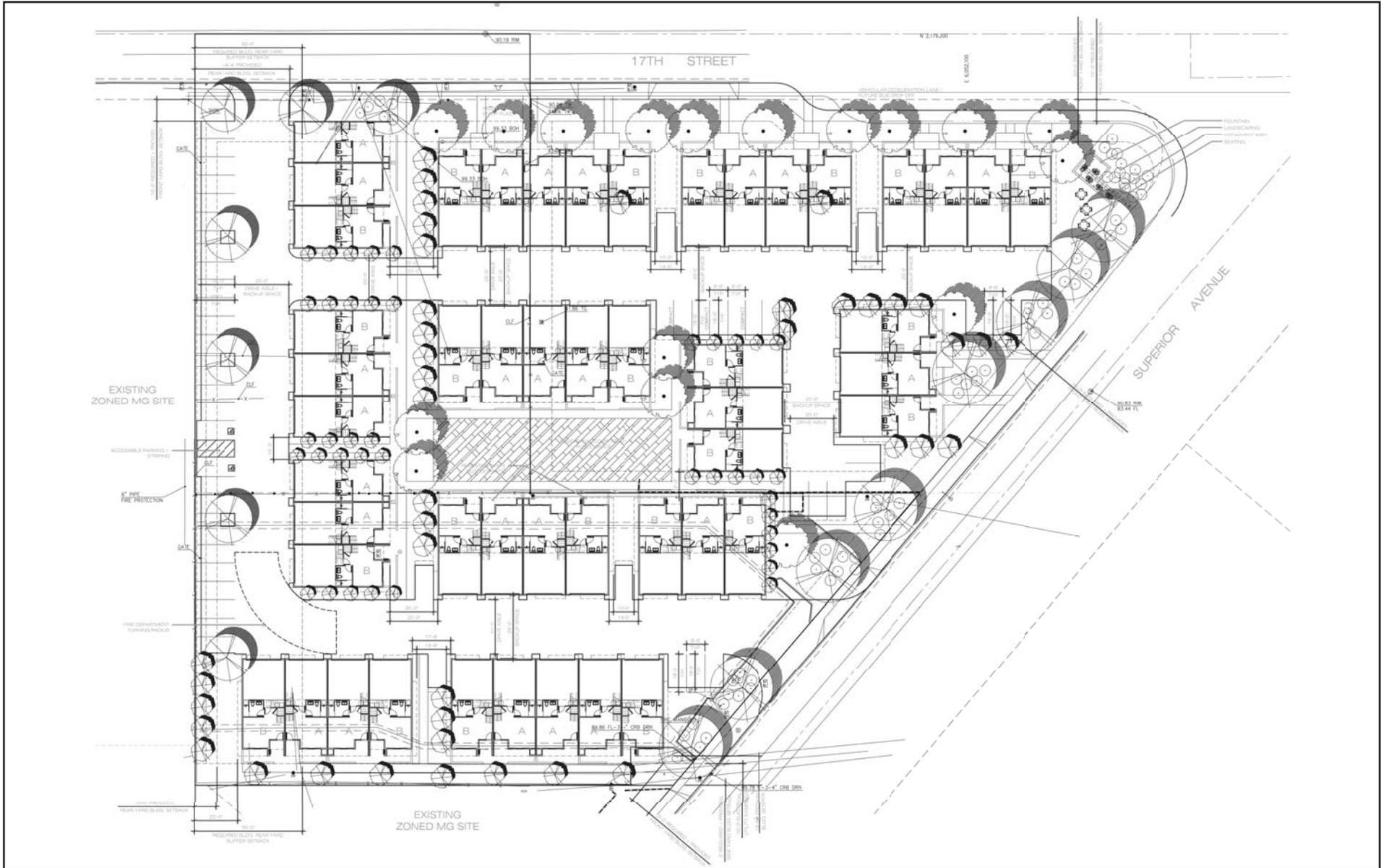


10/13 • JN 136991

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Modified Master Plan

Exhibit 2-2



Source: Withee Malcolm Architects, LLP, August 23, 2013.

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10/13 • JN 136991

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Modified Site Plan

Exhibit 2-3



**Table 2-1
Modified Project Summary**

Plan	Description	Quantity (du)	Unit Residential Area (sf)	Unit Work Area (sf)	Unit Total Area (sf)	Area Subtotal (sf)	Parking Ratio (Resident/Guest Spaces per Unit)	Required Parking (Resident/Guest Spaces)
A	2 BR/3.5 BA Live/Work Unit Side By Side Garage	26 (53%)	1,680	260	1,875	18,750	2.0 / 1.0	52 / 26
B	2 BR / 3.5 BA / Den Live/Work Unit Side By Side Garage	23 (47%)	1,745	250	1,945	21,395		46 / 23
Total		49	83,815	12,628		96,443		147 (98 / 49)

Note: du = dwelling units; sf = square feet.
Source: Withee Malcolm Architects, 643-651 W. 17th Street & 1677 Superior Avenue Master Plan, June 4, 2013.

Similar to the proposed Project, the modified project requests approval of the following deviations:

- A deviation from interior garage parking design standards: a minimum of 20 by 20 feet is required; 19 by 19 feet is proposed).
- A deviation from the buffer zone from the Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. (JC Carter) industrial property (671 West 17th Street): a minimum 50-foot setback is required; 11 units are proposed within the setback area.

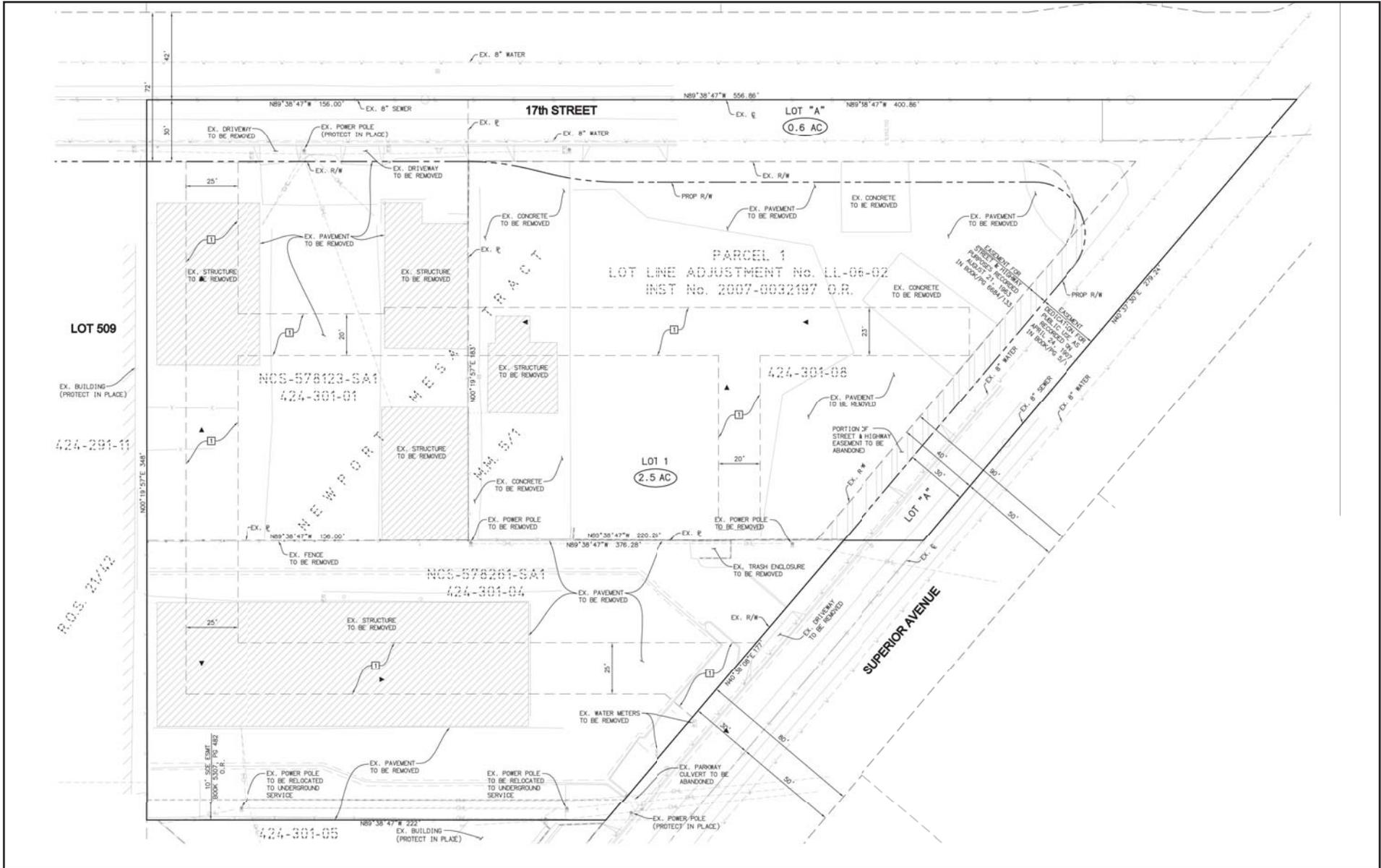
Refer to the *Deviations From Development Standards* Section below for further discussion regarding the requested deviations.

The modified project would also require approval of Vesting Tentative Tract Map 17639, which involves subdivision of a 2.55-acre property for condominium purposes to allow private sale and ownership of the live/work units; refer to Exhibit 2-4, Modified Vesting Tentative Tract Map.

DEVIATIONS FROM DEVELOPMENT STANDARDS

The modified project would require approval of the following deviations:

Parking, Garage Size (Inside Dimension). CMMC Section 20.40.090, *Parking Standards for Residential Uses*, specifies that the minimum interior dimensions for parking spaces in residential zoning districts with lot widths of 40 feet or more is 20 by 20 feet. The modified project proposes garages with interior dimensions of 19 by 19 feet. Therefore, the Applicant is requesting approval of deviations from development standards, in order to allow a deviation from the required minimum garage dimensions.



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10/13 • JN 136991

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
 WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT
Modified Vesting Tentative Tract Map

Exhibit 2-4



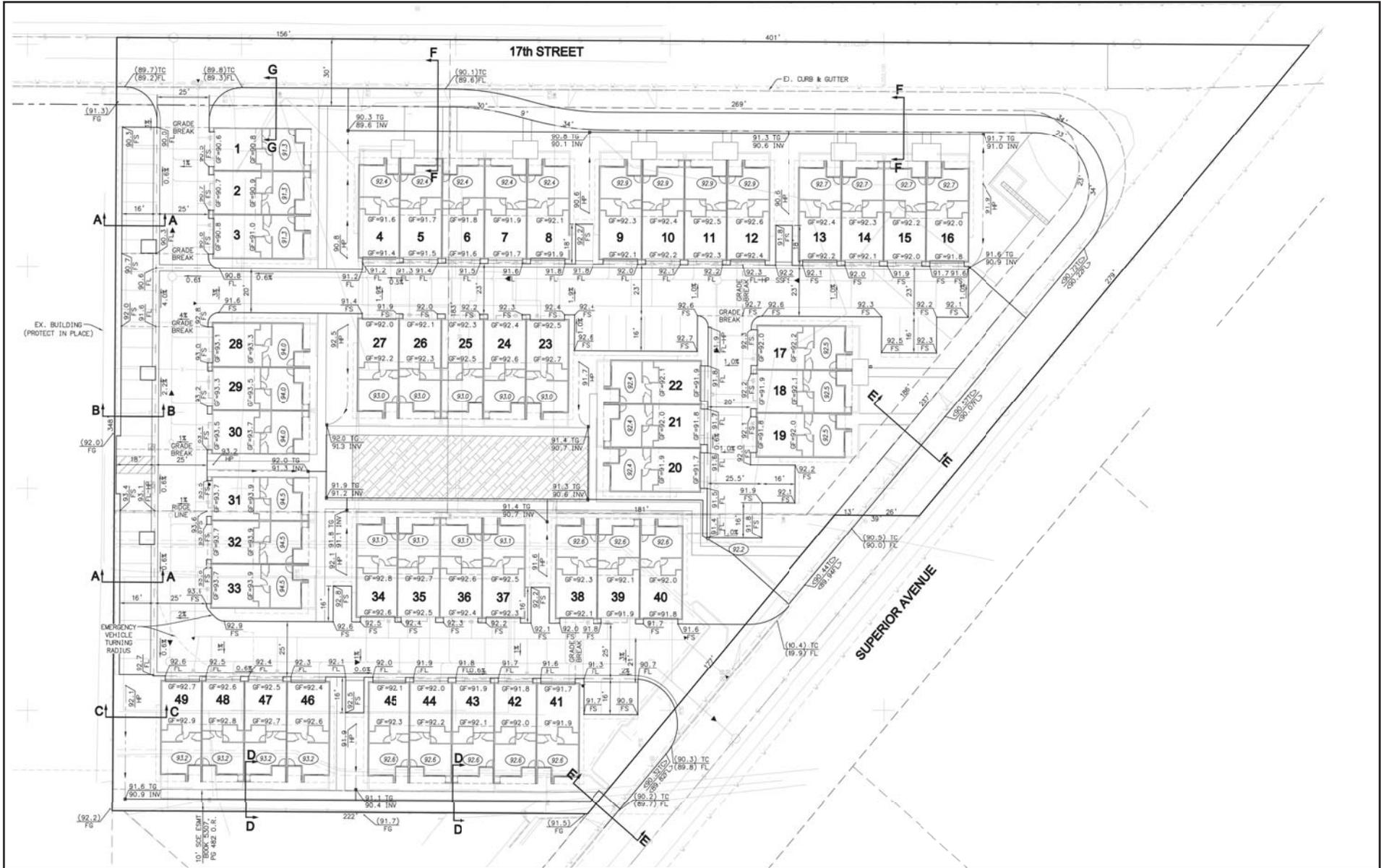
Industrial Property Buffer Zones. City Council Resolution 06-34 established buffer zones from the JC Carter industrial property (671 West 17th Street) and the CLA-VAL industrial property (1701 Placentia Avenue) requiring a minimum 50-foot distance between property lines. The modified project site's westerly property line is common/shared with the JC Carter easterly property line. Eleven (11) units are proposed within the setback area (the garage areas of nine units are setback 44 feet 4 inches and the living areas of two units are setback a minimum of 20 feet). In the modified plan, the building layout was revised to place the entry for two units away from the westerly property line and closer to the 50-foot buffer line. The modified site layout also creates a common walkway for these units away from the driveway. Generally, the modified project orients the live/work units toward the street frontages. Therefore, the Applicant is requesting approval of deviations from buffer zone requirements, in order to allow a deviation from the required minimum setback from the JC Carter industrial property line.

CONSTRUCTION ACTIVITIES AND GRADING PLAN

According to the Preliminary Grading Plan, construction activities would require the export of soil; refer to Exhibit 2-5, Modified Preliminary Grading Plan. A Construction Access and Circulation Plan would be submitted to the City to ensure that the construction traffic would not impact the public roadways in proximity to the site and the vicinity.

2.3 PROJECT PHASING

The modified project is estimated to be constructed over approximately 17 months, beginning approximately March 2014 and ending approximately August 2015.



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10/13 • JN 136991

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
 WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT
Modified Preliminary Grading Plan

Exhibit 2-5



3.0 MODIFIED PROJECT ENVIRONMENTAL ANALYSIS

3.1 AESTHETICS

Would the modified project:

- a. Have a substantial adverse effect on a scenic vista?*
- b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*
- c. Substantially degrade the existing visual character or quality of the site and its surroundings?*
- d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

The IS/MND concluded that the 29-unit Project would result in no impact or less than significant impacts involving scenic vistas, scenic resources, visual character or quality, and light and glare with implementation of standard conditions and mitigation measures.

Scenic Vistas and Resources

Consistent with previous conclusions, the modified project would not impact scenic vistas or damage scenic resources, as these resources do not occur within the project area.

Visual Character

The modified project involves construction of a 49-unit, attached live/work development in place of existing commercial/industrial uses. Thirteen buildings containing three, four, and five attached units would be constructed. Implementation of the modified project would introduce a mid-rise scale to the existing mature industrial neighborhood. Therefore, the proposed development would be dissimilar in scale and character to the site's surroundings. However, implementation of the modified project would enhance the character of the surrounding area through quality architectural design in place of single-story structures primarily constructed in the 1950s and 1960s, as well as development of a vacant lot located on a prominent corner.

The proposed architecture has been designed for aesthetic compatibilities with existing buildings in the immediate vicinity. Exterior materials would include a combination of CMU block and stucco finishes with iron railings and details. Metal garage doors would dominate the ground level drive aisles with architectural articulations and windows included in the second and third levels. Private open spaces in the form of patios near the entries, balcony decks, and rooftop decks are proposed. Additionally, new block walls would be provided along the western and southern boundary, in order to screen the modified project from the existing industrial/commercial uses and enhance the future residents' privacy.

Similar to the 29-unit Project, the modified project site is located within the 19 West Urban Plan. The 19 West Urban Plan's emphasis is on improving the area by providing visual enhancement and encouraging



the development of mixed-use urban villages along specified areas. The modified project would further the 19 West Urban Plan's objectives, providing a mixed-use nontraditional development that includes urban housing in a commercial/light industrial theme. Thus, implementation of the modified project would enhance and revitalize the character of the surrounding area.

Similar to the 29-unit Project, the modified project site is within a Mixed-Use Overlay District, thus, is subject to compliance with the provisions of CMMC Article 11, *Mixed-Use Overlay District*, which is intended to ensure that "the appearance of buildings is complementary to the existing architectural character of the area in which they are located and that on-site residential and nonresidential uses are compatible." The land use regulations for allowable mixed-use development are, however, activated by a Master Plan. The development regulations specified in CMMC Article 11 would be superseded by those contained in the 19 West Urban Plan and Mesa West Bluffs Urban Plan for live/work development, as applicable. Therefore, the proposed development would be subject to compliance with the development standards and requirements specified in the 19 West Urban Plan. Namely, the proposed development would be reviewed for consistency with the 19 West Urban Plan regarding standards that influence the site's visual character, including those relative to density/intensity [FAR], building height, maximum lot coverage, minimum open space, setbacks, signage, and landscaping, among others. The proposed Master Plan would be reviewed through the City's discretionary review process, in order to verify compliance with the 19 West Urban Plan standards, as well as relevant CMMC Article 11 standards.

Therefore, although the proposed development would substantially alter the visual character of the modified project site and is dissimilar to the surrounding industrial/commercial land uses, the development meets the objectives of the Urban Plan by enhancing and revitalizing the site through a live/work development. The visual changes would not degrade the visual character or quality of the site or its surroundings. A less than significant impact would occur in this regard.

Light and Glare

The modified project site is located within a mature commercial/industrial area. Existing lighting conditions in the area include light emanating from the buildings and light from exterior sources associated with the onsite uses and the surrounding light industrial and commercial land uses, as well as nearby street lighting. There are no land uses sensitive to light and glare (i.e., schools and residential uses) located in the modified project site's immediate vicinity.

The proposed live/work development would involve commercial uses on the ground floor and residential uses on the 2nd and 3rd floors. The proposed development would create new sources of light due to light emanating from building interiors and light from exterior sources (e.g., building illumination, security lighting, and landscape lighting). There are no light-sensitive receptors located in the modified project site's immediate vicinity. However, the proposed residential uses are considered light-sensitive and could be exposed to lighting from the existing surrounding commercial/industrial uses and/or the modified project's future commercial uses. Standard Condition SC 4.1-1 requires preparation of a Lighting Plan and Photometric Study, in order to demonstrate that the proposed lighting meets minimum security lighting requirements and minimizes light/glare to residents.



Additionally, the proposed development would be subject to lighting regulations specified in the 19 West Urban Plan, as well as those specified CMMC Article 11. Compliance with the Urban Plan and CMMC standards and Standard Condition SC 4.1-1 would reduce the proposed commercial uses' potential spill-over light impacts on residential uses to less than significant.

As previously noted, the proposed residential uses could be exposed to lighting from the existing surrounding commercial/industrial uses. Most of the lighting from the existing uses would be shielded by building masses. Additionally, Standard Condition SC 4.1-2 requires notification to buyers that the modified project is located within an area designated as Light Industry and subject to existing and potential annoyances/inconveniences (such as spill over lighting) associated with industrial land uses. Compliance with Standard Condition SC 4.1-2 would reduce the existing commercial/industrial uses' potential spill-over light impacts on residential uses to less than significant.

The modified project proposes a combination of CMU block and stucco finishes with iron railings and details, as well as metal garage doors. Architectural articulations and windows would be included in the second and third levels. The modified project would involve primarily nonreflective façade treatments and the minimization of unrelieved glass surfaces. Additionally, the modified project would be subject to compliance with CMMC Section 13-83.53, which specifies that a project must be consistent with the compatibility standards for residential development in that it provides adequate protection for residents from excessive light and glare. Compliance with the CMMC would ensure that the modified project would not create a new source of substantial glare that would adversely affect daytime views in the area. A less than significant impact would occur in this regard.

3.2 AGRICULTURE AND FOREST RESOURCES

Would the modified project:

- a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*
- b. *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*
- c. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*
- d. *Result in the loss of forest land or conversion of forest land to non-forest use?*
- e. *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

The IS/MND concluded that the 29-unit Project would result in no impacts related to agriculture or forest resources, as none are present on the Project site or in its vicinity.

Consistent with previous conclusions, the modified project would not impact agriculture or forest resources.



3.3 AIR QUALITY

Would the modified project:

- a. Conflict with or obstruct implementation of the applicable air quality plan?
- b. Violate any air quality standard or contribute to an existing or projected air quality violation?
- c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- d. Expose sensitive receptors to substantial pollutant concentrations?
- e. Create objectionable odors affecting a substantial amount of people?

AQMP Consistency

The IS/MND concluded that the 29-unit Project would not conflict with or obstruct implementation of the applicable air quality plan.

The modified project's long-term air quality emissions would be well below SCAQMD thresholds for all criteria pollutants. As such, the modified project would not conflict with or obstruct implementation of the SCAQMD's 2012 Air Quality Management Plan (2012 AQMP). In addition, the modified project would be subject to compliance with Standard Conditions SC 4.3-1 and 4.3-2. A less than significant impact would occur in this regard.

Short-Term Construction Emissions

The IS/MND concluded that the 29-unit Project would result in short-term air quality emissions. Implementation of the Standard Conditions would reduce potential impacts to less than significant levels.

The modified project would be constructed over approximately 17 months, beginning March 2014. Construction activities would disturb approximately 2.55 acres and would demolish the five existing on-site structures, pavement, and driveways.

Table 3.3-1, Construction Air Emissions – Modified Project, depicts the construction emissions associated with the modified project. The modified project would be required to adhere to standard SCAQMD regulations (Standard Condition of Approval 4.3-1), which would reduce fugitive dust emissions. As depicted in Table 3.3-1, modified project's construction-related emissions would not exceed the established SCAQMD thresholds for criteria pollutants.

Based on the CalEEMod results, construction of the modified project would not result in an exceedance of the ROG emissions threshold. Compliance with Standard Conditions of Approval 4.3-1 and 4.3-2 would ensure adherence to SCAQMD standard regulations and reduce construction-related emissions to a less than significant level.



**Table 3.3-1
Construction Air Emissions – Modified Project**

Emissions Source	Pollutant (pounds/day) ¹					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2014						
Unmitigated Emissions	7.81	70.27	46.51	0.06	9.98	6.69
Mitigated Emissions ^{2,3}	7.80	70.20	46.47	0.06	6.49	4.79
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Is Threshold Exceeded After Mitigation?</i>	No	No	No	No	No	No
2015						
Unmitigated Emissions	21.89	29.37	22.54	0.04	2.57	2.07
Mitigated Emissions ^{2,3}	21.89	29.34	22.52	0.04	2.56	2.07
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Is Threshold Exceeded After Mitigation?</i>	No	No	No	No	No	No
Notes:						
1. Emissions were calculated using CalEEMod, as recommended by the SCAQMD.						
2. The reduction/credits for construction emission mitigations are based on mitigation included in the CalEEMod model and as required by Standard Conditions 4.3-1 and 4.3-2. The mitigation includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.						
3. Refer to <u>Appendix A, Air Quality Emissions Data</u> , for assumptions used in this analysis.						

Long-Term (Operational) Emissions

The IS/MND concluded that the 29-unit Project would result in long-term air quality emissions. Implementation of the Standard Conditions would reduce potential impacts to less than significant levels. Long-term air quality impacts would consist of mobile source emissions generated by project-related traffic and stationary source emissions generated by project-related electrical energy and natural gas demands. Emissions associated with each of these sources were calculated and are discussed below.

Mobile Source

The modified project site consists of five one-story structures, a small vacant lot, a large vacant lot, and surface parking for commercial and industrial uses. The modified project would replace these existing uses with 49 live/work units. According to the *17th/Superior Live/Work Project Traffic Impact Analysis*, the modified project would result in 29 net new daily trips. Table 3.3-2, Long-Term Operational Air Emissions – Modified Project, presents the anticipated mobile source emissions. The modified project’s impacts from vehicle emissions would be less than significant.

Stationary Source Emissions

Stationary source emissions would be generated due to an increased demand for electrical energy and natural gas with development of the modified project. As indicated in Table 3.3-2, stationary source emissions from the modified project would not exceed SCAQMD thresholds. Thus, impacts from area



source emissions would be less than significant. Moreover, the modified project is subject to compliance with Standard Condition SC 4.3-3, which requires compliance with Title 24 of the California Code of Regulations.

**Table 3.3-2
Long-Term Operational Air Emissions – Modified Project**

Source ²	Estimated Annual Average Emissions (pounds/day) ¹					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
EXISTING EMISSIONS						
Area Sources	0.53	0.00	0.00	0.00	0.00	0.00
Energy Sources	0.00	0.02	0.02	0.00	0.00	0.00
Mobile Sources	9.33	6.75	29.54	0.06	5.00	1.39
Total Existing Emissions	9.87	6.77	29.56	0.06	5.00	1.39
PROPOSED EMISSIONS						
Area Sources	14.38	0.37	28.75	0.04	3.77	3.76
Energy Sources	0.03	0.22	0.10	0.00	0.02	0.02
Mobile Sources	7.87	5.59	25.71	0.06	4.24	1.18
Total Proposed Emissions	22.28	6.18	54.56	0.10	8.02	4.96
Net Increase Over Existing	12.41	-0.59	25.00	0.04	3.02	3.57
SCAQMD Threshold	55	55	550	150	150	55
Is Threshold Exceeded? (Significant Impact)	No	No	No	No	No	No
Notes:						
1 – Based on CalEEMod modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.						
Refer to Appendix A, <i>Air Quality Emissions Data</i> , for assumptions used in this analysis.						

Cumulative Construction Impacts

As indicated in Table 3.3-1, mitigated construction activities for the modified project would not exceed SCAQMD thresholds. Compliance with SCAQMD rules and regulations, as well as implementation of Standard Conditions of Approval 4.3-1 and 4.3-2, would reduce the modified project's construction-related impacts to a less than significant level. Thus, it can be reasonably inferred that the modified project-related construction emissions, in combination with those from other projects in the area, would not substantially deteriorate the local air quality. A less than significant impact would occur in this regard.

Cumulative Long-Term Impacts

As discussed previously and indicated in Table 3.3-2, the modified project would result in less than significant air quality impacts. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Therefore, cumulative operational impacts associated with the modified project operations would be less than significant.



Air Toxics

As concluded for the 29 unit Project, compliance with Mitigation Measure AQ-1 would ensure any potential health risks to the modified project associated with ambient air quality concentrations would be less than significant.

Localized Significance Thresholds (LST)

Table 3.3-3, Localized Significance of Emission – Modified Project, shows the construction-related emissions for NO_x, CO, PM₁₀, and PM_{2.5} compared to the LSTs for SRA 18. As shown in *Table 3.3-3*, mitigated construction emissions and operational emissions would not exceed the LSTs for SRA 18. Therefore, localized significance impacts from construction of the modified project would be less than significant with implementation of Standard Conditions of Approval 4.3-1 and 4.3-2.

**Table 3.3-3
Localized Significance of Emissions - Modified Project**

Source	Pollutant (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Construction				
2014				
Total On-Site Unmitigated Emissions	70.27	46.51	9.98	6.69
Total On-Site Mitigated Emissions	70.20	46.47	6.49	4.79
Localized Significance Threshold	130	991	11.48	5.64
Thresholds Exceeded?	No	No	No	No
2015				
Total On-Site Unmitigated Emissions	29.37	22.54	2.57	2.07
Total On-Site Mitigated Emissions	29.34	22.52	2.56	2.07
Localized Significance Threshold	130	991	11.48	5.64
Thresholds Exceeded?	No	No	No	No
Operational				
Stationary Source Emissions	0.03	2.44	0.05	0.05
Localized Significance Threshold	130	991	3.28	2.00
Thresholds Exceeded?	No	No	No	No
Note:				
1. The Localized Significance Threshold was determined using Appendix C of the SCAQMD <i>Final Localized Significant Threshold Methodology</i> guidance document for pollutants NO _x , CO, PM ₁₀ , and PM _{2.5} . The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction, the total acreage for operational, the distance to sensitive receptors, and the source receptor area (SRA 18). Mitigated emissions are those that incorporate the requirements set forth in Standard Conditions 4.3-1 and 4.3-2.				

Carbon Monoxide Hotspots

The modified project proposes 49 live/work units in place of commercial and light industrial uses. The *17th/Superior Live/Work Project Traffic Impact Analysis* indicates that the modified project would result in 29 net new daily trips. The modified project would not increase the volume to capacity ratio by two percent at



any study intersection; therefore, a CO hotspot analysis is not warranted. Thus, impacts in regards to CO hotspots would be less than significant.

As seen in *Table 3.3-3*, operational emissions are far below the LSTs, thus, a less than significant impact would occur in this regard.

Odors, Short-Term Modified Project Construction

Construction-related odors would be short-term in nature and cease upon completion of the modified project. Any impacts to existing adjacent land uses would be short-term and are considered less than significant.

Odors, Long-Term Modified Project Operations

As with the proposed Project, the modified project's proposed residential uses could be exposed to odors from the existing surrounding commercial/industrial uses. Standard Condition SC 4.1-2 requires notification to buyers that the modified project is located within an area designated as Light Industry and subject to existing and potential annoyances/inconveniences (such as odors) associated with industrial land uses. Standard Condition of Approval 4.3-4 would require all trash facilities to be enclosed to eliminate potential odor impacts. Therefore, impacts are less than significant.

3.4 BIOLOGICAL RESOURCES

Would the modified project:

- a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*
- b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*
- c. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*
- d. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*
- e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
- f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The IS/MND concluded that the 29-unit Project would result in no impacts related to biological resources, as none are present on the Project site or in its vicinity.



Consistent with previous conclusions, the modified project would not impact biological resources.

3.5 CULTURAL RESOURCES

Would the modified project:

- a. *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?*
- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?*
- c. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*
- d. *Disturb any human remains, including those interred outside of formal cemeteries?*

The IS/MND concluded that the 29-unit Project would result in no impact involving historical resources and less than significant impacts involving archaeological/paleontological resources and human remains, with implementation of standard conditions.

The modified project site contains five buildings, inclusive of the corner parcel, which contains one building constructed in the 1950s. The modified project site is not identified as a historically/culturally significant resource; refer to General Plan EIR Exhibit 4.10-1 and General Plan EIR Table 4.10-1. Additionally, the structures that exist on the modified project site, inclusive of the corner parcel, do not qualify as a historical resource pursuant to CEQA Guidelines. Therefore, implementation of the modified project would not cause a substantial adverse change in the significance of a historical resource.

Similar to the 29-unit Project, given the disturbed conditions of the modified project site, the potential to discover archaeological/paleontological resources or human remains is considered low. However, the potential exists for unknown resources or remains to be discovered during project construction activities. Compliance with Standard Conditions SC 4.5-1, SC 4.5-2, and SC 4.5-3 would reduce potential impacts to a less than significant level.

3.6 GEOLOGY AND SOILS

Would the modified project:

- a. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - 1) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*
 - 2) *Strong seismic ground shaking?*
 - 3) *Seismic-related ground failure, including liquefaction?*
 - 4) *Landslides?*
- b. *Result in substantial soil erosion or the loss of topsoil?*



- c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*
- d. *Be located on expansive soil, as defined in Table 18-1-B of the California Building Code (2004), creating substantial risks to life or property?*
- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

The IS/MND concluded that the 29-unit Project would result in no impact involving rupture of a known earthquake fault, landslides, and septic tanks and less than significant impacts involving strong seismic ground shaking, liquefaction, erosion, unstable soils, and expansive soils with implementation of standard conditions.

As with the 29-unit Project, the modified project would result in no impact involving rupture of a known earthquake fault, landslides, and septic tanks.

Strong Seismic Ground Shaking

Similar to the 29-unit Project, the modified project would be susceptible to strong seismic groundshaking. Numerous controls would be imposed on the proposed development through the permitting process. According to Standard Condition 4.6-1, the project would be subject to compliance with the requirements of the California Code of Regulations. Additionally, the City would regulate the proposed development (and lessen potential seismic and geologic impacts) through compliance with the City's Building Regulations and local land use policies. The modified project must comply with Standard Condition SC 4.6-2, which requires preparation of a Geotechnical Investigation and a final written report. Compliance with the City's Building Regulations and Standard Conditions 4.6-1 and 4.6-2 would ensure that implementation of the modified project would result in a less than significant impact due to the exposure of people or structures to potential substantial adverse effects involving strong seismic ground shaking.

Liquefaction

According to the Seismic Hazard Zones Map – Newport Beach Quadrangle (Liquefaction Zone Released April 17, 1997), the modified project site is not mapped as being in a liquefaction zone of required investigation.⁴ Notwithstanding, the City would regulate the proposed development (and further minimize any potential liquefaction hazard) through compliance with the City's Building Regulations. Additionally, the modified project must comply with Standard Condition SC 4.6-1, which requires compliance with the California Building Code and Standard Condition SC 4.6-2, which requires preparation of a Geotechnical Investigation and a final written report.

⁴ State of California, Department of Conservation California Geological Survey Website - Geologic & Hazards Mapping Program, http://gmw.consrv.ca.gov/shmp/html/pdf_maps_so.html, Accessed September 9, 2013.



Erosion

Implementation of the modified project would result in ground-disrupting activities such as excavation and trenching for foundations and utilities; soil compaction and site grading; and the erection of new structures, all of which would temporarily disturb soils. The exposure of previously covered soils during these activities could result in substantial soil erosion or the loss of topsoil. The modified project would be subject to compliance with the National Pollutant Discharge Elimination System (NPDES) permitting process, since one or more acres of soil would be disturbed; refer also to Standard Condition 4.6-3. Following compliance with NPDES regulatory requirements, implementation of the modified project would result in a less than significant impact involving soil erosion or the loss of topsoil.

Unstable Geologic Units and Soils

The modified project site is relatively level and as a result, there is no potential for landslides or slope instabilities. Additionally, as the modified project site has a low potential for liquefaction, the potential for lateral spreading is also low. Following compliance with the City's Building Regulations pursuant to Standard Condition 4.6-1, implementation of the modified project would not expose people or structures to potential substantial adverse effects involving unstable geologic units or soils.

Expansive Soils

According to General Plan EIR Exhibit 4.7-2, *Soil Types*, the modified project site is located within an area identified as having soils characterized as silty sand, which are not typically expansive. The modified project is subject to compliance with Standard Condition SC 4.6-2, which requires preparation of a Geotechnical Investigation and a final written report. The Geotechnical investigation would identify the modified project site's soil characteristics and potential for expansion. If necessary, recommendations would be identified in order to mitigate the effects of expansive soils on the proposed development. The proposed buildings would be required to be designed and constructed in conformance with the City's Building Regulations pursuant to Standard Condition SC 4.6-1 and the Geotechnical Investigation's recommendations. Compliance with the Building Regulations and the Geotechnical Investigation's recommendations would ensure that implementation of the modified project would not create substantial risks to life or property from expansive soils.

3.7 GREENHOUSE GAS EMISSIONS

Would the modified project:

- a. *Generate greenhouse gas emissions, either directly or indirectly that may have a significant impact on the environment?*
- b. *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The IS/MND concluded that the 29-unit Project would result in less than significant impacts involving greenhouse gas emissions and any adopted greenhouse gas plans, policies, or regulations.



Project-Related Sources of Greenhouse Gases

The modified project site consists of five one-story structures, a small vacant lot, a large vacant lot, and surface parking for commercial and industrial uses. The modified project would replace the existing land uses with 49 live/work units. *Table 3.7-1, Estimated Greenhouse Gas Emissions – Modified Project*, presents the modified project’s estimated CO₂, N₂O, and CH₄ emissions, as well as the existing uses’ emissions for informational purposes. The CalEEMod computer model outputs are contained within *Appendix A, Air Quality and Greenhouse Gas Emissions Data*.

**Table 3.7-1
Estimated Greenhouse Gas Emissions**

Source	CO ₂	CH ₄		N ₂ O		Total Metric Tons of CO ₂ eq
	Metric Tons/yr ¹	Metric Tons/yr ¹	Metric Tons of CO ₂ eq ²	Metric Tons/yr ¹	Metric Tons of CO ₂ eq ²	
Existing Emissions						
Area Source	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source	734.26	0.03	0.70	0.00	0.00	734.94
Energy	30.56	0.00	0.03	0.00	0.10	30.69
Water Demand	18.98	0.15	3.23	0.00	1.17	23.38
Waste	3.87	0.23	4.81	0.00	0.00	8.68
Total Existing Emissions	787.67	0.42	8.75	0.00	1.27	797.69
Proposed Emissions						
Construction (total of 609.12 MTCO ₂ eq which would be amortized over 30 years)	20.23	0.00	0.00	0.00	0.00	20.32
Area Source	16.03	0.02	0.00	0.00	0.11	16.49
Mobile Source	710.27	0.03	0.00	0.00	0.00	710.91
Energy	158.54	0.01	0.00	0.00	0.59	159.26
Water Demand	29.05	0.16	0.01	0.00	1.23	33.61
Waste	7.17	0.42	0.02	0.0000	0.00	16.07
Total Emissions	941.29	0.64	0.03	0.01	1.93	956.66
Increase Over Existing	153.62	0.22	-8.72	0.01	0.66	158.97
<i>GHG Threshold</i>		<i>3,000 MTCO₂eq/yr</i>				
Is Threshold Exceeded? (Significant Impact)		No				
Notes:						
1. Emissions calculated using CalEEMod computer model.						
2. CO ₂ Equivalent values calculated using the U.S. EPA Website, <i>Greenhouse Gas Equivalencies Calculator</i> , http://www.epa.gov/cleanenergy/energy-resources/calculator.html , accessed September 5, 2013.						
3. Totals may be slightly off due to rounding.						
Refer to <i>Appendix A, Air Quality and Greenhouse Gas Emissions Data</i> , for detailed model input/output data.						



Direct Project-Related Sources of Greenhouse Gases

- Construction Emissions. As indicated in Table 3.7-1, the modified project would result in 20.32 MTCO₂eq/yr (amortized over 30 years), which represents a total of 609.12 MTCO₂eq from construction activities.
- Area Source. Area source GHG emissions associated with Project operations would directly result in 16.49 MTCO₂eq/yr; refer to Table 3.7-1.
- Mobile Source. The CalEEMod model relies upon trip data within the *17th/Superior Live/Work Project Traffic Impact Analysis* and Project specific land use data to calculate mobile source emissions. The Project would directly result in 710.91 MTCO₂eq/yr of mobile source-generated GHG emissions; refer to Table 3.7-1.

Indirect Project-Related Sources of Greenhouse Gases

- Energy Consumption. Energy Consumption emissions were calculated using the CalEEMod model and Project-specific land use data. Electricity would be provided to the modified project site via the Southern California Edison system. The Project would indirectly result in 159.26 MTCO₂eq/year of GHG emissions due to energy consumption; refer to Table 3.7-1.
- Water Demand. Indirect energy impacts due to water supply would result in 33.61 MTCO₂eq/year of GHG emissions; refer to Table 3.7-1.
- Solid Waste. Solid waste associated with Project operations would result in 16.07 MTCO₂eq/year of GHG emissions; refer to Table 3.7-1.

Total Project-Related Sources of Greenhouse Gases

As indicated in Table 3.7-1, the modified project's "business as usual" GHG emissions from direct and indirect sources combined would total 956.66 MTCO₂eq/yr. Additionally, the modified project would result in a net increase of 158.97 MTCO₂eq/yr over existing conditions. Therefore, as the emissions would be below the 3,000 MTCO₂eq per year threshold, impacts would be less than significant in this regard.

Compliance with applicable plan, policy or regulation

The modified project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. The modified project would not result in substantial construction-related or operational GHG emissions. Additionally, Project implementation would not hinder the State's GHG reduction goals established by AB 32. Thus, a less than significant impact would occur in this regard.



3.8 HAZARDS AND HAZARDOUS MATERIALS

Would the modified project:

- a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The IS/MND concluded that the 29-unit Project would result in no impact or less than significant impacts involving the routine transport, use, or disposal of hazardous materials, hazardous emissions/materials in proximity to a school, hazardous materials sites, airport/airstrip safety hazards, emergency response/evaluation plans, and wildland fires with implementation of standard conditions. Impacts from the Project associated with reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be mitigated to a less than significant level.

Routine Transport, Use, or Disposal of Hazardous Materials

Similar to the 29-unit Project, the modified project would involve business areas on the ground floors of the units. Due to the nature of the allowable uses and size of work spaces, it is not anticipated that the future businesses would be associated with industrial types of uses or disposal of hazardous materials in reportable quantities. Also, operation of the future businesses would not require the handling of hazardous or other materials that would result in the production of large amounts of hazardous waste. Notwithstanding, future businesses would be reviewed through the City's discretionary review process, upon their request for a permit to operate. The future businesses would be required to comply with applicable laws and regulations that would reduce the risk of hazardous materials use, transportation, and disposal through the implementation of established safety practices, procedures, and reporting requirements. Therefore, implementation of the modified project would result in less than significant



impacts involving the creation of a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The modified project site is located within a commercial/industrial area. The surrounding commercial/industrial uses may handle or require disposal of hazardous materials in reportable quantities. Standard Condition SC 4.1-2 requires notification to buyers that the modified project is located within an area designated as Light Industry and subject to existing and potential issues associated with industrial land uses. Additionally, the existing commercial/industrial uses and future commercial uses would be subject to compliance with existing hazardous materials regulations and verification of compliance would be monitored by state (e.g., Occupational Safety and Health Administration in the workplace or Department of Toxic Substances Control for hazardous waste) and the local agencies (e.g., the Costa Mesa Fire Department). Compliance with existing safety standards related to the handling, use, and storage of hazardous materials, and compliance with the safety procedures mandated by applicable federal, state, and local laws and regulations would be required.

Accidental Release of Hazardous Materials

The proposed 29-Unit Project site involves two parcels: APN 424-301-01; and APN 424-301-04. The modified project site involves expanding the development area to include the parcel located at the southwest corner of 17th Street and Superior Avenue (APN 424-301-08). For purposes of this analysis, APN 424-301-01 and APN 424-301-04 are referred to as the westerly parcels and APN 424-301-08 is referred to as the corner parcel.

The following studies were performed for the westerly parcels:

- *Phase I and Limited Phase II Environmental Site Assessment 643 Through 641 West 17th Street and 1677 Superior Avenue, Costa Mesa, Orange County, California* (Phase I/Phase II ESA), (Leighton and Associates, Inc., Revised September 24, 2013); and
- *Vapor Intrusion Risk Evaluation* (Enviro-Tox Services, Inc., May 21, 2013).

The following study was performed for the modified project site, inclusive of both the westerly parcels and the corner parcel:

- *Preliminary Hazardous Materials Assessment 17th Street & Superior Live/Work Project (Assessment)* (RBF Consulting, Revised September 24, 2013).

The findings of these studies are summarized below.

Westerly Parcels: Phase I and Limited Phase II ESA and Vapor Intrusion Risk Evaluation

Phase I ESA

The purpose of the Leighton and Associates (Leighton) Phase I ESA was to identify, to the extent feasible pursuant to the processes prescribed in ASTM International (ASTM) E1527-05, recognized environmental conditions (RECs) in connection with the westerly parcels. Recognized environmental conditions are



defined as “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimus conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimus are not recognized environmental conditions”.

Regulatory Records Review. Leighton conducted a search of selected government databases using Environmental Data Resources (EDR) Inc. Radius Report, dated April 24, 2013. The HAZNET database is comprised of facilities listed as having manifested California-hazardous waste. The southernmost westerly parcel (1677 Superior Avenue) was listed in 2003 as having disposed of unspecified organic liquid.

Several sites with the potential to adversely impact the westerly parcels were also identified. One CERCLIS facility is located 0.23 miles west-southwest (down and cross-gradient) from the westerly parcels. Due to the site’s location, Leighton concluded there is low potential for these facilities to adversely impact the westerly parcels.

Two Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) - No Further Action facilities are located over 0.35-miles down- or cross-gradient from the westerly parcels. According to the database report, these facilities have received a No Further Remedial Action Planned letter from the EPA. Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.

One Corrective Action under Resource Conservation and Recovery Act (CORRACTS) facility (also listed as the RCRA TSD facility) is located 0.402-miles southwest (down- and cross-gradient) from the westerly parcels. Due to the site’s location, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.

Fifteen Resource Conservation and Recovery Act (RCRA) Generator facilities are located within 0.25-miles of the westerly parcels. One facility had a duplicate listing and eight facilities are located down- or cross-gradient from the westerly parcels and no violations were found. Leighton concluded that there is low potential for these facilities to adversely impact the westerly parcels. The remaining six facilities and one unmapped facility are discussed below:

- Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. is located at 671 West 17th Street, adjacent to the westerly parcels’ western boundary. According to the database report, records for the generation of various wastes were found for the facility from 1980 to 2008. Additionally, the facility had numerous notices of violation. Due to the close proximity to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and Human Health Risk Assessment (HHRA). Based on these Assessments’ findings (presented in the *Phase I/Limited Phase II and Vapor Intrusion Risk Evaluation Findings and Conclusions* Section below), Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.



- Sprint Cleaners is located at 103 East 17th Street, 371 feet east-northeast of the westerly parcels across Superior Avenue. According to the database report, the facility had no violations. Due to the close proximity to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.
- Dry Clean 4 Less is located at 1704 Newport Boulevard, 1,095 feet northeast of the westerly parcels across Superior Avenue. According to the database report, the facility had no violations. Due to the distance from the westerly parcels, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.
- Frank and Jimmy Auto Repair is located at 746 West 17th Street, 1,275 feet west-northwest of the westerly parcels along 17th Street. According to the database report, the facility had no violations. Due to the distance from the westerly parcels, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.
- Island Auto Body Inc. is located at 1701 Pomona, 666 feet west-northwest of the westerly parcels along 17th Street. According to the database report, the facility had no violations. Due to the distance from the westerly parcels, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.
- Pacific Handy Cutter Inc. is located at 720 West 17th Street, 948 feet west-northwest of the westerly parcels along 17th Street. According to the database report, the facility had no violations. Based on the distance of the facility from the westerly parcels, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.
- Texaco Service Station previously located at 1695 Superior Avenue, immediately east of the westerly parcels (within the corner parcel). According to the database report, records for the generation of flammable hazardous wastes and benzene were found for the facility from 2001 to 2004. No notices of violation were found for the facility. Due to the close proximity to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.

Four State Response Sites (Response) facilities are located at least 0.36 miles west (crossgradient) from the westerly parcels. Due to the site's location, Leighton concluded there is low potential for these facilities to adversely impact the westerly parcels.

Sixteen (16) Envirostor database facilities are located within 1.0 mile of the westerly parcels. Of the 16 facilities, two are located within 0.25 miles of the westerly parcels. One facility is located down-gradient from the westerly parcels. Leighton concluded there is low potential for this facility to adversely impact the westerly parcels. The second facility, located at 1704 Newport Boulevard, is not under DTSC oversight; however, this facility is also listed in the Orange County Industrial Site database and received a closure certification in 2000. Therefore, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.



One Solid Waste Landfill (SWL) facility is located within 0.5-miles of the westerly parcels. The facility is located down-gradient from the westerly parcels. Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.

Thirty-two (32) Leaking Underground Storage Tank (LUST) facilities are located within 0.50-miles of the westerly parcels. Excluding duplicate listings, a total of 25 unique facilities were identified within the database report. Of the 25 facilities, 22 facilities have been remediated and received closure from a regulatory agency. One facility is located 0.402 miles from the westerly parcels and down-gradient; therefore, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels. One facility, G&M Oil Station No. 43, is located 0.294 miles from the westerly parcels and is up-gradient. The facility is currently under active remediation and Leighton concluded the contamination plumes do not appear to extend beneath the westerly parcels. Based on this information, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels. One facility, Argo-Tech Corporation Costa Mesa/JC Carter Company Inc., is located at 671 17th Street adjacent to the westerly parcels. The facility is currently under active remediation; however, a dissolved trichloroethene (TCE) groundwater contaminant plume may extend beneath the westerly parcels. Additionally, one LUST facility, Texaco Service Station, previously located on the corner parcel at 1695 Superior Avenue, immediately east of the westerly parcels, obtained regulatory closure in 2005. Due to the close proximity to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.

Five California Facility Inspection Database Underground Storage Tank (CAL FID UST) and Statewide Environmental Evaluation and Planning System Underground Storage Tank (SWEEPS UST) facilities are located within 0.25-miles of the westerly parcels. Four facilities are located down gradient from the westerly parcels or do not have a corresponding LUST listing. Therefore, Leighton concluded there is low potential for these facilities to adversely impact the westerly parcels. One facility, Texaco Service Station, located within the corner parcel, was addressed under the LUST listing discussion above.

One Spills, Leaks, Investigation, and Cleanup Cost Recovery (SLIC) facility is located 0.402 miles down-gradient from the westerly parcels. Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.

Fourteen Underground Storage Tank (UST) facilities are located within 0.25 miles of the westerly parcels. Of the 14 facilities, 10 facilities have closed. LUST listings are located down- or cross-gradient from the westerly parcels; therefore, Leighton concluded there is low potential for these facilities to adversely impact the westerly parcels. One facility, Texaco Service Station, located within the corner parcel, was addressed under the LUST listing discussion above. One facility, Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc., located adjacent to the westerly parcels, was previously addressed under the LUST listing discussion above. One facility, AAMCO Automatic Transmission, is located 0.213-miles up-gradient from the westerly parcels. This facility does not have a corresponding LUST listing and the UST was used for waste oil. Leighton concluded there is low potential for this facility to adversely impact the westerly parcels. One facility, David Fitch Automotive Repair, is located 0.130-miles up-gradient from the westerly parcels. This facility does not have a corresponding LUST listing and no other information regarding the UST was available. Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.



Nine Historical UST facilities are located within 0.25 miles of the westerly parcels. Six facilities are located down- or cross-gradient from the westerly parcels or are located at a distance greater than 0.20 miles from the westerly parcels; therefore, Leighton concluded there is low potential for these facilities to adversely impact the westerly parcels. One facility, James D Merrick-Firestone, is located 0.122-miles up-gradient of the westerly parcels. This facility does not have a corresponding LUST listing and the UST was used for waste; therefore, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels. One facility, AAMCO Automatic Transmission, was discussed in the UST listing section above. The remaining facility, Argo Tech Corporation Costa Mesa/JC Carter Company, Inc., was addressed under the LUST listing discussion above.

One Aboveground Storage Tank (AST) facility, Argo Tech Corporation Costa Mesa/JC Carter Company, Inc, is located adjacent to the westerly parcels' western boundary. The AST has a 20,000 gallon capacity. This facility was addressed under the LUST listing discussion above.

Two Drycleaners facilities are located within 0.25 miles of the westerly parcels. One facility is located 0.222 miles southeast (down-gradient) from the westerly parcels. Leighton concluded there is low potential for this facility to adversely impact the westerly parcels. One facility, Sprint Cleaners, is located 371 feet east-northeast (up-gradient) from the westerly parcels. Due to the close proximity to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels if an undocumented release has occurred on the premises.

Forty-eight (48) Historic Auto Station facilities are located within 0.25 miles of the westerly parcels. Of the 48 listings, 35 facilities are located down- or cross-gradient from the westerly parcels or are located at a distance greater than 0.20 miles from the westerly parcels; therefore, Leighton concluded there is low potential for these facilities to adversely impact the westerly parcels. The remaining 13 facilities are located adjacent, up-gradient, or at a distance from the westerly parcels and concluded by Leighton to have low potential to adversely impact the westerly parcels.

Five Historic Cleaners facilities are located within 0.25 miles of the westerly parcels. Four facilities are located at a distance greater than 0.20 miles, or are down- or cross-gradient from the westerly parcels and are therefore concluded by Leighton to be unlikely to adversely impact the westerly parcels. One of the Historic Cleaners, Sprint Cleaners, is located 371 feet east-northeast (upgradient) from the westerly parcels. Due to the close proximity to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels if an undocumented release has occurred on the premises.

Other Reports. As part of their Phase I assessment, Leighton reviewed several reports associated with the corner parcel (1695 Superior Avenue). The facility located at the corner parcel was a former gasoline service station. The facility was under the regulatory oversight of the Orange County Health Care Agency. Between August 1991 and January 2005, numerous investigations were conducted to assess the extent of subsurface contamination in soil and groundwater at onsite and adjacent properties.



In 1991, during the first UST removal event, petroleum hydrocarbon contaminated soil was encountered during the removal of one 10,000-gallon diesel UST and four 4,000-gallon USTs. A total of approximately 584 yards of contaminated soil was removed from the facility. In January 2003, during the second UST removal event, three 10,000 gallon gasoline USTs, one 10,000 gallon diesel UST, one 550 gallon waste oil UST, and five fuel dispensers and associated piping were removed from the facility. Approximately 1,575 tons of soil was removed from the facility during the UST closures.

Remedial activities at the facility included soil vapor extraction between June 1995 and April 1997, with resumption of soil vapor extraction in January 2000. Approximately, 20,431 pounds of hydrocarbons were removed by intermittent vapor extraction activities. In 2002, an ozone sparging pilot test was performed and was shown to be an effective means of remediation. Ozone sparging was conducted at the facility between 2003 and 2004.

Following the vapor extraction and ozone sparging, three confirmation soil borings extending into groundwater were drilled in worst case areas. Soil sample concentrations of contaminants of concern were non-detect or below actionable levels. All groundwater monitoring wells had either non-detect, below maximum contaminant levels, or at "low-risk" levels since September 2000. The facility was granted regulatory closure in January 2005 and all wells associated with the remediation activities were abandoned in June 2005.

Site Reconnaissance. As part of their Phase I assessment, Leighton conducted a reconnaissance-level assessment of the westerly parcels. The property reconnaissance consisted of the observation and documentation of existing site conditions and nature of the neighboring development within 0.25 miles of the westerly parcels.

One, 5-gallon container of acetone was observed within the structure on the northernmost westerly parcel (643 West 17th Street). No leaks or stains were observed on the concrete flooring beneath the container. Numerous small containers of hazardous substances, ranging from one quart to five gallons in size, were observed in the suite occupied by a wood working shop at 1677 Superior Avenue. The containers consisted of paints, solvents, oils, wood stains, lacquer, and general cleaning solutions. Minor staining was noted on the concrete beneath the containers; however, most material was stored within secondary cabinets and evidence of major spills was not observed.

Four pole-mounted transformers were observed along the southern boundary of the westerly parcels. No leaks were observed on the exterior of the transformers or on the ground beneath the transformers.

One compressor was observed within the suite occupied by a wood working shop on the southernmost westerly parcel (1677 Superior Avenue). No leaks or stains were observed beneath the compressor.

Based on the age of the onsite structures it is possible that asbestos-containing building materials (ACM) and lead-based paint may be present in the structures on the westerly parcels.



Limited Phase II ESA

The purpose of the Limited Phase II ESA conducted by Leighton was to assess the westerly parcels for the presence of contaminants and gas in the onsite soil originating from offsite sources identified in the concurrent Phase I ESA such that potential health risks can be evaluated prior to residential development.

Summary of Assessment. Seven soil borings (LB1 through LB7) were advanced as described in Initial Study Section 4.8. Contamination was not visually observed during boring advancement or with the PID; however, one soil sample was collected at a depth of five feet bgs in boring LB4 based on a slight change in color noted in the soils. The soil sample was transported to TestAmerica Laboratories, Inc. (TestAmerica) for analysis.

Upon reaching the total depth of the borings, soil gas probes were installed in each of the seven soil boring locations to perform a soil gas survey. Soil gas samples were obtained from soil gas probes located at five feet and 15 feet bgs.

Laboratory Analysis. The soil sample collected from the westerly parcels, LB4 at 5 feet bgs, was analyzed for volatile organic compounds (VOCs). VOCs were not detected above the laboratory reporting limit in the soil sample analyzed.

The soil sample was also analyzed for TPH. The soil sample had a TPH diesel (also referred to as diesel range organics [DRO]) concentration above the laboratory reporting limit, as detailed in the *Vapor Intrusion Risk Evaluation* Section below. The soil sample analyzed had a TPH gasoline (also referred to as gasoline range organics [GRO]) concentration below the laboratory reporting limit.

Soil gas samples were analyzed for the tracer gas and VOCs with a laboratory reporting limit at or below residential California Human Health Screening Levels (CHHSLs) (1.0 microgram per liter ($\mu\text{g}/\text{L}$) or less). VOCs were detected in the soil gas samples collected from the westerly parcels and analyzed, as detailed in the *Vapor Intrusion Risk Evaluation* Section below.

Human Health Risk Assessment. Leighton compiled all representative soil and soil gas data collected from the westerly parcels and forwarded the information to Enviro-Tox to perform a Human Health Risk Assessment (HHRA) in order to determine whether concentrations of VOCs detected in soil gas samples taken from the westerly parcels pose a threat to future residential occupants; refer to the *Vapor Intrusion Risk Evaluation* discussion below.

Vapor Intrusion Risk Evaluation

Enviro-Tox Services, Inc. conducted a Screening-Level Health Risk Evaluation for the property in response to soil gas analytical data provided by Leighton. Risk characterization involves estimating the magnitude of the potential adverse health effects that could occur as a result of chronic, long-term exposure to chemicals identified in soil gas at the westerly parcels. The risk characterization is based on the results of the dose-response (toxicity) and exposure assessment.



The U.S. Environmental Protection Agency has established acceptable incremental cancer risk levels to be within the risk range of 1 in 10,000 (1.0E-04) and 1 in 1,000,000 (1.0E-06); risks greater than 1.0E-04 are generally considered unacceptable. The California Environmental Protection Agency has defined a risk of 1 in 100,000 (1.0E-05) as the “no significant risk level” for carcinogens under California’s Safe Drinking Water and Toxic Enforcement Act (Proposition 65). Further, most California air districts use the 1.0E-05 risk level as the notification trigger level under California’s AB2588 Toxic Hot Spots Program. Thus, although agencies will exercise caution in determining whether risks within the range of 1.0E-04 and 1.0E-06 require additional investigation or some form of risk management, there is a general precedent that predicted cancer risks that are on the low end of this range will generally be considered acceptable and not warrant further evaluation.

The highest cancer risk (5.0E-06 or 5 in 1,000,000) estimated for soil gas samples collected at the westerly parcels at a depth of 5 feet bgs was obtained from soil gas sample LB1-5. Up to 100 percent of the estimated cancer risk detected in this sample was contributed by chloroform. The highest cancer risk (4.0E-06 or 4 in 1,000,000) estimated for soil gas samples collected at a depth of 15 feet bgs was obtained from soil gas sample LB5-15. Up to 99 percent of the estimated cancer risk detected in this sample was contributed by trichloroethylene (TCE). It is noted that three of seven soil gas sampling locations at depths of 15 feet bgs had estimated cancer risks that exceeded 1.0E-06 (samples LB5-15, LB6-15, and LB7-15). However, their corresponding samples at depths of 5 feet bgs (LB5-5, LB6-5, and LB7-5) had estimated cancer risks equal to or below 1.0E-06. According to Enviro-Tox, these results indicate that soils at the westerly parcels are acting as an effective barrier to soil gas migration and that VOCs detected at a depth of 15 feet bgs are not migrating in significant quantities in soil gas.

For each sampling point, chemical, and depth evaluated, the hazard quotient per sample was obtained. Hazard quotients equal to or less than 1.0 indicate that no adverse health effects are expected to occur from exposure to chemicals at the site. Enviro-Tox’ evaluation found that all estimated hazard quotients were below 1.0, which indicates exposure to VOCs detected under the westerly parcels do not represent a health hazard to future site residents.

Phase I ESA, Limited Phase II ESA, and Vapor Intrusion Risk Evaluation Findings and Conclusions

The soil sample analyzed, LB4 at 5 feet bgs, had a TPH diesel (DRO) concentration of 70 milligrams per kilogram (mg/kg). As previously noted, TPH gasoline (GRO) and VOCs were not detected above the laboratory reporting limits in the soil sample analyzed.

The following VOCs were identified in the soil gas samples collected from the westerly parcels and analyzed:

- Chloroform was detected above the laboratory reporting limit in two of the 16 soil gas samples analyzed at concentrations of 0.371 µg/L in LB6 at 5 feet bgs and 1.84 µg/L in LB1 at 5 feet bgs.
- sec-Butylbenzene was detected above the laboratory reporting limit in two of the 16 soil gas samples analyzed at concentrations of 0.269 µg/L in LB7 at 5 feet bgs and 0.126 µg/L in LB7 at 15 feet bgs.



- Isopropylbenzene was detected above the laboratory reporting limit in one of the 16 soil gas samples analyzed at a concentration of 0.111 µg/L in LB7 at 5 feet bgs.
- Toluene was detected above the laboratory reporting limit in four of the 16 soil gas samples analyzed at concentrations ranging from 0.125 µg/L in LB2 at 5 feet bgs to 0.238 µg/L in LB3 at 5 feet bgs.
- Tetrachloroethene (PCE) was detected above the laboratory reporting limit in 10 of the 16 soil gas samples analyzed at concentrations ranging from 0.028 µg/L in LB3 at 5 feet bgs to 2.09 µg/L in LB6 at 15 feet bgs.
- Trichloroethene (TCE) was detected above the laboratory reporting limit in 10 of the 16 soil gas samples analyzed at concentrations ranging from 0.014 µg/L in LB4 at 15 feet bgs to 3.54 µg/L in LB5 at 15 feet bgs.
- Xylenes were detected above the laboratory reporting limit in one of the 16 soil gas samples analyzed at a concentration of 0.394 µg/L in LB3 at 5 feet bgs.

The concentrations of the VOCs were compared to the CHHSLs for residential land use developed by the California Environmental Protection Agency (Cal EPA). The concentrations of VOCs detected in the soil gas samples collected from the westerly parcels were above the following residential CHHSLs:

- PCE was detected above the residential CHHSL of 0.47 µg/L in six of the 16 soil gas samples analyzed at concentrations ranging from 0.508 µg/L in LB4 at a depth of 15 feet bgs, with a purge volume of ten, to 2.09 µg/L in LB6 at a depth of 15 feet bgs.
- TCE was detected above the residential CHHSL of 1.3 µg/L in three of the 16 soil gas samples analyzed at concentrations ranging from 0.154 µg/L in LB3 at a depth of 15 feet bgs to 3.54 µg/L in LB5 at a depth of 15 feet bgs.

A majority of the higher concentrations of VOCs detected in the soil gas at the westerly parcels were collected in the deeper sample (15 feet bgs), indicating that VOCs may be off-gassing from the groundwater. Groundwater in the site vicinity is known to be impacted with PCE and TCE due to a known release of these chemicals on the adjacent property to the west of the westerly parcels and with possible residual gasoline constituents associated with a known release of fuel-related chemicals on the corner parcel.

Results of the HHRA, conducted by Enviro-Tox, indicate that the levels of man-made chemicals detected in soil gas at the westerly parcels slightly exceed levels considered acceptable for residential land use. However, VOCs detected are at a level that would be deemed by the DTSC to pose a “low risk.” Based on the results of the analysis, Enviro-Tox concluded that site mitigation engineering controls, such as Liquid Boot® barrier, should be implemented as a precaution in order to prevent vapor intrusion into the future onsite buildings (see mitigation measure HAZ-1).



The following surrounding properties of environmental concern were identified as having a low potential to adversely impact the westerly parcels:

- Texaco Service Station (1695 Superior Avenue) - Due to the proximity of the corner parcel to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Gasoline constituents were not detected in onsite soil gas at concentrations above the CHHSLs nor at levels which present a health risk to future occupants of the Project site. Therefore, based on these findings, Leighton concluded there is low potential for residual petroleum hydrocarbons associated with the former release at this facility to adversely impact the westerly parcels.
- Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. (671 West 17th Street) - The facility is currently under active remediation; however, a dissolved trichloroethene (TCE) groundwater contaminant plume may extend beneath the westerly parcels. Due to the close proximity to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Chlorinated solvents, such as TCE and PCE, were detected in onsite deeper soil gas samples (15 feet bgs) at concentrations above the CHHSLs and the DTSC's health risk benchmark value of 1.0E-06; however, the corresponding soil gas sample concentrations at a depth of 5 feet bgs were all below the CHHSLs and estimated to be equal to or less than the health risk benchmark value of 1.0E-06. These results indicate that soils at the westerly parcels are acting as an effective barrier to soil gas migration and that chlorinated solvents detected at a depth of 15 feet bgs are not migrating to the surface in significant quantities in soil gas. Therefore, based on these findings, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels.
- Sprint Cleaners (103 East 17th Street) - Due to the close proximity to the westerly parcels, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Chlorinated solvents, such as TCE and PCE which are typically associated with drycleaning facilities, were detected in onsite deeper soil gas samples (15 feet bgs) at concentrations above the CHHSLs and the DTSC's health risk benchmark value of 1.0E-06; however, the corresponding soil gas sample concentrations at a depth of 5 feet bgs were all below the CHHSLs and estimated to be equal to or less than the health risk benchmark value of 1.0E-06. These results indicate that soils at the westerly parcels are acting as an effective barrier to soil gas migration and that chlorinated solvents detected at a depth of 15 feet bgs are not migrating to the surface in significant quantities in soil gas. Therefore, based on these findings, Leighton concluded there is low potential for this facility to adversely impact the westerly parcels if an undocumented release has occurred on the premises.

Leighton has concluded that the following evidence of RECs associated with the westerly parcels and surrounding properties have been identified:

- Three nearby facilities, Texaco Service Station (corner parcel), Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc., and Sprint Cleaners with known or potential releases of solvents and petroleum hydrocarbons to groundwater were identified. Due to their close proximity, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA.



- A soil vapor survey of the westerly parcels was conducted by Leighton in May 2013 per the DTSC/RWQCB Advisory to determine if releases from adjacent properties have impacted the westerly parcels. Elevated concentrations of chloroform, sec-butylbenzene, isopropylbenzene, toluene, PCE, TCE, and xylenes were detected in the soil gas samples collected from the westerly parcels. The higher concentrations of VOCs detected in the soil gas at the westerly parcels were primarily associated with the deeper soil sample gas samples (15 feet bgs), indicating that VOCs may be off-gassing from the groundwater.
- A HHRA prepared by Enviro-Tox indicated a cancer risk of approximately $5.0E-06$ associated with chloroform in one of the seven soil gas samples collected at 5 feet bgs, which is between the USEPA established acceptable incremental cancer risk range of $1.0E-04$ and $1.0E-06$ not requiring remedial action; therefore, Enviro-Tox concluded that site mitigation engineering controls, such as a Liquid Boot® barrier, should be considered as precaution to prevent vapor intrusion into the future onsite buildings. The source of the chloroform is unknown and could be the result of irrigation water or sewage spills that reacted with local organic matter in the onsite soils. Furthermore, concentrations of PCE and TCE detected in the deeper soil gas samples (15 feet bgs) were above the DTSC's benchmark value of $1.0E-06$; however, the corresponding soil gas sample concentrations at a depth of 5 feet bgs were all estimated to be equal to or less than $1.0E-06$. These results indicate that soils at the westerly parcels are acting as an effective barrier to soil gas migration and that VOCs detected at a depth of 15 feet bgs are not migrating to the surface in significant quantities in soil gas.

Based on the findings of the Limited Phase II ESA and HHRA, Leighton concludes there is low potential for the RECs described above to adversely impact the westerly parcels. Additionally, Leighton recommends the installation of site mitigation engineering controls, such as a Liquid Boot® barrier, if the westerly parcels and corner parcel are to be redeveloped for residential purposes (Mitigation Measure HAZ-1). Therefore, with mitigation, a less than significant impact is anticipated.

Although not considered a REC, Leighton recommends that a comprehensive asbestos and lead-based paint survey of the onsite structures be completed by a licensed consultant prior to their demolition. This is further discussed in the *Preliminary Hazardous Materials Assessment* discussion below.

Further, Leighton recommends observations be made during future property development for areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, and stained soil or odorous soils. Should such materials be encountered, further investigation and analysis may be necessary at that time. This is further discussed in the *Preliminary Hazardous Materials Assessment* discussion below.

Preliminary Hazardous Materials Assessment

The following summarizes the findings of the Preliminary Hazardous Materials Assessment (Assessment) prepared by RBF Consulting.



The purpose of the Assessment was to review existing conditions, analyze potential environmental impacts, and suggest feasible mitigation measures to reduce potentially significant effects, if any, associated with hazardous materials for the modified project site.

Site Improvements. Three parcels (APNs 424-310-01, 424-301-04, and 424-301-08) and multiple associated addresses comprise the modified project site. On-site land uses consist of commercial/light industrial uses, as well as vacant land.

California Department of Oil, Gas, and Geothermal Resources. According to the California Department of Oil, Gas, and Geothermal Resources (DOGGR) online mapping system, no oil or gas wells are located within the modified project site. Multiple oil gas wells are located in the immediate vicinity of the modified project site. These wells are reported to be plugged.

Regulatory Records Review. Regulatory records were searched by Environmental Data Resources, Inc. (EDR) and reviewed by RBF for sites within the modified project site and within an approximate one-mile radius of the modified project site boundaries. One regulatory site consisting of the Texaco Service Station (with the historical address of 1695 Superior Avenue, corner parcel) was identified within the modified project site. This facility was reported in the following databases:

- Leaking Underground Storage Tank Incident Report (LUST);
- Orange County Industrial Site;
- Underground Storage Tank (UST);
- Historic Cortese Hazardous Waste and Substances Sites List (HIST CORTESE);
- California Facility Inventory Database Underground Storage Tank (CA FID UST);
- Statewide Environmental Evaluation and Planning System Underground Storage Tank (SWEEPS UST); and
- EDR Exclusive Historic Gas Stations (EDR US Hist Auto Stat).

This facility is reported as a LUST cleanup site and has received a case closed status as of January 2005. Therefore, based on regulatory records review, this facility has a moderate potential to affect the modified project site due to the previous groundwater contamination history. Review of the Case Closure Summary for this LUST facility indicates that two tank removal events took place at this site. High TPH and benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations were detected in both soil and groundwater samples collected following the first tank removal event and subsequent site assessments. Approximately 20,431 pounds (3,143 gallons) of hydrocarbons were removed by intermittent vapor extraction activities between June 1995 and April 1997.

During the second tank removal event, high methyl tertiary-butyl ether (MTBE) and tertiary butyl alcohol (TBA) concentrations were detected in soil samples collected from the tank excavation at 18 feet below grade (fbg). The tank area was further excavated to 21 to 22 fbg. However, due to residual MTBE and TBA concentrations remaining in the capillary fringe and continued increasing MTBE and TBA concentrations in groundwater samples, ozone sparging was conducted from August 2003 to May 2004.

Following, completion of vapor extraction and ozone sparging, three soil verification borings extending beneath the water table were drilled in worst case areas, with the exception of the northern dispenser



island area. All soils sampled were non-detect for all constituents except for .053 ppm ethylbenzene at 30 fbg in the boring located to the northeast of the tank excavation. After tank removal incidents, Texaco installed monitoring wells on the corner parcel. The soil contamination in the northern dispenser area appears to have been remediated since BTEX concentrations in down-gradient well MW-7 have been below MCLs since December 2000.

In addition to the wells installed by Texaco, four wells associated with an adjacent cleanup were incorporated in groundwater monitoring events. All wells have had either non-detect, below MCLs or "low-risk" BTEX concentrations since at least the September 2000 sampling event. Also, 13 of the 22 wells sampled have had non-detect MTBE and oxygenates since the June 2000 sampling event. The MTBE and TBA concentrations in the other remaining wells have continued decreasing to non-detect or below 10 ppb, except for two wells showing MTBE concentrations of 43 and 100 ppb during the last sampling event.

According to GeoTracker, no further work is recommended for this site with the following considerations:

- Source removal by excavation, vapor extraction, and ozone sparging has taken place at the corner parcel.
- The soil verification boring results indicate that the remediation activities were effective.
- BTEX, MTBE and oxygenates concentrations have continuously decreased to non-detect or below the MCLs for majority of the wells.
- There are no production wells within a one mile radius of this modified project site.

The regulatory records review identified approximately 145 off-site regulatory properties within a one-mile radius of the modified project site. The majority of the listed regulatory sites are considered to have a low potential of affecting the modified project site for one or more of the following reasons: distance to the modified project site; direction of anticipated groundwater flow; and/or site status; refer to Appendix B.

Based on the regulatory records review, the following sites are considered to have a moderate to high potential to affect the modified project site:

- Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. (671 West 17th Street). This facility adjoins the modified project site to the west and cross-gradient. This facility was reported in the HIST CORTESE, LUST, RCRA-LQG, Cortese, ENF, NPDES, HIST UST, EMI, WDS, EDR US Hist Auto Stat, UST, AST, and FINDS databases.

The facility is reported in the LUST database as a LUST cleanup site due to affected groundwater. The primary chemical contaminant at the site is TCE; however, other compounds were detected at concentrations of concern. The status is reported to be open and is undergoing pollution characterization. As part of the remedial action plan for this facility, vapor exposure to occupants of buildings on the JC Carter property would be mitigated through engineered controls and/or land use restrictions.



According to GeoTracker, this facility is currently under active remediation; however, a dissolved TCE groundwater contaminant plume may extend beneath the modified project site. Based on regulatory records review, this facility has a moderate potential to affect the modified project site as a result of contaminated groundwater.

- *Sprint Cleaners (103 East 17th Street)*. This facility is located approximately 465 feet to the east of the modified project site. This facility was reported in the RCRA-SQG, FINDS, and DRYCLEANERS databases. This facility has not reported any violations; however, based on regulatory records review, this facility has a moderate potential to affect the modified project site due to its proximity and type of use (potential for undocumented releases).

Overall, the regulatory database search indicated a moderate potential for regulatory properties to adversely impact the modified project site. However, as concluded above by Leighton, based on the concurrent Limited Phase II ESA and HHRA, there is a low potential of adverse impacts within the westerly parcels. Additionally, it is anticipated the ongoing monitoring will further demonstrate there is low potential of adverse impact within the corner parcel. Also, although groundwater is known to have been impacted by contaminants underneath the modified project site, the modified project is not expected to encounter groundwater; therefore, there is a low potential for adverse impacts to occur within the modified project site due to contaminated groundwater.

No listed Unmapped Properties are located within the boundaries of the modified project site. Potentially contaminated groundwater underlying the modified project site, as a result of the reported Unmapped Properties, is considered to be low due to the distance from the modified project site, gradient, and/or the status of the identified sites.

Site Inspection. RBF conducted a visual site inspection in order to obtain information indicating the likelihood of identifying potential hazardous materials-related conditions, including hazardous substances and petroleum products, in connection with the modified project site (including soils, surface water, and groundwater).

Three single-story buildings are located within the northernmost westerly parcel (APN 424-301-01). Coast Affordable Glass and a wood working shop are within one building located in the northwest portion of this parcel, at 647 and 649 West 17th Street. This building's exterior is stucco. Paddle Surf is within the second building located on this parcel, at 643 West 17th Street. The Paddle Surf's interior was observed and noted to consist of concrete flooring and an inventory of fiberglass surfboards and miscellaneous accessories. This building's exterior is concrete. Blinn & Young, Inc. Canvas Products are within the third building located on this parcel, at 645 West 17th Street. Blinn & Young, Inc. Canvas Products' interior was observed and noted to consist of wood and concrete flooring, as well as canvas materials. One additional address is associated with this parcel and consists of a vacant lot where a boat is being stored. All buildings were located on concrete pads. Additional areas consist of asphalt paved parking areas.

One single-story concrete building is located within the southernmost westerly parcel (APN 424-301-04). This building was associated with Orange Coast Crossfit, Wood Working Shop, Coast Affordable Glass, The Medicine Chest Services, and TJs Property Maintenance. The interior of Orange Coast Crossfit consisted of miscellaneous exercise equipment. The wood working shop consisted of wood materials, as



well as cutting equipment including saws. Paint, lacquers, waxes, and degreasers in small (under 5-gallon) containers on shelves in the interior of the Wood Working Shop were observed. One air compressor within the Wood Working Shop was also noted. Medical supplies were observed in the interior of the building associated with The Medicine Chest Services. One fenced storage yard in the southwestern portion of APN 424-301-04 consisting of equipment and tools associated with TJs Property Maintenance were noted. Tools and equipment consisted of rakes, shovels, stream washers, ladders, trailers, road cones, and pressure washers. Dark staining was observed on the asphalt near the storage area. The on-site structure was surrounded by paved asphalt parking areas and an alley located along the north parcel boundary. One power pole with a pole-mounted transformer was visible in the southeastern portion of APN 434-301-04. One additional pole-mounted transformer was observed in the southwestern portion of this APN.

One single-story building, which appeared to be vacant, is located within the western portion of the corner parcel (APN 424-301-08). The addresses associated with this parcel are 635 West 17th Street and 1695 Superior Avenue. One vehicle and one boat were parked on the asphalt paved parking area surrounding the structure. The remainder of APN 424-301-08 consisted of a fenced vacant lot, which appeared to be associated with a former gasoline station. Concrete fuel islands were visible, but all gasoline pumps and associated improvements appear to have been removed.

Dumpsters and trash cans associated with on-site commercial practices were observed. Signs of dumping or solid waste disposal on bare soil or asphalt during the site visit were not apparent.

Water utilities were noted along the northern boundary of APN 424-301-01. No staining or leaking was noted in association with on-site utilities during the site inspection.

Asbestos-Containing Materials. Asbestos is a strong, incombustible, and corrosion resistant material, which was used in many commercial products since prior to the 1940s and up until the early 1970s. If inhaled, asbestos fibers can result in serious health problems. Asbestos Containing Materials (ACMs) are building materials containing more than one percent asbestos (some state and regional regulators impose a one-tenth of one percent threshold). Due to historical documentation reviewed during the course of this Assessment, including historical aerial photographs and topographic maps, most of the structures within the modified project site were built during or prior to 1970. Due to the age of the structures, the potential for ACMs to be present is likely. The structures appeared to be in fair condition and no flaking or peeling was noted.

Lead-Based Paint. Until 1978, when the U.S. Consumer Product Safety Commission (CPSC) phased out the sale and distribution of residential paint containing lead, many homes were treated with paint containing some amount of lead. It is estimated that over 80 percent of all housing built during or prior to 1978 contains some Lead-Based Paints (LBP). The mere presence of lead in paint may not constitute a material to be considered hazardous. In fact, if in good condition (no flaking or peeling), most intact LBP is not considered to be a hazardous material. In poor condition LBPs can create a potential health hazard for building occupants, especially children. Due to historical documentation reviewed during the course of this Assessment, including historical aerial photographs and topographic maps, most structures within the modified project site were built prior to 1970. Due to the age of the structures, the potential for LBPs to be present is likely. The structures appeared to be in fair condition and no flaking or peeling was noted.



Polychlorinated Biphenyls (PCBs). One power pole with three pole-mounted transformers was noted within the southeastern portion of the westerly parcel (APN 424-301-04). During the site visit, one additional power pole and associated pole-mounted transformer was noted in the southwestern portion of the southernmost westerly parcel (APN 424-301-04). Pole-mounted transformers appeared to be in fair condition. No staining or leaking was noted in association with the pole-mounted transformers.

Preliminary Hazardous Materials Assessment Findings and Conclusions. Construction of the modified project would require demolition of existing buildings. Demolition of structures could expose construction personnel and the public to hazardous substances such as ACMs or LBPs. Given the age of the buildings and other structures (primarily constructed prior to 1978), it is likely that these structures could contain LBPs and/or ACMs. As a result, construction workers and the public could be exposed. Federal and state regulations govern the renovation and demolition of structures where ACMs and LBPs are present. All demolition that could result in the release of ACMs or LBPs must be conducted according to federal and state standards.

The modified project would be required to comply with Mitigation Measure HAZ-2, which requires removal and/or abatement of ACMs to be conducted by a qualified environmental professional in consultation with the Costa Mesa Fire Department. Additionally, Standard Condition SC 4.8-1 specifies requirements for worker safety while handling ACM. With implementation of the recommended Mitigation Measure HAZ-2 and compliance with Standard Condition SC 4.8-1, potential impacts involving ACM would be reduced to less than significant levels.

The modified project would be required to comply with Mitigation Measure HAZ-3, which requires paint that is separated from building materials (chemically or physically) during demolition/relocation of the structures to be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found, abatement would be required to be completed by a qualified Lead Specialist prior to any demolition/renovation activities. Additionally, Standard Condition SC 4.8-2 specifies requirements for worker safety while handling LBP. With implementation of recommended Mitigation Measure HAZ-3 and compliance with Standard Condition SC 4.8-2, potential impacts involving LBP would be reduced to less than significant levels.

In addition, although the Texaco Service Station received regulatory closure for a LUST in 2005, development at the modified project site could expose construction workers (during site disturbance activities) and the public (during operations) to hazardous materials should soil and/or groundwater be encountered. In accordance with Mitigation Measure HAZ-4, a Phase II/site characterization specialist would be required to review available documentation for the Texaco Service Station site and coordinate with the RWQCB to confirm that the regulatory closure in 2005 meets current residential use standards. If deemed necessary by the RWQCB, sampling would need to take place at the corner parcel to determine the level of remediation and/or mitigation measures that would be required. Additionally, installation of site mitigation engineering controls (Mitigation Measure HAZ-1) would reduce potential impacts associated with vapor intrusion to a less than significant level.

Excavation/grading activities and/or site disturbance of existing building materials may result in the offsite transport and disposal of hazardous substances. Offsite transport and disposal of hazardous substances would be short-term in nature, only occurring during demolition/renovation or grading/excavation activities,



and would be subject to Federal, State, and local health and safety regulations that protect public safety. With adherence to the requirements of affected regulatory agencies regarding the handling, transport, and disposal of hazardous materials, the modified project would not create a significant hazard to the public or the environment. As such, impacts related to the temporary offsite hauling and disposal of hazardous building materials during demolition would be less than significant.

Construction activities could also encounter unknown waste or suspect materials. If unknown wastes or suspect materials are discovered during construction by the contractor, which he/she believes may involve hazardous wastes/materials, the contractor would be required to complete Mitigation Measure HAZ-5, which would reduce potential impacts associated with unknown waste or suspect materials to a less than significant level.

Although, the modified project would include the development of live/work units, long-term operations of the modified project are not anticipated to result in a release of hazardous materials into the environment. During short-term construction, there is a possibility of accidental release of hazardous substances such as petroleum-based fuels or hydraulic fluid used for construction equipment. The level of risk associated with this potential accidental release would be minor. Standard construction practices would be observed such that any such materials released are appropriately contained and remediated as required by local, State, and Federal law.

Surrounding Commercial/Industrial Uses

The modified project site is located within a commercial/industrial area that includes businesses that use or generate hazardous materials. The existing commercial/industrial uses surrounding the modified project site could create a significant hazard to future residents/patrons of the proposed live/work development through upset and accident conditions involving the release of hazardous materials into the environment. The use of hazardous materials is controlled and permitted by the Costa Mesa Fire Department (CMFD), which conducts Uniform Fire Code inspections of these facilities, regulates these facilities, and otherwise ensures that risks associated with the use of hazardous materials in the community are minimized.

The CMFD has a dedicated hazardous materials response team. In the event of a hazardous materials upset, CMFD is responsible, as a first responder to arrive that the site within three to five minutes. CMFD as a joint powers authority also works with Orange County Fire Authority (OCFA), who provides additional emergency response resources. CMFD has indicated their ability to provide adequate response time to the modified project site and surrounding areas. As noted above, compliance with safety standards related to the handling, use, and storage of hazardous materials, and compliance with the safety procedures mandated by applicable federal, state, and local laws and regulations would be required. Additionally, Standard Condition SC 4.1-2 requires notification to buyers that the modified project is located within an area designated as Light Industry and subject to existing and potential issues associated with industrial land uses.

Overall, compliance with the established regulatory framework, Standard Conditions SC 4.1-2 and 4.8-1, and the specified Mitigation Measures would ensure that implementation of the modified project would create a less than significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.



Hazardous Emissions/Materials in Proximity to a School

There are no schools located within 0.25 mile of the modified project site. Due to the nature of the allowable uses, it is not anticipated that the future businesses would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste in reportable quantities. Impacts would be less than significant in this regard.

Airport/Airstrip Safety Hazards

Similar to the 29-unit Project, the modified project site is located within the AELUP Height Restriction Zone. The proposed structures would not exceed three stories. Therefore, implementation of the modified project would not result in an airport-related safety hazard for people residing or working at the proposed live/work development.

Similar to the 29-unit Project, the modified project site is not located within the vicinity of a private airstrip.

Emergency Response/Evaluation Plans

Access to the modified project site would occur from West 17th Street and Superior Avenue. A 20-foot internal driveway would extend west from Superior Avenue connecting to a 25-foot driveway that would extend south from 17th Street. The proposed Master Plan would be reviewed through the City's discretionary review process and by the Costa Mesa Fire Department, in order to verify adequate emergency vehicle access is provided. Therefore, implementation of the modified project would not physically interfere with site access by emergency personnel.

Wildland Fires

The modified project site is located within an urban area and not adjacent to wildlands. Therefore, implementation of the modified project would not expose people or structures to a significant risk involving wildland fires.

3.9 HYDROLOGY AND WATER QUALITY

Would the modified project:

- a. *Violate any water quality standards or waste discharge requirements?*
- b. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*
- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*



- d. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
- e. *Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*
- f. *Otherwise substantially degrade water quality?*
- g. *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*
- h. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*
- i. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*
- j. *Inundation by seiche, tsunami, or mudflow?*

The IS/MND concluded that the 29-unit Project would result in no impact or less than significant impacts, with implementation of standard conditions and mitigation measures, involving water quality, groundwater supplies, drainage patterns, runoff volumes, flood hazards, and inundation.

Water Quality

The modified project site includes five commercial/industrial structures, one small and one large vacant lot, and internal driveways on a 2.5-acre parcel. Approximately 91 percent of the site (101,044 square feet) is covered with impervious surfaces under existing conditions. The modified project involves replacement of the existing commercial/industrial uses with a 49-unit live/work development. Under the proposed conditions, approximately 40 percent of the modified site (43,717 square feet) would be covered with impervious surfaces (building coverage).⁵ The modified project proposes permeable pavers on the driveways/open parking areas. Therefore, the pervious surfaces (the common open space/landscaping and driveways/open parking areas) would cover approximately 60 percent (66,145 square feet). Under proposed conditions, the modified site's impervious areas would decrease by approximately 52 percent (57,327 square feet), as compared to existing conditions. Project implementation would decrease the site's impervious surfaces, since more of the site would be covered with pervious surfaces. The decrease in impervious surfaces would be considered a water quality benefit. Notwithstanding, for analysis purposes, it is assumed that proposed conditions on the modified project site would be generally similar to existing conditions with respect to impervious surfaces. Implementation of the modified project would remove the onsite commercial/industrial uses and replace them with a live/work development. Thus, the water quality issues of concern would involve storm water and nuisance water runoff associated with the proposed live/work development.

The modified project's demolition and construction activities would be subject to compliance with NPDES requirements, which include obtaining coverage under the General Construction Permit by filing the Permit Registration Documents (i.e., a NOI and SWPPP, among others), as well as the pertinent provisions of the

⁵ Impervious surface area calculations are based on proposed 43,717 square feet of building coverage and 31,173 square feet of driveways/open parking (Withee Malcolm Architects, *Project Summary and Vicinity Map, 17th Street and Superior Live/Work*, August 22, 2013).



CMMC. Compliance with the NPDES and CMMC requirements would reduce the modified project's construction-related impacts to water quality to below a level of significance.

The modified project would create approximately 43,717 square feet of impervious surface, thus, would meet the criteria of a Priority Project. As such, in order to mitigate storm water pollution from the proposed development, the modified project must prepare a WQMP that specifies the proposed BMPs. The modified project would be subject to compliance with the Orange County DAMP, which includes preparation of a WQMP that specifies the proposed BMPs. Compliance with NPDES, DAMP, CMMC, and Standard Condition 4.9-1 requirements would reduce the Project's long-term impacts to water quality to below a level of significance.

Groundwater Supplies

As concluded in Response 3.17.d, the modified project would result in a less than significant increase in water demand (approximately 22,057 gallons per day). Mesa Water has concluded they are capable of meeting the water demands of their customers in normal, single dry, and multiple dry years between 2015 and 2035.⁶ Therefore, implementation of the modified project would not substantially deplete groundwater supplies.

Compliance with Mitigation Measure HYD-1, which requires preparation of a detailed Hydrology Study demonstrating that the modified project would not substantially alter the existing drainage pattern of the site or area, or create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems, would be required.

Drainage Patterns, Runoff Volumes, Flood Hazards, and Inundation

As with the 29-unit Project, the modified project would result in no impact or less than significant impacts, with implementation of standard conditions and mitigation measures, involving substantial alterations to drainage patterns, increased runoff volumes, flooding, and inundation.

3.10 LAND USE AND PLANNING

Would the modified project:

- a. Physically divide an established community?*
- b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*
- c. Conflict with any applicable habitat conservation plan or natural community conservation plan?*

Physically Divide an Established Community

The Initial Study concluded the proposed Project would not divide an established community.

⁶ Ibid.



The modified project site is surrounded by commercial, industrial, and light industrial uses. The site is occupied by 20,749 square feet of commercial and industrial uses. The modified project involves construction of a 49-unit, attached live/work development in place of the existing commercial and industrial uses. Thus, modified project implementation would not divide an established community. Additionally, the modified project would further the 19 West Urban Plan's objectives.

City of Costa Mesa 2000 General Plan Consistency

The Initial Study concluded the proposed Project would comply with the Costa Mesa General Plan Policies.

According to the City of Costa Mesa General Plan Land Use Map (July 2004), the modified project site is designated Light Industry and Neighborhood Commercial (approximately 1.6 acres and 1.0, respectively).⁷ The General Plan identifies the Mixed-Use Overlay Zoning District as a compatible zoning district in these land use designations. Therefore, the General Plan allows mixed-use development and residential development within a Mixed-Use Overlay Zone. Redevelopment of the subject property relates to the conversion of marginal nonresidential properties into a mixed-use residential development, and is therefore consistent with the General Plan in this regard.

The modified project is further analyzed for consistency with the Costa Mesa General Plan, as follows:

- Mix of Uses/Four Story Maximum. The modified project involves construction of a 49-unit, three-story, attached live/work development, in compliance with the intended use and building height for the property.
- Product Types. The modified project includes live/work units with residential uses located above the nonresidential component, in compliance with the intended product types for the property.
- Types of Nonresidential Uses. The future businesses that would occupy the proposed live/work units would be subject to compliance with the listing of land uses that are permitted and conditionally permitted within the overlay zone's mixed-use developments.

As with the proposed Project, the modified project would be consistent with the relevant goals and objectives of the General Plan Land Use Element.

Based on the analysis presented above, the modified project would not conflict with the *General Plan* and a less than significant impact would occur in this regard.

⁷ City of Costa Mesa Website, City of Costa Mesa General Plan Map, <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=369>, Accessed August 23, 2013.



City of Costa Mesa Municipal Code Consistency

Title 13, Planning, Zoning, and Development

According to the Official Zoning Map, the modified project site is zoned MG General Industrial District and C1 Local Business.⁸ Additionally, with adoption of the 19 West Urban Plan, the 19 West Village Mixed-Use Overlay District was applied to the property; refer to *19 West Urban Plan* Section below.

According to the Westside Urban Plan Areas Map,⁹ the modified project site is specifically located within the 19 West Urban Plan. The 19 West Village Mixed-Use Overlay District was applied to the property at the time of the 19 West Urban Plan adoption. The modified project entitlements include the 17th Street & Superior Avenue Master Plan, among others; refer to Section 2.2, *Proposed Modified Project*. Adoption of the proposed Master Plan would activate the provisions of the Mixed-Use Overlay District, as specified in the 19 West Urban Plan. Therefore, the modified project is analyzed below for consistency with the 19 West Urban Plan.

19 West Urban Plan/Mesa West Bluffs Urban Plan

The development standards that apply for live/work developments are primarily specified in the Mesa West Bluffs Urban Plan. However, the modified project is subject to compliance with the Mesa West Bluffs Urban Plan development standards and regulations, as well as Resolution 06-34.

Development Standards

The modified project is analyzed for consistency with the specified development standards in Table 3.10-1, *Consistency with Live/Work Development Standards*. As indicated in Table 3.10-1, the modified development plan complies with the Mesa West Bluffs Urban Plan's mixed-use development standards, with one exception: required garage dimensions; refer to the *Deviations From Development Standards* Section below.

⁸ City of Costa Mesa Website, City of Costa Mesa Zoning Map, <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=367>, Accessed August 23, 2013.

⁹ City of Costa Mesa Website, Westside Urban Plan Areas Map, <http://www.costamesaca.gov/index.aspx?page=110>, Accessed September 10, 2013.



**Table 3.10-1
Consistency with Live/Work Development Standards**

Mesa West Bluffs Urban Plan Live/Work Standards ¹	modified project	Complies
Overall Building Height: Maximum 4 Stories / 60 feet	3 stories and roof deck / 44 feet	Yes
Distance Between Buildings: Minimum 10 feet	10 feet	Yes
Lot Size: None	3.1 gross acres/2.5 net acres	Yes
Size of Work Space: Minimum 250 square feet	Unit A = 261 square feet Unit B = 254 square feet	Yes
Floor Area Ratio: Maximum 1.0 FAR	0.87	Yes
Development Lot Coverage: Maximum 90%	68% (43,717 square feet buildings + 31,173 square feet driveways/open parking)	Yes
Open Space of Development Lot: Minimum 10%	32% (34,972 square feet)	Yes
Front Build-to-Line and Setbacks <ul style="list-style-type: none"> • Front Build-to-Line Abutting a Public Street: Min. 10 feet • Side Setback, Interior: 0 feet • Side Setback, Abutting a Public Street: Min. 10 feet • Rear Setback, All Other Property Lines: 0 feet 	10 feet (Superior Avenue) 13 feet 6 inches (south setback) 20 feet (17 th Street) 20 feet (west setback)	Yes
Parking <ul style="list-style-type: none"> • Garage Dimensions, Interior (per CMMC Section 13-85): 10 x 20 feet each space • Unit to 2,000 square feet <ul style="list-style-type: none"> -Tenant: Minimum 1.5 space per unit -Guest: Minimum 1.5 space per unit -Total: Minimum 3 spaces per unit, 147 spaces 	19 feet x 19 feet Tenant, Garage = 98 spaces Guest, Open = 49 spaces Total = 147 spaces	No ² Yes
Notes: 1. Mesa West Bluffs Urban Plan Tables A1 and A2. 2. Approval of a Deviation is required.		

Industrial Property Buffer Zones

The modified project site's westerly property line is common with the JC Carter easterly property line, thus, the western portion of the modified development is located within the JC Carter 50-foot buffer zone. Therefore, the Applicant is requesting approval of a deviation from the JC Carter buffer zone requirement to allow residential units within the 50-foot buffer zone; refer to the following Section for further discussion.

Deviations From Development Standards

CMMC Section 13-85, Required Garage Dimensions. The Applicant is requesting approval of a deviation from the garage dimensions standard to allow a smaller interior dimension. This deviation is considered a less than significant impact, since the decrease in garage dimension is nominal (one foot) and additional space is provided in all garages for water heaters and trash and recycling cart storage. Additionally, granting of this deviation would not be detrimental to the public or materially injurious to nearby properties or improvements.



City Council Resolution 06-34, Industrial Property Buffer Zones. The western portion of the modified development is located within the JC Carter 50-foot buffer zone. Specifically, 11 units would be located within the buffer zone: two units at the southwest corner (setback a minimum of 20 feet from property line); and nine units along the western boundary (setback 44 feet 4 inches). Therefore, the Applicant is requesting approval of a deviation from the JC Carter buffer zone requirement to allow residential units within the 50-foot buffer zone. As with the proposed Project, this deviation for the modified project is considered a less than significant impact. Refer to the following sections, which verify the modified project would not be exposed to significant impacts with mitigation incorporated involving light/glare, offensive odors/excessive dust/potentially significant pollutant concentrations, hazardous materials, excessive interior/exterior noise levels/vibration, respectively: Section 3.1, Aesthetics; Section 3.3, Air Quality; Section 3.8, Hazards and Hazardous Materials; and Section 3.12, Noise. Additionally, as with the proposed Project, granting this deviation for the modified project would not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity. With approval of the requested deviations and implementation of Standard Condition 4.1-2, the modified project meets the purpose and intent of the Mixed-Use Overlay District, and complies with the 19 West Urban Plan/Mesa West Bluffs Urban Plan, and thus with CMMC Title 13. A less than significant impact would occur in this regard.

Compatibility With Surrounding Land Uses

As with the proposed Project, the modified project would be compatible with the surrounding land uses.

3.11 MINERAL RESOURCES

Would the modified project:

- a. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
- b. *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

The IS/MND concluded that the 29-unit Project would result in no impacts related to mineral resources, as none are present on the Project site or in its vicinity. Consistent with previous conclusions, the modified project would not impact mineral resources.

3.12 NOISE

Would the modified project result in:

- a. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
- b. *Exposure of persons or generation of excessive groundborne vibration or groundborne noise levels?*
- c. *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*



- d. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*
- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*
- f. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

The IS/MND concluded that the 29-unit Project would result in less than significant or no impacts regarding groundborne vibrations, and public and private airports or airstrips. Impacts from the Project resulting in noise levels in excess of a local general plan or noise policy, a substantial permanent increase in ambient noise levels, and a substantial temporary or periodic increase in ambient noise levels in the Project vicinity would be mitigated to less than significant.

Short-Term Construction Impacts

Construction activities associated with the modified project would be similar to those of the 29-unit Project, and would include demolition of the existing on-site structures, pavement, driveways, removal of interior fencing, and either removal or relocation of existing power poles. Construction activities would also include site preparation, grading, building construction, paving, and architectural coating. As such, the same construction equipment used for the 29-unit Project would be used for the modified project, and would generate similar noise levels. The modified project includes the development of 49 live/work units on the modified project site. Due to the close proximity of traffic noise on West 17th Street and Superior Avenue, and the short-term nature of construction activities, the modified project would not generate short-term construction noise levels atypical of the existing noise environment. In addition, the modified project would be required to comply with the City's Noise Ordinance (construction activities can only occur between 7:00 a.m. and 7:00 p.m. on weekdays, and between 9:00 a.m. and 6:00 p.m. on Saturdays, and are prohibited on Sundays and federal holidays), pursuant to Standard Condition 4.12-1. Compliance with the Noise Ordinance regarding the specified hours of construction, and Standard Condition 4.12-1 would ensure that impacts in this regard would be less than significant.

Long-Term Operational Impacts

Off-Site Mobile Noise

Based on the *17th/Superior Live/Work Project Traffic Impact Analysis*, the modified project would result in a net increase of 29 daily trips to and from the modified project site. Traffic generally must double in volume to result in a 3 dB increase. Therefore, due the nominal increase in daily trips, the modified project would not result in a 3 dB increase at off-site uses as a result of traffic noise. Off-site noise impacts associated with mobile noise sources would be less than significant.

On-Site Mobile Noise

The modified project would result in 49 live/work units at the site. The future residents of the proposed on-site live/work units could be exposed to elevated noise levels from traffic noise along West 17th Street and



Superior Avenue. As noted above, implementation of the modified project would result in nominal traffic on adjacent roadways, as compared to the existing conditions. The Future (Year 2015 With Modified Project) traffic volumes along West 17th Street and Superior Avenue are 10,821 average daily trips and 21,430 average daily trips, respectively. The Federal Highway Administration (FHWA) TNM 2.5 model was used to evaluate the noise impacts from traffic along West 17th Street and Superior Avenue to the future on-site uses; refer to the TNM 2.5 outputs in Appendix B, Modeling Data, of Appendix D, Noise Data. Noise levels from typical daily traffic along West 17th Street and Superior Avenue were modeled at the receptors on the modified project site that would be located along a roadway, or that would have a direct line of sight to a roadway. The modeled receptors included the first floor work component, the second and third story residential uses, and the rooftop deck areas.

As noted in *Table 4.12-2* of the 29-unit IS/MND, the City does not consider exterior balconies or deck areas of mixed uses or live/work units to be exterior areas subject to the noise standards. However, interior standards remain applicable to the commercial and residential floors of the proposed live/work units. The exterior noise levels were modeled using the Federal Highway Administration's Traffic Noise Model (TNM) 2.5 model to obtain the interior noise levels using a standard exterior to interior attenuation rate of 20 dB from standard construction materials and windows. The anticipated exterior noise levels at the receptor locations on the ground floors (work component) would range between 58.3 and 67.5 dBA, resulting in interior noise levels ranging between 38.3 and 47.5 dBA, which would be below the City's 50 dBA CNEL standard for commercial office uses (i.e., the work area of the live/work units). The anticipated exterior noise levels at the receptor locations on the second and third floors (residential component) would range between 60.3 and 67.5 dBA CNEL, thus, resulting in interior noise levels ranging between 40.3 and 47.5 dBA, which could exceed the City's residential interior standard of 45 dBA. Recommended Mitigation Measure NOI-1 requires that the residential use areas exposed to West 17th Street and Superior Avenue include windows with a minimum Sound Transmission Class (STC) of 33, in order to ensure interior noise levels are below the City's 45 dBA CNEL interior standard. The anticipated exterior noise levels between 60.3 and 67.5 dBA on the second and third floors are representative of the expected noise levels at the balconies and roof decks of the units facing the adjacent roadways. However, as previously noted, the City has exempted exterior balconies or deck areas of mixed uses or live/work units to be exterior areas from being subject to noise standards, and no mitigation for these areas would be required. With implementation of the recommended mitigation, on-site noise impacts to the proposed live/work uses from mobile noise sources would be less than significant.

Operational Stationary Source Noise

Stationary noise sources would include noise associated with mechanical equipment and parking areas, as well as noise from adjacent uses. Noise impacts from these sources would be intermittent and occur primarily during daytime hours.

Mechanical Equipment and Parking Areas. Impacts from the modified project's mechanical equipment and parking areas would be less than significant.

Adjacent Uses. Because of the existing traffic noise levels, existing adjacent commercial uses would not cause an exceedance of the City's interior noise standards for on-site residential or commercial uses. Impacts would be less than significant in this regard. Additionally, Standard Condition SC 4.1-2 requires



notification to buyers that the Project is located within an area designated as Light Industry and subject to existing and potential annoyances/inconveniences (such as noise) associated with industrial land uses.

Future stationary noise impacts may increase or decrease accordingly. As noted above, the Project would be subject to compliance with Mitigation Measure NOI-1 and Standard Condition 4.1-2, which require upgraded windows and prior notification to buyers regarding existing and potential annoyances/inconveniences (such as noise) associated with industrial land uses. Compliance with Mitigation Measure NOI-1 and Standard Condition SC 4.1-2 would ensure that noise impacts from future industrial uses have been addressed. Impacts would be less than significant in this regard.

3.13 POPULATION AND HOUSING

Would the modified project:

- a. *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*
- b. *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*
- c. *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

The IS/MND concluded that the 29-unit Project would result in less than significant impacts to population and housing.

The modified project involves construction of a 49-unit, attached live/work development in place of the existing commercial/industrial uses. The development would include approximately 12,628 square feet of work space, or between 254 and 261 square feet per unit. The modified project proposes new homes, thus, would induce direct population growth within the City. Based on an average household size of 2.72, implementation of the modified project could result in a population increase of approximately 133 persons. The potential population growth would be nominal, representing less than one-quarter of one percent increase over the City's existing 2013 population of 111,358 persons. Therefore, implementation of the modified project would not induce substantial population growth within the City.

3.14 PUBLIC SERVICES

Would the modified project:

- a. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*
 - 1) *Fire protection?*



- 2) *Police protection?*
- 3) *Schools?*
- 4) *Parks?*
- 5) *Other public facilities?*

The IS/MND concluded that the 29-unit Project would increase the demand for public services beyond existing conditions. Compliance with the City's discretionary review process, CMMC requirements, and specified Standard Conditions would reduce the modified project's impacts to public services to below a level of significance.

The modified project would also increase the demand for public services beyond existing conditions. Consistent with previous conclusions, compliance with the City's discretionary review process, CMMC requirements, and specified Standard Conditions would reduce the modified project's impacts to public services to below a level of significance.

Implementation of the modified project would result in an increase of 49 dwelling units, with a resultant increase in the demand for school facilities. Based on a student generation factor of 0.26 students per dwelling unit,¹⁰ implementation of the modified project could generate a total of approximately 13 students. As the modified project is anticipated to generate a nominal increase in the student population, it is anticipated that the NMUSD schools would have the capacity to accommodate these students and construction of new or physically altered school facilities would not be required. Additionally, based on a parkland demand factor of 5.76 acres per 1,000 residents and a potential population growth of 133 persons, implementation of the modified project would generate a demand for approximately 0.77 acres of parkland. Compliance with the specified Standard Conditions, which require payment of the school and parkland impact fees, would fully mitigate any potential impact to school and recreational facilities. Therefore, implementation of the modified project would result in a less than significant impact in this regard.

3.15 RECREATION

Would the modified project:

- a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*
- b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

Refer to Section 3.14, Public Services.

¹⁰ RBF Consulting, *City of Costa Mesa General Plan EIR*, January 22, 2002, Page 4.11-9.



3.16 TRANSPORTATION/TRAFFIC

Would the modified project:

- a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- e. Result in inadequate emergency access?
- f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

This section is based on the 17th/Superior Live/Work Project Traffic Impact Analysis (RBF Consulting, September 3, 2013); refer to Appendix D, Traffic Impact Analysis. This study analyzes forecast traffic conditions associated with the modified project, which is detailed in Section 2.0, Modified Project Description. The Analysis considers impacts on study area intersections resulting from the modified project. Mitigation measures are recommended, if necessary, to avoid or lessen impacts.

The following scenarios are evaluated in this analysis:

- Forecast Existing With Modified Project Conditions;
- Forecast Opening Year (2014) Without Modified Project Conditions; and
- Forecast Opening Year (2014) With Modified Project Conditions.

The following discussions and analyses are as identified for the proposed Project; refer to Section 4.16 above:

- Existing Circulation System;
- Methodology;
- Performance Criteria;
- Thresholds of Significance; and
- Existing Conditions Scenario.



The IS/MND concluded the proposed Project is forecast to result in no significant traffic impact at the City or State-controlled study intersections for the evaluated scenarios, based on the thresholds of significance; refer to Section 4.16.

49-Unit Modified Project

This study analyzes forecast traffic conditions associated with the modified project. The modified project site is currently occupied by approximately 20,749 square feet of commercial/warehouse land uses that would be displaced by the proposed 49 live/work units, which include a total of 12,628 square feet of work space. Full access for the modified project site would continue to be provided at 17th Street and Superior Avenue. Exhibit 2-3 shows the site plan for the 49 live/work unit development. The modified project is planned to open in 2015.

Modified Project Trip Generation

Table 3.16-1, Trip Generation of Existing Land Uses, shows the trip generation of the existing land uses that would be displaced by the modified project, based on observed data. As shown in Table 3.16-1, the existing trip generation that would be displaced by the 49 live/work units is approximately 549 daily trips, which includes approximately 20 a.m. peak hour trips and approximately 30 p.m. peak hour trips.

**Table 3.16-1
Trip Generation of Existing Land Uses – Modified Site**

Land Use	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
	In	Out	Total	In	Total	Out	
Commercial/Warehouse	7	13	20	17	13	30	549

Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.

To calculate trips forecast to be generated by the modified project, ITE trip generation rates were utilized. Table 3.16-2, ITE Trip Generation Rates for Modified Project, summarizes the ITE trip generation rates used to calculate the number of trips forecast to be generated by the modified project.

**Table 3.16-2
ITE Trip Generation Rates for Modified Project**

Land Use (ITE Code)	Units	AM Peak Hour			PM Peak Hour			Daily Trip Rates
		In	Out	Total	In	Out	Total	
Residential Condominium (230)	du	0.07	0.37	0.44	0.35	0.17	0.52	5.81
General Office Building (710)	tsf	1.37	0.19	1.56	0.25	1.24	1.49	11.03
Specialty Retail Center (826)	tsf	0.00	0.00	0.00	1.19	1.52	2.71	44.32

Notes: du = dwelling units; tsf = thousand square feet
Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.



Table 3.16-3, *Forecast Modified Project Trip Generation*, summarizes the forecast trip generation of the modified project when utilizing the ITE trip generation rates shown in [Table 3.16-2](#) and accounting for the displaced land uses on the modified project site.

**Table 3.16-3
Forecast Modified Project Trip Generation**

Project Component	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
	In	Out	Total	In	Out	Total	
Proposed Project							
49-du Condominium	3	18	21	17	8	25	285
6.456-tsf Office	9	1	10	2	8	10	71
6.456-tsf Specialty Retail	0	0	0	8	10	18	286
Trip Generation Subtotal	12	19	31	27	26	53	642
<i>10% Mixed Use Trip Reduction</i>	-1	-2	-3	-3	-3	-6	-64
Total Trip Generation of Proposed Project	11	17	28	24	23	47	578
Displaced Land Use							
Commercial Land Uses ¹	-7	-13	-20	-17	-13	-30	-549
Total Forecast Net Trip Generation of Project	4	4	8	7	10	17	29
Notes: du = dwelling unit; tsf = thousand square feet.							
1 – Existing trip generation determined from measured traffic counts on August 6, 2013.							
Source: RBF Consulting, <i>17th/Superior Live/Work Project Traffic Impact Analysis</i> , September 3, 2013.							

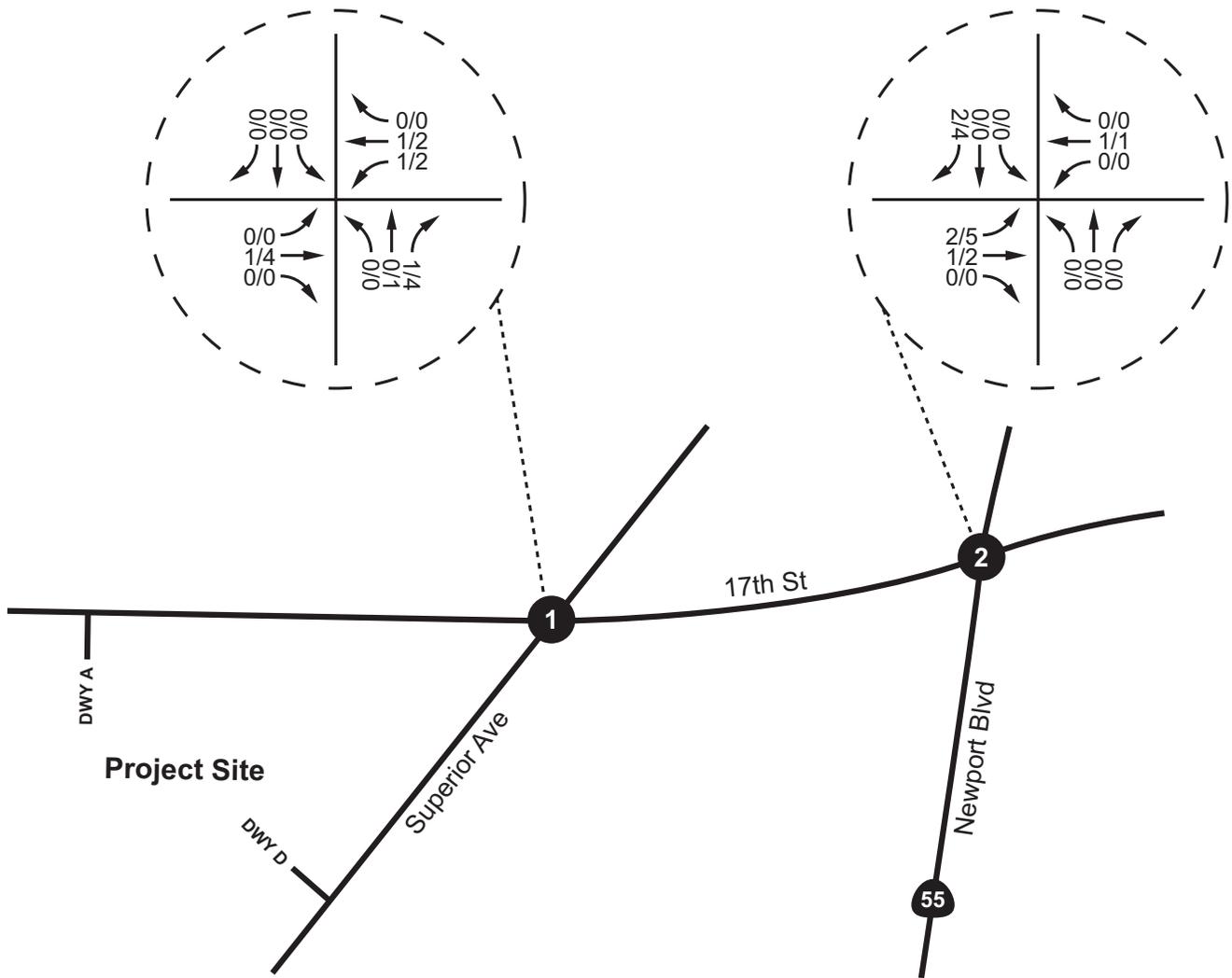
As shown in [Table 3.16-3](#), when accounting for the displaced land uses, the modified project is forecast to generate a total of approximately 29 net new daily trips, which includes approximately 8 net new a.m. peak hour trips and approximately 17 net new p.m. peak hour trips.

Forecast Modified Project Trip Distribution and Assignment

[Exhibit 3.16-1, Forecast Percent Trip Distribution of Modified Project](#), shows the forecast trip percent distribution of the modified project. [Exhibit 3.16-2, Forecast AM/PM Peak Hour Trip Assignment of Modified Project](#), shows the corresponding assignment of modified project-generated net peak hour trips, assuming the trip percent distributions shown in [Exhibit 3.16-1](#).

Forecast Existing With Modified Project Conditions

Forecast existing with modified project conditions a.m. and p.m. peak hour volumes were derived by adding forecast modified project-generated trips to existing conditions traffic volumes.



Legend:



Study Intersection

DWY

Driveway

XX/XX

AM/PM Peak Hour Volume

NOT TO SCALE

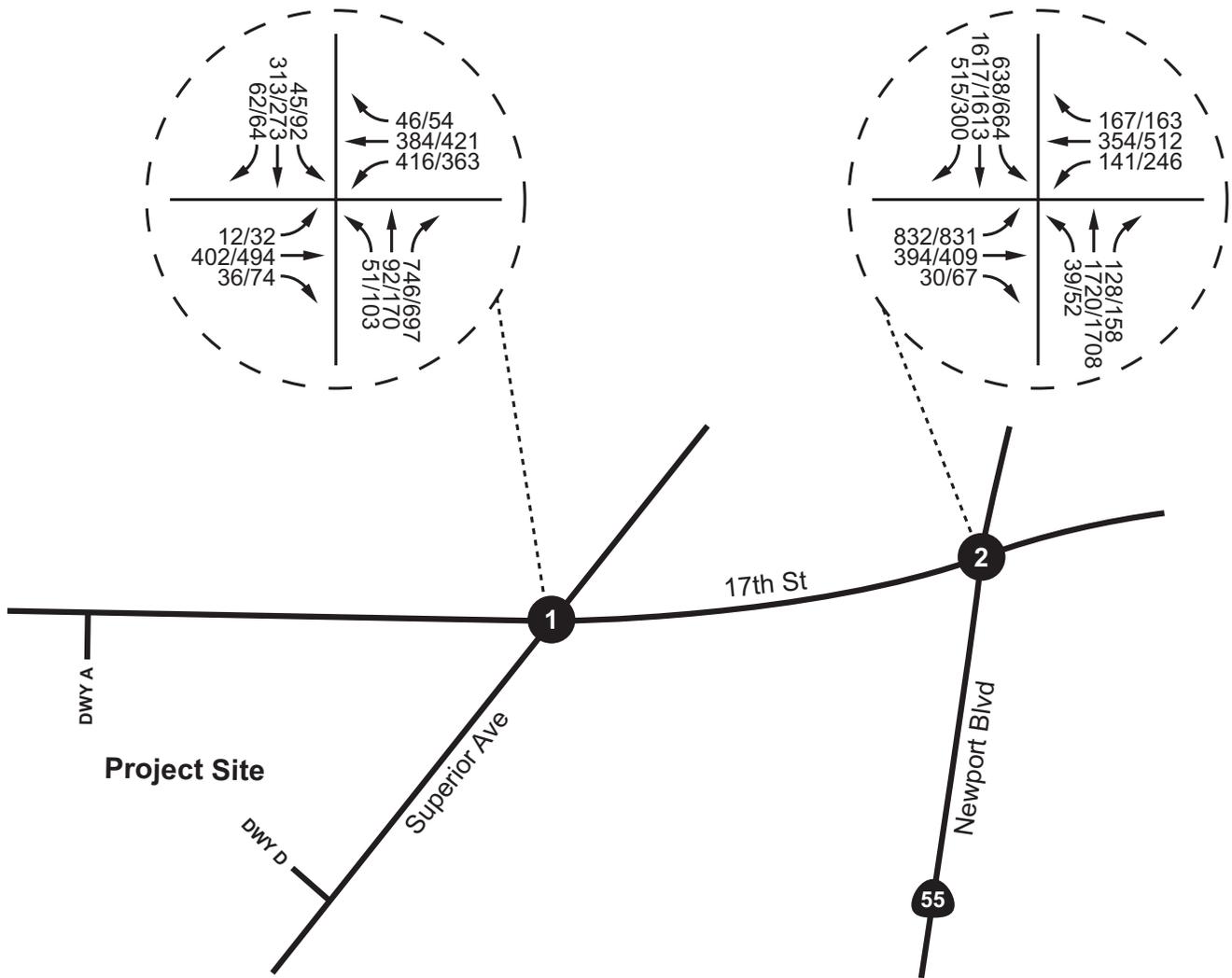


10/13 • JN 136991

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Forecast Modified Project AM/PM Peak Hour Trip Assignment

Exhibit 3.16-1



Legend:

X Study Intersection

DWY Driveway

XX/XX AM/PM Peak Hour Volume

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Forecast Existing Plus Modified Project Conditions AM/PM Peak Hour Study Intersection Volumes

NOT TO SCALE



10/13 • JN 136991

Exhibit 3.16-2



Forecast Existing With Modified Project Traffic Volumes

Exhibit 3.16-3, Forecast Existing With Modified Project AM & PM Peak Hour Study Intersection Volumes, shows forecast existing with modified project conditions a.m. and p.m. peak hour volumes at the study intersections.

Forecast Existing With Modified Project Conditions City Study Intersection Peak Hour LOS

Table 3.16-4, Forecast Existing With Modified Project Conditions AM/PM Peak Hour City Study Intersection LOS, summarizes forecast existing with modified project conditions a.m. peak hour and p.m. peak hour LOS of the City study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

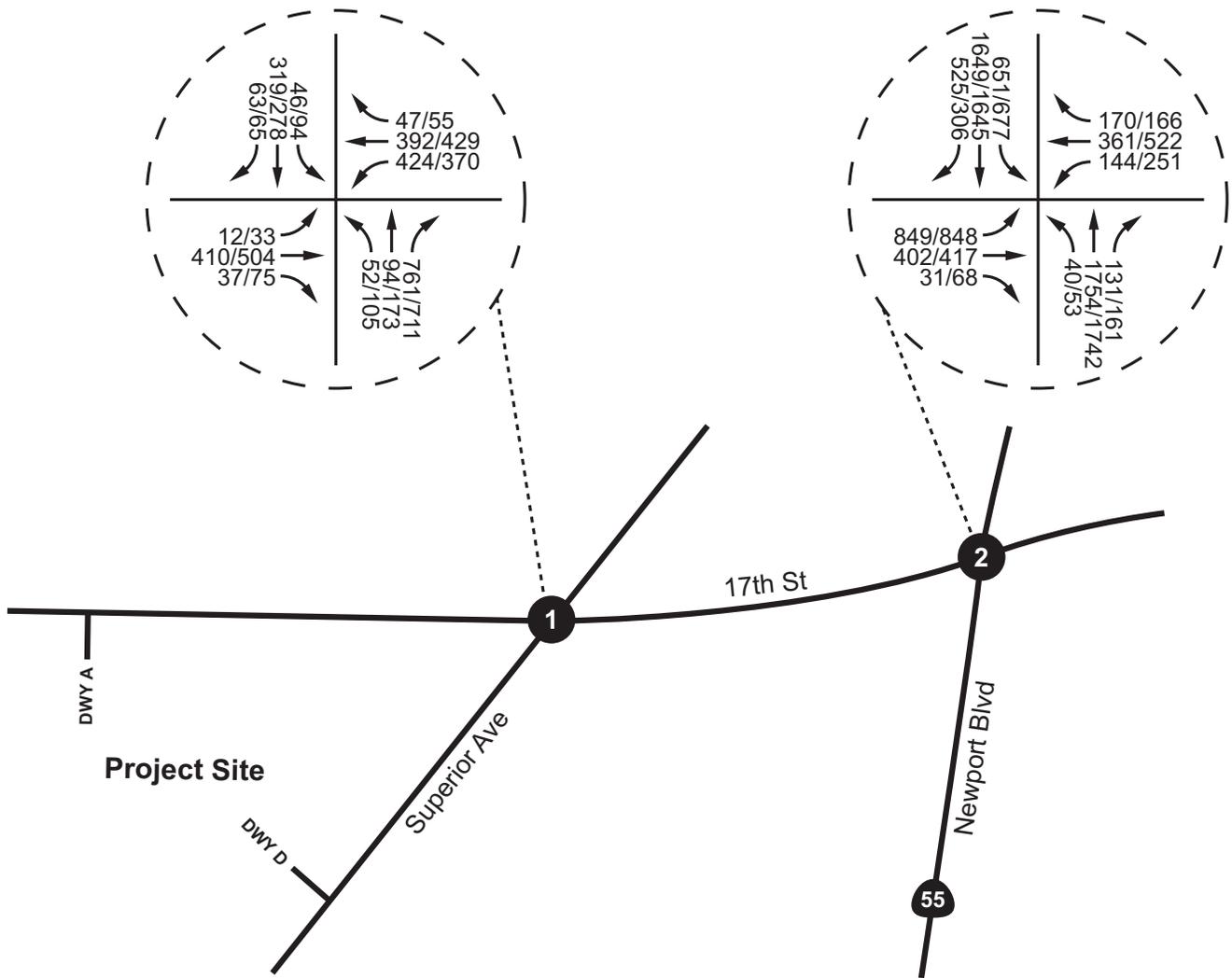
**Table 3.16-4
Forecast Existing With Modified Project Conditions
AM/PM Peak Hour City Study Intersection LOS**

Study Intersection	Existing Conditions		Forecast Existing With Modified Project Conditions		Change in V/C		Significant Impact
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS			
Superior Avenue/17th Street	0.74 – C	0.78 – C	0.74 – C	0.78 – C	0.00	0.00	No
Note: V/C = volume to capacity ratio.							
Source: RBF Consulting, 17 th /Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.							

As shown in Table 3.16-4, based on the thresholds of significance, the addition of modified project-generated trips is forecast to result in no significant traffic impact at the City study intersection for forecast existing with modified project conditions.

Forecast Existing With Modified Project Conditions State-Controlled Study Intersection Peak Hour LOS

Table 3.16-5, Forecast Existing With Modified Project Conditions AM/PM Peak Hour State-Controlled Study Intersection LOS, summarizes forecast existing with modified project conditions a.m. peak hour and p.m. peak hour LOS of the State-controlled study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D. As shown in Table 3.16-5, based on the thresholds of significance, the modified project is forecast to result in no significant traffic impact at the State-controlled study intersection for forecast existing with modified project conditions.



Legend:

X Study Intersection

DWY Driveway

XX/XX AM/PM Peak Hour Volume

NOT TO SCALE



10/13 • JN 136991

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Forecast Existing With Modified Project AM/PM Peak Hour Study Intersection Volumes



**Table 3.16-5
Forecast Existing With Modified Project Conditions
AM/PM Peak Hour State-Controlled Study Intersection LOS**

State-Controlled Study Intersection	Existing Conditions		Forecast Existing With Modified Project Conditions		Increase in Delay		Significant Impact
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS			
Newport Blvd (SR-55)/17th St	31.8 – C	34.0 – C	31.8 – C	34.1 – C	0.0	0.1	No
Note: Delay shown in seconds.							
Source: RBF Consulting, 17 th /Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.							

Forecast Year 2015 Without Modified Project Conditions

To determine the modified project’s potential cumulative traffic impacts at the 2015 opening year, forecast year 2015 without modified project conditions are examined prior to forecast year 2015 with modified project conditions.

Forecast Year 2015 Without Modified Project Conditions Peak Hour Traffic Volumes

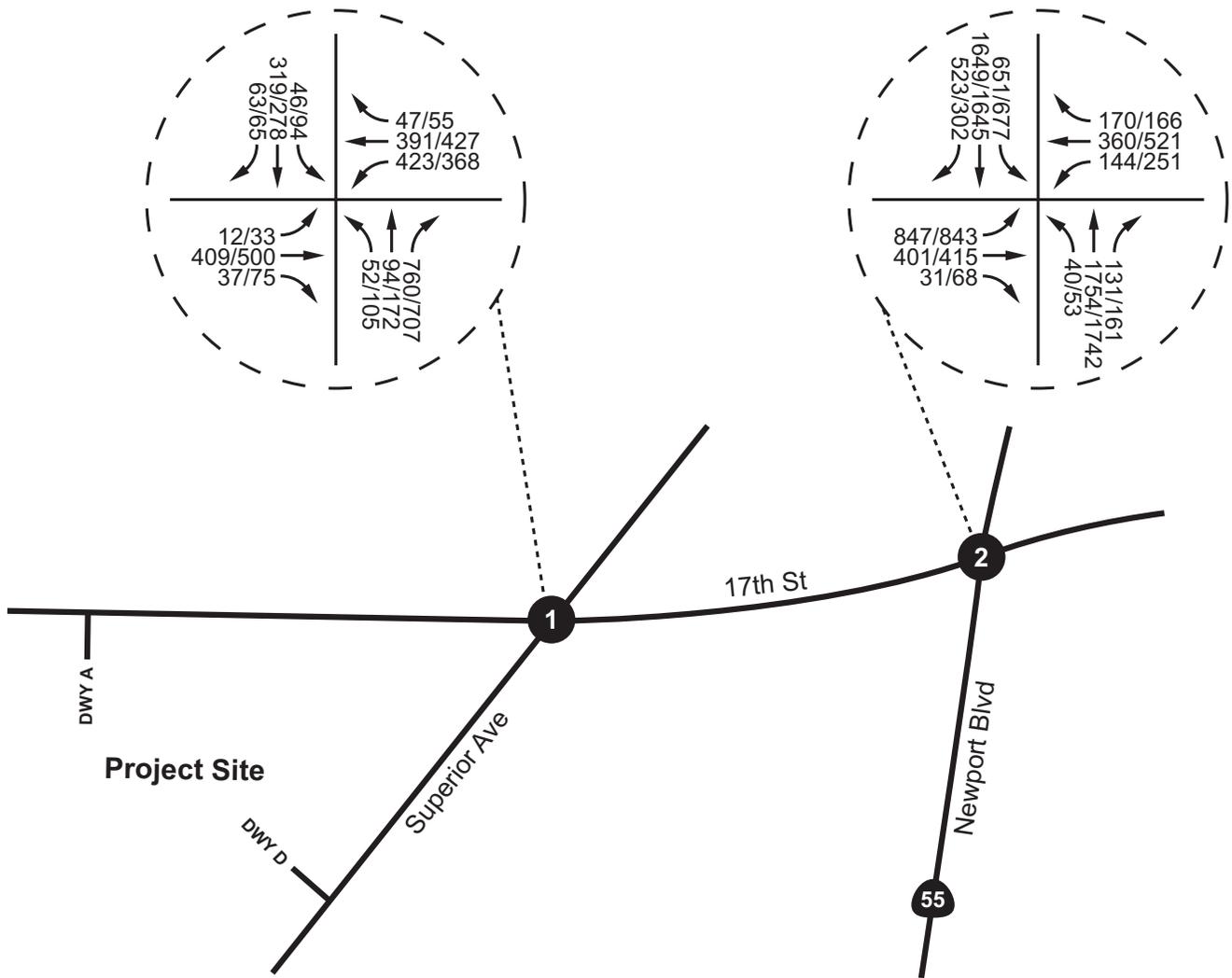
Exhibit 3.16-4, *Forecast Year 2015 Without Modified Project AM & PM Peak Hour Study Intersection Volumes*, shows forecast year 2015 without modified project conditions a.m. and p.m. peak hour volumes at the study intersections.

Forecast Year 2015 Without Modified Project Conditions City Study Intersection Peak Hour LOS

Table 3.16-6, *Forecast Year 2015 Without Modified Project Conditions AM/PM Peak Hour City Study Intersection LOS*, summarizes forecast year 2015 without modified project conditions a.m. peak hour and p.m. peak hour LOS of the City study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

**Table 3.16-6
Forecast Year 2015 Without Modified Project Conditions
AM/PM Peak Hour City Study Intersection LOS**

Study Intersection	V/C – LOS	
	AM Peak Hour	PM Peak Hour
Superior Avenue / 17 th Street	0.75 – C	0.79 – C
Note: V/C = volume to capacity ratio.		
Source: RBF Consulting, 17 th /Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.		



Legend:

-  Study Intersection
- DWY** Driveway
- XX/XX AM/PM Peak Hour Volume

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Forecast Year 2015 Without Modified Project AM/PM Peak Hour Study Intersection Volumes

NOT TO SCALE



10/13 • JN 136991



Table 3.16-7, Forecast Year 2015 Without Modified Project Conditions AM /PM Peak Hour State-Controlled Study Intersection LOS, summarizes forecast year 2015 without modified project conditions a.m. peak hour and p.m. peak hour LOS of the State-controlled study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

**Table 3.16-7
Forecast Year 2015 Without Modified Project Conditions
AM/PM Peak Hour State-Controlled Study Intersection LOS**

State-Controlled Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
Newport Boulevard (SR-55) / 17 th Street	32.3 – C	34.7 – C
Note: Delay shown in seconds.		
Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.		

Forecast Year 2015 With Modified Project Conditions

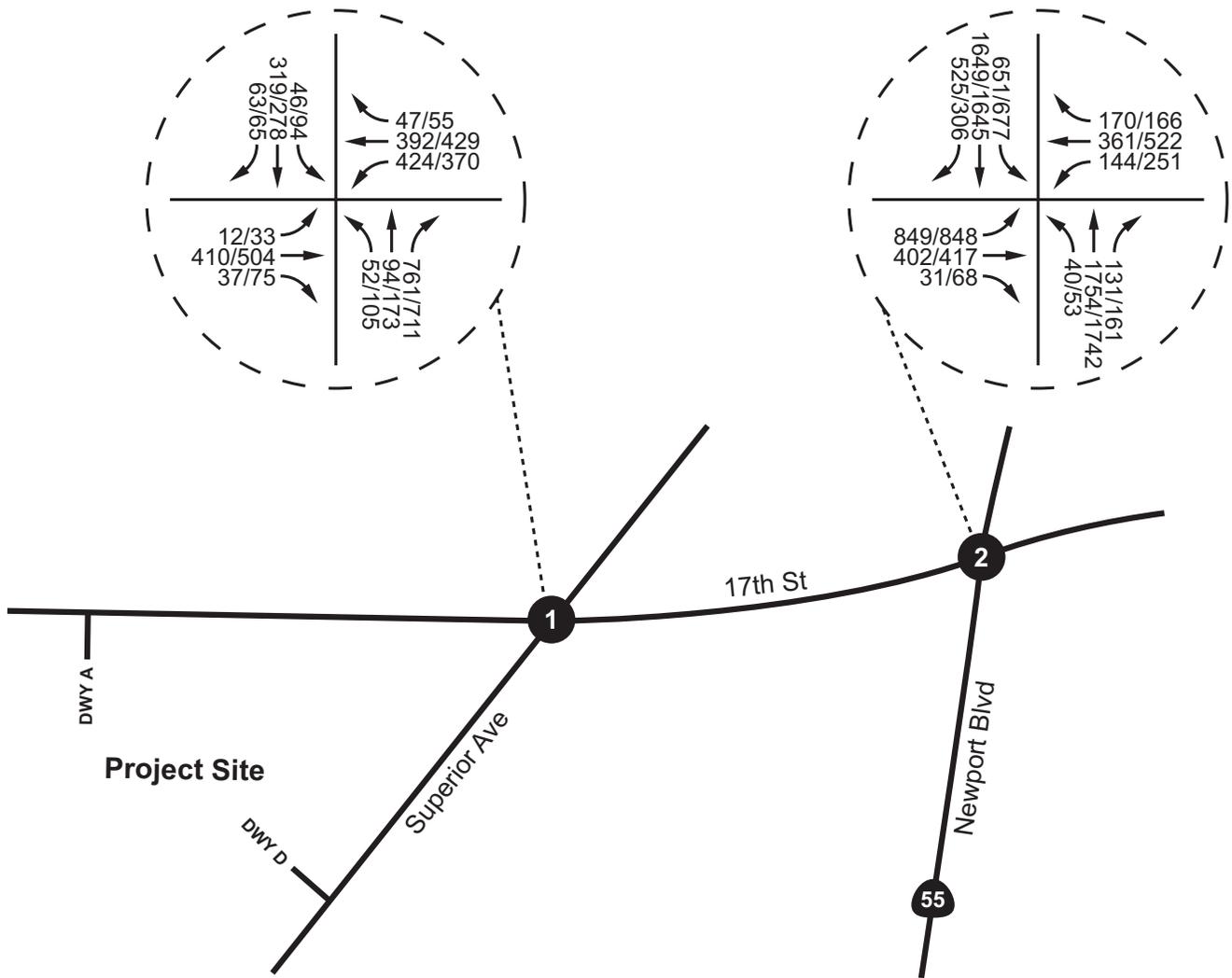
This section analyzes the potential traffic impact of the addition of trips forecast to be generated by the modified project to forecast year 2015 without modified project conditions.

Forecast Year 2015 With Modified Project Conditions Traffic Volumes

Forecast year 2015 with modified project conditions a.m. and p.m. peak hour volumes were derived by adding forecast modified project-generated trips to forecast year 2015 without modified project conditions traffic volumes. Exhibit 3.16-5, Forecast Year 2015 With Modified Project AM & PM Peak Hour Study Intersection Volumes, shows forecast year 2015 with modified project conditions a.m. and p.m. peak hour volumes at the study intersections for the modified project.

Forecast Year 2015 With Modified Project Conditions City Study Intersection Peak Hour LOS

Table 3.16-8, Forecast Year 2015 With Modified Project Conditions AM/PM Peak Hour City Study Intersection LOS, summarizes forecast year 2015 with modified project conditions a.m. peak hour and p.m. peak hour LOS of the City study intersections; detailed LOS analysis sheets are contained in Appendix B of Appendix D. As shown in Table 3.16-8, based on the thresholds of significance, the addition of modified project-generated trips is forecast to result in no significant traffic impact at the City study intersections for forecast year 2015 with modified project conditions.



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION • APPENDIX E
 WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Forecast Year 2015 With Modified Project AM/PM Peak Hour Study Intersection Volumes

NOT TO SCALE



10/13 • JN 136991



**Table 3.16-8
Forecast Year 2015 With Modified Project Conditions
AM/PM Peak Hour City Study Intersection LOS**

Study Intersection	V/C – LOS	
	AM Peak Hour	PM Peak Hour
Superior Avenue / 17 th Street	0.75 – C	0.79 – C
Note: V/C = volume to capacity ratio.		
Source: RBF Consulting, 17 th /Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.		

Forecast Year 2015 With Modified Project Conditions State-Controlled Study Intersection Peak Hour LOS

Table 3.16-9, Forecast Year 2015 With Modified Project Conditions AM/PM Peak Hour State-Controlled Study Intersection LOS, summarizes forecast year 2015 with modified project conditions a.m. peak hour and p.m. peak hour LOS of the State-controlled study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

**Table 3.16-9
Forecast Year 2015 With Modified Project Conditions
AM/PM Peak Hour State-Controlled Study Intersection LOS**

State-Controlled Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
Newport Boulevard (SR-55) / 17 th Street	32.4 – C	34.7 – C
Note: Delay shown in seconds.		
Source: RBF Consulting, 17 th /Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.		

As shown in Table 3.16-9, based on the thresholds of significance, the modified project is forecast to result in no significant traffic impact at the State-controlled study intersections for forecast year 2015 with modified project conditions.

Hazards Due to a Design Feature (Site Access Analysis)

Access to the modified project site would be provided at one full access location on 17th Street and one full access at Superior Avenue.

Forecast Existing With Modified Project Conditions Modified Project Driveways Peak Hour LOS

Table 3.16-10, Forecast Existing With Modified Project Conditions AM/PM Peak Hour Modified Project Driveways LOS, summarizes forecast existing with modified project conditions a.m. peak hour and p.m.



peak hour LOS of the modified project driveways; detailed LOS analysis sheets are contained in Appendix B of Appendix D. As shown in Table 3.16-10, the modified project driveways are forecast to operate within the City goal for peak hour intersection operation (LOS D or better) for forecast existing with modified project conditions.

**Table 3.16-10
Forecast Existing With Modified Project Conditions
AM/PM Peak Hour Modified Project Driveways LOS**

Study Intersection	Forecast Year 2015 Without Project Conditions		Forecast Year 2015 With Project Conditions		Change in V/C		Significant Impact
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS			
Newport Blvd (SR-55)/17th St	0.75 – C	0.79 – C	0.75 – C	0.80 – C	0.00	0.01	No
Note: V/C – volume to capacity ratio.							
Source: RBF Consulting, 17 th /Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.							

Forecast Year 2015 With Modified Project Conditions Modified Project Driveways Peak Hour LOS

Table 3.16-11, Forecast Year 2015 With Modified Project Conditions AM/PM Peak Hour Modified Project Driveways LOS, summarizes forecast year 2015 with modified project conditions a.m. peak hour and p.m. peak hour LOS of the modified project driveways; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

**Table 3.16-11
Forecast Year 2015 With Modified Project Conditions
AM/PM Peak Hour Modified Project Driveways LOS**

Study Intersection	Forecast Year 2015 With Project Conditions	
	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
Project Driveway / 17 th Street	9.7 – A	10.2 – B
Superior Avenue/Project Driveway	22.4 – C	21.5 – C
Note: Delay shown in seconds.		
Source: RBF Consulting, 17 th /Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.		



As shown in Table 3.16-11, the modified project driveways are forecast to operate within the City goal for peak hour intersection operation (LOS D or better) for forecast year 2015 with modified project conditions.

Consistent with previous conclusions, the modified project would result in less than significant impacts involving transportation and traffic.

4.17 UTILITIES AND SERVICE SYSTEMS

Would the modified project:

- a. *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*
- b. *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
- c. *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
- d. *Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?*
- e. *Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?*
- f. *Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?*
- g. *Comply with federal, state, and local statutes and regulations related to solid waste?*

The IS/MND concluded that the 29-unit Project would increase water demand and wastewater/solid waste generation beyond existing conditions. Implementation of recommended Standard Conditions would reduce potential impacts to less than significant levels.

Water. The modified project's average water demand would be approximately 22,057 gpd, as indicated in Table 3.17-1, Modified Project Water Demand. The increase in water demand would place an incremental increase in the demand for water supplies. The increased demand is not considered substantial, since the modified project is consistent with the site's General Plan land use designation and General Plans form the basis for evaluating the service area's future water demands. Mesa Water has concluded they are capable of meeting the water demands of their customers in normal, single dry, and multiple dry years between 2015 and 2035.¹¹ The modified project would result in a negligible increase in water demand, thus, resulting in a negligible impact on the existing water treatment and conveyance facilities.

Wastewater. The modified project's average wastewater generation would be approximately 7,118 gpd, as indicated in Table 3.17-2, Modified Project Wastewater Generation. The increase in wastewater

¹¹ Ibid., Executive Summary Page 2.



generation would place an incremental increase in the demand for wastewater conveyance and treatment facilities. The Project is consistent with the site's General Plan land use designation and City General Plans form the basis for issuance of the County Sanitation's NPDES wastewater discharge permits. Compliance with the Code requirements and specified Standard Conditions would reduce impacts to below a level of significance.

**Table 3.17-1
Modified Project Water Demand**

Land Use	Units	Factor GPD ¹ /Unit ²	Average Water Demand GPD
EXISTING LAND USES			
Commercial (SF)	-20,749	0.22	-4,565
<i>Total Existing</i>	-20,749		-4,565
PROPOSED PROJECT			
Residential (Capita)	133	178.9	23,844
Commercial (SF)	12,628	0.22	2,778
<i>Total Proposed Project</i>			26,622
Net Change			+22,057
Notes:			
1. GPD = Gallons per day.			
2. Malcolm Pirnie, Inc., <i>Mesa Consolidated Water District 2010 Urban Water Management Plan</i> , May 2011, Page 2-8.			

**Table 3.17-2
Modified Project Wastewater Generation**

Land Use	Units (Acres)	Flow Factor GPD ¹ /Acre ^{2,3}	Average Wastewater Generation (GPD)
EXISTING LAND USES			
Commercial (19,559 SF = 100% of Area)	-1.52	2,262	-1,016
<i>Total Existing</i>	1.52		-1,016
PROPOSED PROJECT			
Residential (48,643 SF = 87% of Area)	2.21	5,474	6,113
Commercial (7,486 SF = 13% of Area)	0.34	2,262	389
<i>Total Proposed Project</i>	2.55		6,501
Net Change			+5,486
Notes:			
1. GPD = Gallons per day.			
2. RBF Consulting, <i>Anchor Live/Work Project Final Initial Study/Mitigated Negative Declaration, Comment Letter 3</i> , January 2013.			
3. Telephone Conversation, Leon, Richard, Engineer, Orange County Sanitation District, September 9, 2013.			



Solid Waste. The modified project's average solid waste generation would be approximately 102 TPY, as indicated in Table 3.17-3, Modified Project Solid Waste Generation. The increase in solid waste generation would place an incremental increase in the demand for solid waste collection and disposal services. Additionally, the increased solid waste generation would contribute to incrementally shortening the lifespan of the landfills identified above. The Project would be subject to compliance with the specified Standard Conditions, which address solid waste disposal and District consultation. A less than significant impact would occur in this regard.

**Table 3.17-3
Modified Project Solid Waste Generation**

Land Use	Units	Factor Lbs ¹ /Day/ Unit	Average Lbs/Day Generation ²	Average Tons/Day Generation ²	Average Tons/Year Generation
EXISTING LAND USES					
Commercial (SF)	-20,749	0.005	-104	-0.05	-19
<i>Total Existing</i>					-19
PROPOSED PROJECT					
Residential (DU)	49	12.23	599	0.2996	109
Commercial (SF)	12,628	0.005	63	0.0316	12
<i>Total Proposed Project</i>					121
Net Change					+102
Notes:					
1. Lbs = Pounds per day.					
2. State of California CalRecycle Website, <i>Estimated Solid Waste Generation and Disposal Rates</i> , http://www.calrecycle.ca.gov/wastechar/wastegenrates/ , Accessed September 6, 2013.					

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

- a. *Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*
- b. *Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*
- c. *Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

The IS/MND concluded that the 29-unit Project would result in less than significant impacts involving the mandatory findings of significance. The modified project's impacts would be, as identified for the 29-unit Project.