

SECTION 3

ENVIRONMENTAL SETTING AND POTENTIALLY SIGNIFICANT ENVIRONMENTAL EFFECTS

3.0 ENVIRONMENTAL SETTING AND POTENTIALLY SIGNIFICANT ENVIRONMENTAL EFFECTS

The components of Section 3.0, *Setting, Impacts, Mitigation, and Significant Impacts After Mitigation*, are organized by the order each environmental topic is presented in the West Haven Specific Plan NOP/IS (refer to Appendix A, *Notice of Preparation/Initial Study, and Comments*). Each environmental topic contains a description of the environmental setting and the thresholds used to determine whether or not the proposed Project may result in a significant impact on the environmental setting. The impact analysis is followed by a list of mitigation measures designed to avoid, minimize, rectify, reduce, or eliminate potential impacts, or compensate for unavoidable adverse effects. The statement of unavoidable adverse impacts describes the level of significance of each impact after mitigation. Below is a brief definition of the components represented in this section.

Environmental Setting – The Environmental Setting subsection describes the physical conditions of the proposed Project, the policy, and regulatory framework as they relate to the natural and built environment. This information establishes the baseline condition of the Project, and thus, the environmental goals and objectives to be considered in the impact analysis.

Thresholds of Significance – The Threshold of Significance for a given environmental impact is that level at which the City finds the impacts of the Project on the environmental setting to be significant. To the extent possible, quantitative, qualitative, or performance level standards or criteria used to evaluate and describe each environmental impact are adapted from City and responsible agency policies, regulations, and standards for environmental review to determine the Thresholds of Significance. For purposes of this EIR, the City considers non-compliance with an applicable, adopted policy, regulation or standard to be a *significant* impact, and compliance with an adopted policy, regulation or standard to be a *less than* significant impact (CEQA Guidelines, §15064.7).

Impacts – The Impact subsection identifies the direct and indirect impacts of both the short- and long-term. Short-term impacts are those effects incurred with construction of the Project. Long-term impacts are environmental effects associated with occupation and implementation of the Project, after construction.

Consistent with CEQA, the impacts of the Project are described using the words *adverse* and *significant* when appropriate, based on the applicable threshold criteria. An *adverse* impact is any negative effect of the Project, notwithstanding its severity and probability of occurrence. A *significant* impact is considered a substantial or potentially substantial adverse change in the physical conditions in the affected area as they existed at the time the environmental analysis is commenced (CEQA Guidelines, §15382).

Mitigation Measures – For each potentially adverse or significant impact to the physical conditions within the area affected by the Project, Mitigation Measures are identified in the *Mitigation Measures* subsection. The types of mitigation considered are briefly defined below.

- ◆ *Avoid* the impact by not taking certain actions or parts of actions.
- ◆ *Minimize* by limiting the degree or magnitude of the action and its implementation.
- ◆ *Rectify* by repairing, rehabilitating, or restoring the affected environment.
- ◆ *Reduce or eliminate* over time by preservation and maintenance during the life of the action.

- ◆ *Compensate* for the impact by replacing or providing substitute resources or environments.

When applicable, standard conditions, uniform codes, and design features incorporated into the Project to lessen the environmental effects, are described.

Significant Impacts of the Project After Mitigation – The subsection, Significant Impacts of the Project After Mitigation, identifies and discusses those significant environmental impacts that cannot be avoided or reduced to a level of insignificance through application of reasonable and feasible mitigation measures.

3.1 AGRICULTURAL RESOURCES

This section is a summary of the Agricultural Resources associated with the development of the West Haven Specific Plan. Potential resources and constraints discussed in this section were previously identified in the City’s General Plan (1992) and the NMC GPA (1998). Section 3.1, *Agricultural Resources*, also features information researched from the California Department of Conservation and the United States Natural Resource Conservation Service.

3.1.1 Setting

The West Haven Specific Plan area was formerly designated as Specific Plan Ag Preserve. Following the City’s January 7, 1998 NMC GPA adoption, the Project site was designated in the General Plan as Low Density Residential and Commercial Neighborhood Center, and was zoned Specific Plan. Historically, the Project site and surrounding area primarily functioned agriculturally, consisting of dairy farm operations, row crops production and some vineyard use. Today, the Project area is primarily used for dairy farm operations, which include feedlots, feed storage, dairy panels, feed crop growing areas, and on-site residences. A plant nursery is located approximately 1,245 feet south of the intersection of Haven Avenue and Riverside Drive, within the borders of the proposed Project. The portion of the Project site adjacent to Turner Avenue is vacant, although it is designated as “Grazing Land.”

Except for the vacant portion of the Project site designated as “Grazing Land,” a designation that applies to land with vegetation suitable for livestock grazing, the Project site vicinity is designated as “Other Land” on the San Bernardino County Important Farmland Map as prepared by the California Department of Conservation (CDOC, 2002). Portions of the Project site were historically under Williamson Act Contracts, although there are not any current, or active, Williamson Act Contracts on the site, to conflict with the development of the proposed Project (refer to Figure 3.1-1, *Status of Williamson Act Contracts in the New Model Colony*).

Lands immediately to the east and south of the Project site also serve in agricultural and dairy capacities, and are designated by the CDOC as “Other Land” and “Prime Farmland” on the San Bernardino County Important Farmland Map. In contrast, the land west and north of the Project site are residential and are primarily designated by the CDOC (2002), as “Urban” and “Built-Up Land,” with “Other Land” and “Prime Farmland” designated areas also to the west.

The NMC GPA assessed local soils on the valley floors and gentle slopes as alluvial, consisting primarily of Delhi and Hilmar series, which are mostly Class II and Class III soils, considered Prime Agricultural Soils by the United States Natural Resource Conservation Service (NRCS, aka United States Department of Agriculture, Soil Conservation Service, 1980). These soils exhibit moderate to severe limitations with



LEGEND

| ACTIVE CONTRACTS | |
|-------------------|-----------------|
| [Yellow Box] | Active Contract |
| [Purple Box] | Expires 2009 |
| [Light Blue Box] | Expires 2010 |
| [Light Green Box] | Expires 2011 |
| [Pink Box] | Expires 2012 |
| [Dark Green Box] | Expires 2013 |
| [Orange Box] | Expires 2014 |

N
N
N.T.S.

Source: City of Ontario
Planning Department, 2004

STATUS OF WILLIAMSON ACT CONTRACTS IN THE NEW MODEL COLONY

regard to agricultural production, have a low shrink-swell potential, and possess a slight to high erosion potential, especially where the vegetation has been removed and the soil is not protected from wind and water erosion.

3.1.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on agricultural resources associated with the Project. The NOP and Appendix G suggest that a Project related significant impact would occur if the Project would:

- ◆ 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.
- ◆ Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- ◆ Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

3.1.3 Impacts

The proposed Project is anticipated to have a significant impact on agricultural productivity in the NMC GPA area due to the individual and cumulative effect it will have on the continued viability of dairy farm production in the area. There are currently 150 dairies within the City's NMC area, which represents approximately 50 percent of the dairies in the Chino Basin. Buildout of the NMC, in addition to the West Haven Specific Plan development, will convert most of the existing dairies, some of which are on Prime Farmland and some of which are under Williamson Act Contracts, from agricultural land uses to non-agricultural land uses. Therefore, the proposed Project and expected buildout would result in the conversion of Prime Farmland to non-agricultural use resulting in potential significant individual and cumulative impacts.

The proposed Project will ultimately develop a small amount of land classified as having "Prime" agricultural soils. As described above, these soils exhibit moderate to severe limitations with regard to agricultural production, have a low shrink-swell potential, and possess a slight to high erosion potential, especially where the vegetation has been removed and the soil is not protected from wind and water erosion. However, this portion of the Project site is no longer used for agricultural production and although mapped as "Grazing Land" on the San Bernardino County Important Farmland map, it has not been used for irrigated agricultural production for seven years (CDOC, 2002). Therefore, the Project site does not qualify as Prime Farmland in accordance with the County's Important Farmland Map.

3.1.4 Mitigation Measures

Mitigation Measure Considered

CEQA §21002 states "it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project

alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.”

Section 15364 of the CEQA Guidelines defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.”

The NMC Final EIR did not include any mitigation measures for the conversion of prime agricultural land to non-agricultural uses or allow for agricultural easements or include any mitigation measures that would avoid the impacts related to agricultural productivity. Agricultural easements were considered but also rejected as feasible mitigation. Once the farmland within the Project is converted to other uses, that farmland is now effectively gone. Agricultural easements on different agricultural land will not decrease the loss of farmland for this particular Project. All it will accomplish is to impact potential future uses of other agricultural land. The easement will not create new farmland where previous farmland did not exist and thus it is not appropriate mitigation for the loss of agricultural land from the Project.

On-site and off-site mitigation, including easement area, for the loss of agricultural land and uses was considered but found to be infeasible. If a portion of the site was maintained in agriculture, in the long-term it would become economically unviable as the other dairies and agricultural uses within the Chino Basin move out to other regions or states. Agriculture needs specialized support uses such as feed stores, equipment sales and maintenance, and manure removal services. Without a critical mass of customers (dairies and farms), such services close thus driving the cost of securing such services up and making agriculture less profitable. According to the Census of Agriculture,¹ farm production expenses in San Bernardino County increased from an average of \$167,844 per farm in 1997 to \$240,765 per farm in 2002. Over the same time period, the number of farms in San Bernardino County decreased from 1,861 to 1,382. Neighboring Riverside County saw similar increased expenses of \$204,052 per farm in 1997 to \$253,229 in 2002, with a similar loss in the number of operating farms from 3,864 in 1997 to 3,184 in 2002. These trends will continue as the cost of land, supplies, and services increase.

The long-term economic viability of agriculture in the Chino Basin is declining as discussed above. If this approach were taken in the NMC, to be fair, easements for all prime Farmland soils lost (about 2,952 acres) of would have to be acquired elsewhere. Therefore, cumulatively, this is also not a feasible approach. In addition, preserving agriculture within the NMC would impede the City of Ontario from achieving General Plan goals and objectives for housing. Therefore, City-wide farmland preservation was considered infeasible.

Approximately 200 acres of land that are owned by the County of San Bernardino and managed by the Southern California Agricultural Land Foundation (SoCALF) are located within the NMC to preserve a portion of the approximately 8,200 acres that will be converted in the future. The majority of the 200 acres is designated Prime Farmland and is leased to dairy operators. The SoCALF properties can only be used for agriculture and/or open space, however, the use of 1988 Park Bond Act funds for acquisition and maintenance of the property ensured that the land would be used for agricultural preserve. This land is not considered mitigation for the loss of Prime Farmland on the Specific Plan Project site, however. Therefore, no feasible on-site or off-site mitigation measures exist.

¹ USDA, national Agricultural Statistics Service, 2002 Census of Agriculture, June 2004.

In order to minimize conflicts between urban and agriculture land uses, all residential units in the West Haven SP shall be provided with a deed disclosure, or similar notice, approved by the City attorney Re: The Proximity and Nature , including odors, of neighboring agricultural uses.

3.1.5 Significant Effects of the Project After Mitigation

The implementation of the proposed Project and the resulting continued buildout of the NMC will result in a significant and unavoidable adverse impact on agricultural resources because of the conversion of the Project site from agricultural land uses to non-agricultural land uses. This would result in a substantial cumulative reduction in the Chino Basin's long-term agricultural productivity.

3.2 AIR QUALITY

This section is a summary of the Air Quality constraints associated with the development of the West Haven Specific Plan. The information and analysis is based on data researched by URS (~~2005~~2006). Section 3.2, *Air Quality*, also includes data from the South Coast Air Quality Management District (SCAQMD), the California Air Resources Board (CARB), as well as the U.S. Environmental Protection Agency (U.S. EPA) and established national ambient air quality standards (NAAQS).

3.2.1 Setting

3.2.1.1 Climate

The Project site is located within the South Coast Air Basin (SCAB). The climate is mild, however, periods of extremely hot weather, winter storms, or Santa Ana wind conditions periodically occur. The annual average temperature generally ranges from the low to mid 60s, measured in degrees Fahrenheit. The majority of annual rainfall in the SCAB occurs between October and March. Summer rainfall is minimal and generally limited to scattered thundershowers in the coastal regions and slightly heavier showers in the eastern portion of the SCAB. Climatological rainfall measured from 1971-2000 in the Ontario area varies from 3.4-3.5 inches in January through March to 0.63 inches or less between April and October, with an annual total of 14.77 inches.

The region experiences a persistent temperature inversion (increasing temperature with increasing altitude). This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the smog appears to clear up suddenly. Winter inversions frequently break by mid-morning.

In the Project vicinity, relatively low velocity winds (average 4 miles per hour) blow predominantly from the east and southeast. At night, the wind pattern is reversed with 2- to 3-mile per hour winds flowing west toward the coast. Strong, dry north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino counties. In

the winter, the greatest pollution problems are carbon monoxide (CO) and nitrogen oxides (NO_x) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form photochemical smog.

3.2.1.2 Local Air Quality

The SCAQMD is responsible for air resources planning, regulation, and permitting within the SCAB. The SCAQMD air monitoring stations nearest to the Project site are located in the cities of Upland and Ontario. The Ontario Fire Station air monitoring station monitors only suspended particulates less than or equal to 10 microns (PM₁₀). The next closest station, Upland, monitors the other criteria pollutants. Table 3.2-1 shows that the criteria pollutants monitored at the Upland station are CO, ozone (O₃), and nitrogen dioxide (NO₂). Sulfur dioxide (SO₂) is not listed because there has been no exceedance of the federal or State standards in the past ten years. The Fontana station is the closest station that monitors SO₂ concentration. The monitored SO₂ level has been much lower than the standards.

The ambient air quality data in Table 3.2-1, *Ambient Air Quality Data: Upland Air Monitoring Station*, show that NO₂ and CO levels recorded at the Upland air monitoring station for (1998-2002) were below the relevant State and federal standards. Based on Upland station data, O₃ levels exceeded the State (29 to 60 days) and federal (4 to 30 days) one hour standard each year for the past five years. Over the past five years, PM₁₀ levels at the Ontario station did not exceed 24-hour federal standards. Over the same five-year period, PM₁₀ levels at the Ontario station exceeded the State standard 28 to 36 days each year.

3.2.2 Regulatory Setting

3.2.2.1 Federal Regulations and Standards

Pursuant to the federal Clean Air Act (CAA) of 1970, the U.S. Environmental Protection Agency (U.S. EPA) established national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State government have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health. The NAAQS are two tiered: primary, to protect public health; and secondary, to prevent degradation to the environment (impairment of visibility, damage to vegetation and property). The six criteria pollutants are O₃, CO, PM₁₀, NO₂, SO₂, and lead (Pb). The primary standards for these pollutants are presented in Table 3.2-2.

Air monitoring stations are strategically placed throughout the region to collect ambient air quality data. The data collected at permanent monitoring stations are used by the U.S. EPA to classify regions as "attainment" or "non-attainment" depending on whether the regions met the requirements stated in the primary NAAQS. The U.S. EPA imposes additional stringent restrictions on non-attainment areas to alleviate the amount of air pollution and to bring the area into compliance with the NAAQS. The CAA Amendments designated the SCAB as "extreme" for O₃, requiring attainment with the federal O₃ standard by 2010; "serious" for CO, requiring attainment of federal CO standards by 2000; and "serious" for PM₁₀, requiring attainment with federal standards by 2001. Concentrations of SO₂ and Pb are classified as "attainment." The SCAB was recently re-designated a NO₂ attainment area because NO₂ levels have met the federal standard within the past few years. The SCAB attainment status for PM_{2.5} has not been determined.

Table 3.2-1 Ambient Air Quality Data: Upland Air Monitoring Station

| | CO | | | | O ₃ | | PM ₁₀ ¹ | | NO ₂ | |
|-------------------|-------------------------------------|-------------------------|-------------------------|-------------------------|------------------------|-------------------------|--|-------------------------|---------------------------|-------------------------|
| | Max 1 Hour Conc. (PPM) ² | Number of Days Exceeded | Max. 8 Hour Conc. (PPM) | Number of Days Exceeded | Max 1 Hour Conc. (PPM) | Number of Days Exceeded | Max. 24 Hour Conc. (µg/m ³) ³ | Number Of Days Exceeded | Max 1 Hour Conc. (PPM) | Number of Days Exceeded |
| State Standards | > 20 UG/M3, 24 HOUR | | ≥ 9.1 PPM/ 8 HOUR | | > 0.09 PPM/ 1 HOUR | | > 50 UG/M3, 24 HOUR | | > 0.25 PPM/ 1 HOUR | |
| 2002 | 4.0 | 0 | 1.6 | 0 | .139 | 36 | 102 | 32 | .12 | 0 |
| 2001 | 3.0 | 0 | 1.75 | 0 | .174 | 53 | 106 | 34 | .13 | 0 |
| 2000 | 4.0 | 0 | 2.6 | 0 | .18 | 43 | 108 | 31 | .15 | 0 |
| 1999 | 7.0* | 0 | 4.4* | 0 | .15 | 29 | 116 | 36 | .13 | 0 |
| 1998 | 5.0* | 0 | 4.6* | 0 | .21 | 60 | 101 | 28 | .14 | 0 |
| MAXIMUM | 7.0 | 0 | 4.6 | 0 | .21 | 60 | 116 | 36 | .15 | 0 |
| FEDERAL STANDARDS | > 35 PPM/ 1 HOUR | | ≥ 9.5 PPM/ 8 HOUR | | > 0.12 PPM/ 1 HOUR | | > 150 UG/M3, 24 HOUR | | 0.053 PPM, ANNUAL AVERAGE | |
| 2002 | 4.0 | 0 | 1.6 | 0 | .139 | 5 | 102 | 0 | 0.037 | 0 |
| 2001 | 3.0 | 0 | 1.75 | 0 | .174 | 14 | 106 | 0 | 0.038 | 0 |
| 2000 | 4.0 | 0 | 2.6 | 0 | .18 | 10 | 108 | 0 | 0.038 | 0 |
| 1999 | 7.0* | 0 | 4.4* | 0 | .15 | 4 | 116 | 0 | 0.04 | 0 |
| 1998 | 5.0* | 0 | 4.6* | 0 | .21 | 30 | 101 | 0 | 0.036 | 0 |
| MAXIMUM | 7.0 | 0 | 4.6 | 0 | .21 | 30 | 116 | 0 | .04 | 0 |

Source: South Coast Air Quality Management District (1998-2002)

*1998 and 1999 CO data from Riverside-Rubidoux Monitoring Station

- 1 Suspended particulates data are from the Ontario Fire Station Monitoring Station
- 2 Parts per million
- 3 micrograms per cubic meter

The U.S. EPA has designated Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization responsible for ensuring compliance with the requirements of the CAA.

Table 3.2-2 Ambient Air Quality Standards

| Pollutant | Averaging Time | State | Federal | |
|-------------------------------|----------------------------------|--|---------------------------------------|--------------------------------------|
| | | | Primary | Secondary |
| O ₃ | 1 Hour | 0.09 ppm (180 µg/m ³) | 0.12 ppm (235 µg/m ³) | Same as Primary Standard |
| | 8 Hour | -- | 0.08 ppm (157 µg/m ³) | |
| NO ₂ | Annual Average | -- | 0.053 ppm (100 µg/m ³) | Same as Primary Standard |
| | 1 Hour | 0.25 ppm (470 µg/m ³) | -- | |
| CO | 8 Hour | 9.0 ppm (10,000 µg/m ³) | 9 ppm (10,000 µg/m ³) | None |
| | 1 Hour | 20 ppm (23,000 µg/m ³) | 35 ppm (40,000 µg/m ³) | None |
| PM ₁₀ | 24 Hour | 50 µg/m ³ | 150 µg/m ³ | Same as Primary Standard |
| | Annual Arithmetic Mean | 20 µg/m ³ | 50 µg/m ³ | |
| Sulfur Dioxide | Annual Average | -- | 0.030 ppm (80 µg/m ³) | -- |
| | 24 Hour | 0.04 ppm (105 µg/m ³) | 0.14 ppm (365 µg/m ³) | |
| | 3 Hour | -- | -- | 0.5 ppm (1,300 g/m ³) |
| | 1 Hour | 0.25 ppm (655 µg/m ³) | -- | -- |
| Pb | 30 Day Average | 1.5 µg/m ³ | -- | -- |
| | Calendar Quarter | -- | 1.5 µg/m ³ | Same as Primary Standard |
| Sulfates | 24 Hour | 25 µg/m ³ | No Federal Standard | No Federal Standard |
| Hydrogen Sulfide | 1 Hour | 0.03 ppm (42 µg/m ³) | No Federal Standard | No Federal Standard |
| Vinyl Chloride | 24 Hour | 0.01 ppm (26 µg/m ³) | No Federal Standard | No Federal Standard |
| Visibility Reducing Particles | 8 Hour (10A.M. to 6 P.M. PST) | ** | No Federal Standard | No Federal Standard |

Source: California Air Resources Board (2003)

** Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%. Measurement is in accordance with Air Resources Board Method V.

The following paragraphs briefly describe the adverse health effects of the six criteria pollutants monitored in the SCAB.

- ◆ O₃ is formed by photochemical reactions between oxides of nitrogen and reactive organic gases, rather than being directly emitted. O₃ is a pungent, colorless gas typical of Southern California smog. Elevated O₃ concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. O₃ levels peak during the summer and early fall months.
- ◆ CO is formed by the incomplete combustion of fossil fuels generated almost entirely by automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.
- ◆ NO_x contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_x is a primary component of the photochemical smog reaction. NO₂, a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. NO₂ decreases lung function and may reduce resistance to infection.
- ◆ SO₂ is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO₂ levels. SO₂ irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.
- ◆ Reactive Organic Compounds (ROC) is formed from combustion of fuels and evaporation of organic solvents. ROC, a prime component of smog, accumulates in the atmosphere much more quickly during the winter when sunlight is limited and photochemical reactions are slower.
- ◆ PM₁₀ refers particulate matter less than or equal to ten microns. PM₁₀ comes from a variety of sources, including windblown dust and grinding operations and can accumulate in the respiratory system and aggravate health problems such as asthma. Particles less than or equal to 2.5 microns (PM_{2.5}) often come from fuel combustion, power plants, and diesel buses and trucks. PM_{2.5} can also be formed in the atmosphere through chemical reactions.

3.2.2.2 State Regulations and Standards

The State of California ambient air quality standards (CAAQS) are generally more stringent than the NAAQS. In addition to the six criteria pollutants covered by the NAAQS, there are CAAQS standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are listed in Table 3.2-2, *Ambient Air Quality Standards*.

Originally there were no attainment deadlines for the CAAQS; however, the California Clean Air Act (CCAA) of 1988 provided a time frame and a planning structure to promote their attainment. The CCAA required non-attainment areas in the State to prepare attainment plans, and proposed to classify each such area on the basis of the submitted plan, as follows: moderate, if CAAQS attainment could not occur before December 31, 1994; serious, if CAAQS attainment could not occur before December 31, 1997; and severe, if CAAQS attainment could not be conclusively demonstrated at all. The attainment plans are

required to achieve a minimum five percent annual reduction in the emissions of non-attainment pollutants, unless all feasible measures have been implemented.

3.2.2.3 Regional Air Quality Planning Framework

The CARB coordinates and oversees both State and federal air pollution control programs in California. The CARB has divided the State into 15 air districts and oversees the activities of each local air pollution control districts. It is responsible for incorporating air quality management plans for local air districts into a State Implementation Plan for U.S. EPA approval. CARB also maintains air quality monitoring stations throughout the State in conjunction with local air districts. Data collected at these stations are used by the CARB to classify air basins as "attainment" or "non-attainment" with respect to each pollutant and to monitor progress in attaining air quality standards.

The local air pollution control districts regulate stationary source emissions and develop local air quality management plans. The CCAA enables the SCAQMD to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. An example of this would be the motor vehicles at an intersection in a mall parking lot or on congested highways. The CARB regulates motor vehicles and fuels.

3.2.2.4 Regional Air Quality Management Plan

The SCAQMD and SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the air basin. The AQMP was adopted in 1979 and amended in 1982, 1991, 1994, 1997, 1999, and 2003.

California air districts that would not attain the CAAQS by 2000 were required to prepare a comprehensive plan update by December 31, 1997. The 1997 AQMP satisfied that requirement. The SCAQMD Governing Board approved the 1997 AQMP on November 15, 1996, and subsequently submitted the 1997 AQMP to the CARB for its review and approval. The CARB approved the O₃ and PM₁₀ portions of the 1997 AQMP on January 23, 1997, and submitted the plan to U.S. EPA as proposed revisions to the State Implementation Plan (SIP). The U.S. EPA rejected the O₃ provisions of the 1997 AQMP and approved separate parts of the plan related to CO and NO₂; however, it has not acted on the PM₁₀ standards. The SCAQMD adopted on January 12, 1999 the Final 1999 Amendments to the 1997 Ozone SIP Revision for the SCAB and submitted it to U.S. EPA for approval. Sometime in 1999, U.S. EPA indicated in a letter to the Governing Board that it believes the 1999 Amendment would be approvable and would expedite the review and approval process. The SCAQMD Governing Board adopted the 2003 AQMP on August 1, 2003, which updates the attainment demonstration for the federal ozone and particulate matter standards and is awaiting response from U.S. EPA.

3.2.3 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on air resources associated with the Project. The NOP and Appendix G suggest that a Project related significant impact would occur if the Project would:

- ◆ Conflict with or obstruct implementation of the applicable air quality plan.

- ◆ Violate any air quality standards or contribute substantially to an existing or projected air quality standard.
- ◆ Result in a cumulatively considerable net increase of any criteria pollutant for which the project location is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- ◆ Expose sensitive receptors to substantial pollutant concentrations.

The SCAQMD has established significance thresholds for air emissions associated with short-term construction-related activities and long-term operational characteristics of development projects. The SCAQMD-recommended pollutant thresholds presented in Table 3.2-3, *SCAQMD Thresholds of Significance*, are used by the County to assess the impacts of the Project. Predicted emissions associated with construction and operations that would exceed any of the emission thresholds presented in Table 3.2-3, below, would be considered significant.

Table 3.2-3 SCAQMD Thresholds of Significance

| Emissions | Pollutant Thresholds | | | | |
|---------------------|----------------------|-----|-----------------|-----------------|------------------|
| | CO | ROC | NO _x | SO _x | PM ₁₀ |
| Construction | | | | | |
| ▪ Pounds Per Day | 550 | 75 | 100 | 150 | 150 |
| ▪ Tons Per Quarter | 24.75 | 2.5 | 2.5 | 6.75 | 6.75 |
| Operational | | | | | |
| ▪ Pounds Per Day | 550 | 55 | 55 | 150 | 150 |

Source: SCAQMD (1993)

State CO emission standards are 20 ppm for one hour and 9.0 ppm for eight-hour concentrations. The significance of localized Project impacts depends on whether ambient CO levels in the Project vicinity are above or below State and federal CO standards. If ambient levels are below the standards, a Project is considered to have significant impacts if Project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, Project emissions are considered significant if they increase one-hour CO concentrations by 1.0 ppm or more or eight-hour CO concentrations by 0.45 ppm or more.

3.2.3.1 Methodology

The URBEMIS 7G-2002 (Urban Emission Model) Version 8.7.0 computer model is used to estimate emissions associated with land use development projects such as residential neighborhoods, shopping centers, office buildings, and hotels in California. URBEMIS 7G-2002 calculates both short-term construction emissions and long-term stationary emissions and long-term mobile emissions associated with these land uses. The model uses variables such as the number of trips generated by the proposed land uses, the size of the development, and type of development.

The CALINE4 model is used to assess air quality impacts related to the formation of CO hotspots within the project vicinity near transportation facilities. The air model uses variables such as traffic volume, roadway geometry, topography, and meteorology data to estimate the CO concentration near intersections or roadway segments. In order to assess the magnitude of the impact on local air quality resulting from

the Project, a comparison is made between the future “with Project” versus the future “without Project” scenarios. The future “without Project” scenario serves as the baseline condition.

3.2.4 Impacts

Project-related air pollutant emissions such as fugitive dust from site preparation, grading, and emissions from construction equipment exhaust would occur over the short-term. There would be long-term regional emissions associated with Project-related vehicular trips. In addition, long-term stationary source emissions would occur due to energy consumption such as natural gas and electricity usage by the proposed land uses.

3.2.2.5 Construction Impacts

Fugitive Dust

Fugitive dust emissions are generally associated with demolition, land clearing, exposure, and cut and fill operations. Dust generated during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors and on-site workers may be exposed to blowing dust, depending upon prevailing wind conditions. Fugitive dust would also be generated as construction equipment travels on unpaved roads or on the construction site.

The entire site (202 acres) is not expected to be under construction at the same time. It is assumed that up to 35 acres of land would be under construction or exposed on any one day.

Equipment Exhausts and Related Construction Activities

Construction activities produce combustion emissions from various sources such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew. Localized exhaust emissions from on-site construction equipment and activities would vary daily as work schedules and levels change. Emissions associated with construction equipment exhaust for the Project on a peak day are summarized in Table 3.2-4, *Peak Day Exhaust Emissions from Building Construction*. The values presented in Table 3.2-4 are from the URBEMIS2002 model. These values are the unmitigated maximum pounds per day emitted from the building construction activities associated with the Project. ~~The emissions listed are from plan year 2007 (except as noted), which has the maximum pound per day emissions based on the proposed construction schedule. At the time of analysis, the actual project construction schedule is not known. Therefore, it is assumed that the project will begin construction no earlier than January 2007 and will take 24 months to complete. Although it is anticipated that the project will be built in 2 phases, the analysis assumes that the project will be completed in a single phase since this represents a worse-case scenario. Additionally, where project-specific construction information was not available, the default values within URBEMIS 2002 and similar prior project experience were used. The default values for architectural coatings contained in URBEMIS2002 overestimate the actual ROC emissions from painting. With residential construction, most of the exterior surfaces are stucco, which do not need to be painted and hence result in lower ROC emissions that what is estimated by URBEMIS. Therefore, in order to estimate the emissions from painting, the formula used by URBEMIS2002 (URBEMIS 2002 User Manual Page A-12) was used with the default rate of 0.0185 lbs of ROC per square foot surface area and assuming that one crew would paint an entire house in a day, which represents a worse-case scenario.~~

Table 3.2-4 Peak Day Exhaust Emissions from Building Construction

| Source | Pollutants (lbs/day) | | | | |
|--|----------------------|------------------|-------------------|-----------------|-------------------|
| | CO | ROC | NO _x | SO _x | PM ₁₀ |
| SCAQMD Daily Construction Threshold | 550 | 75 | 100 | 150 | 150 |
| 2007 Building Construction Off-Road Diesel | 823.31* | 106.06 | 789.33 | ND | 34.29 |
| Grading Asphalt Off-Gas | 205.63ND | 26.781-18 | 222.12ND | 0.10ND | 120.08ND |
| Building Construction Asphalt Off-Road Diesel | 166.8779-89* | 19.709-5 | 118.7859-20 | 0.01ND | 5.622-18 |
| MAXIMUM EMISSIONS *Asphalt On-Road Diesel | 205.630-92 | 26.780-25 | 222.124-79 | 0.100-01 | 120.080-12 |
| Significant All-Phases Worker Trips* | NO81-12 | NO6-6 | YES3-83 | NO0-02 | NO1-37 |
| 2008 TOTAL UNMITIGATED | 985.2 | 149.1 | 857.2 | 0.03 | 238.0** |
| Building Construction SCAQMD Threshold | 167.26550 | 19.4175 | 113.57400 | 0.01450 | 5.15450 |
| Architectural Coating **Significant | 0.27YES | 46.27YES | 0.01YES | 0.00NO | 0.00YES |
| Asphalt TOTAL MITIGATED | 34.68171-5 | 4.7444-8 | 25.78442-4 | 0.000-03 | 0.7841-8 |
| MAXIMUM EMISSIONS ***Significant | 202.21NO | 70.42NO | 139.36YES | 0.01NO | 5.93NO |
| Significant | NO | NO | YES | NO | NO |

Source: Data compiled by URS Corporation (2006~~5~~)

* Since building construction cannot begin until after site grading is completed, the maximum daily emissions are from either grading alone or building construction alone.

** Architectural coatings emissions include emissions from painting (ROC only) and from worker trips.

*** Since building construction, architectural coatings, and asphalt could occur concurrently, the maximum emissions are from the sum of all three activities.* Values are from 2008.

** Model results include fugitive dust emissions (200 lb/day) from grading activities in 2006.

ND—No Data reported by the model.

Table 3.2-4, *Peak Day Exhaust Emissions from Building Construction*, shows that during peak days exhaust emissions from building construction activities, ~~daily unmitigated total construction emissions would exceed the SCAQMD thresholds for four of the five criteria pollutants, CO, ROC, NO_x, and PM₁₀. Emissions from SO₂ would be below the daily thresholds established by the SCAQMD. However, mitigated exhaust emissions from building construction activities show that would only exceed the NO_x would still exceed the daily thresholds.~~

Fugitive Dust

Fugitive dust emissions are generally associated with demolition, land clearing, exposure, and cut and fill operations. Dust generated during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors and on-site workers may be exposed to blowing dust, depending upon prevailing wind conditions. Fugitive dust would also be generated as construction equipment travels on unpaved roads or on the construction site.

The entire site (202 acres) is not expected to be under construction at the same time. It is assumed that up to 20 acres of land would be under construction or exposed on any one day.

Implementation of mitigation measures AQ-1 and AQ-2 (refer to Section 3.2.5) would reduce fugitive dust emissions from construction and grading activities from 238 to 42 pounds or less per day. This level of dust emissions is below the SCAQMD threshold of 150 pounds per day.

Table 3.2-5, *Peak Grading Day Total Emissions*, shows that during peak grading days, daily unmitigated total construction emissions would exceed the SCAQMD thresholds for two of the five criteria pollutants, NO_x and PM₁₀. Emissions from the other three air pollutants would be below the daily thresholds established by the SCAQMD. The NO_x and PM₁₀ would still exceed the daily thresholds during an average grading day. However, mitigated exhaust emissions from grading activities show that only NO_x would still exceed the daily thresholds. The emissions listed are from plan year 2006 (except as noted), which has the maximum pound per day emissions based on the proposed construction schedule.

Table 3.2-5 Peak Grading Day Total Emissions (lbs/day)

| Source | Pollutant (lbs/day) | | | | |
|------------------------------------|---------------------|-------------|-----------------|-----------------|------------------|
| | CO | ROC | NO _x | SO _x | PM ₁₀ |
| Fugitive Dust | -- | -- | -- | -- | 200 |
| Off Road Diesel | 269.5* | 33.3 | 229.0 | -- | 10.0 |
| On Road Diesel | 0.22 | 0.06 | 1.3 | 0.02 | 0.02 |
| All Phases Worker Trips | 9.34 | 0.4 | 0.49 | 0.01 | 0.03 |
| TOTAL UNMITIGATED EMISSIONS | 279.0 | 33.7 | 230.8 | 0.03 | 210.0 |
| SCAQMD Threshold | 550 | 75 | 100 | 150 | 150 |
| Significant | NO | NO | YES | NO | YES |
| TOTAL UNMITIGATED EMISSIONS | 36.0 | 3.7 | 119.3 | 0.03 | 41.5 |
| Significant | NO | NO | YES | NO | NO |

Source: Data compiled by URS Corporation (2005)

* Value is from 2007.

Architectural Coatings

Architectural coatings contain volatile organic compounds (VOC) that are similar to ROC and are part of the O₃ precursors. Although emissions associated with architectural coatings cannot be quantified at this time because building details are not available, the emissions associated with architectural coating could be reduced by using (1) pre-coated/natural colored building materials, (2) water-based or low-VOC coating, and (3) coating transfer or spray equipment with high transfer efficiency. For example, the high volume, low pressure (HVLP) spray method is a coating application method operated at air pressures between 0.1 and 10 pounds per square inch gauge (psig) with 65 percent transfer efficiency. Manually applied coatings (paint brush, hand roller, trowel spatula, dauber, rag, or sponge) have 100 percent transfer efficiency.

Localized Significance Thresholds

Localized significance thresholds (LSTs) were developed by the SCAQMD in response to their Governing Board's Environmental Justice Enhancement Initiative I-4 and was formally approved by SCAQMD's Mobile Source Committee in February 2005. According to the LST methodology, the use of LSTs by local government is voluntary, to be implemented at the discretion of local agencies (*Final*

Localized Significance Threshold Methodology, SCAQMD, Pg 1-1). The methodology and associated LSTs are recommendations only and not mandatory requirements. LSTs generally apply to smaller projects and not regional projects. At the time that the project-specific air quality impacts were being analyzed and the NOP for the project was released (July 2004), the LST methodology was not finalized and approved for use by SCAQMD. Based on the lack of availability of approved methodology and the size of this project (approximately 202-acres), the City of Ontario has decided that the use of LSTs is not appropriate or applicable to this project and that air quality impacts should be analyzed based on SCAQMD approved and published methodologies and thresholds used herein.

3.2.2.6 Operational Impacts

The Project (residential uses) would consume natural gas and electricity. Use of consumer products such as home appliances, lawn mowers, water heaters, and stoves cause air emissions which are individually insignificant but may be cumulatively substantial. In addition to these area sources, mobile sources from vehicles traveling to and from the Project site would also emit pollutants. The area and mobile source emissions for the Project are generated using the URBEMIS 7G model, and are shown in Table 3.2-6, *Emissions from Proposed Land Usage*.

Table 3.2-6, below, shows that the emissions generated from the Project-related area and mobile sources would exceed the SCAQMD thresholds for ROC. There are no feasible mitigation measures for the Project that would reduce the ROC emissions to below the thresholds presented in the table.

Table 3.2-6 Emissions from Proposed Land Usage (lbs/day)

| Land Use | CO | ROC | NO _x | SO _x | PM ₁₀ |
|---|--------|-------|-----------------|-----------------|------------------|
| Area Sources – Consumer Products ¹ | ND | 36.84 | ND | ND | ND |
| Area Sources - Natural Gas Usage | 4.74 | 0.86 | 11.24 | ND | 0.02 |
| Area Source – Landscaping | 5.8 | 0.6 | 0.12 | 0.17 | 0.01 |
| TOTAL AREA SOURCE EMISSIONS | 10.54 | 38.29 | 11.36 | 0.17 | 0.03 |
| Mobile Sources (Vehicles) | 448.01 | 49.09 | 41.76 | 0.3 | 44.9 |
| TOTAL UNMITIGATED EMISSIONS | 458.55 | 87.38 | 53.12 | 0.47 | 44.93 |
| SCAQMD Threshold | 550.0 | 55.0 | 55.0 | 150.0 | 150.0 |
| Significant (Yes/No) | NO | YES | NO | NO | NO |
| TOTAL MITIGATED EMISSIONS | 372.0 | 80.34 | 43.7 | 0.25 | 36.9 |
| Significant (Yes/No) | NO | YES | NO | NO | NO |

Source: Data compiled by URS Corporation (2005).

- 1 Consumer Product emissions are from air fresheners, automotive additives, household cleaners, and personal care products.

ND No data reported by the model.

Long-Term Microscale (CO Hot Spot) Analysis

The Project would generate approximately 6,550 daily vehicular trips. Vehicular trips associated with the Project would contribute to the congestion at intersections and along roadway segments in the Project vicinity. CO concentration is a direct function of vehicle idling time and, thus, traffic flow conditions. Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with a high ambient

background CO concentration, modeling of CO concentrations is recommended to determine a project's effect on local CO levels.

Existing CO concentrations in the immediate Project vicinity are not available; however, ambient CO data from Upland's air monitoring station (approximately 7 miles northwest of the Project) are generally moderate. During the past five years, the highest recorded one-hour CO concentration was 7.0 ppm and the highest eight-hour CO concentration was 4.6 ppm (refer to Table 3.2-1). U.S. EPA recommends use of the second highest monitored CO levels recorded within the latest five-year period for areas lacking current CO data. The second highest CO concentrations are 5.0 ppm and 4.4 ppm, respectively, for the one-hour and the eight-hour concentrations. However, the CO concentration used to analyze the future conditions used the future predicted value presented on the SCAQMD web site. This one hour value is 3-62.9 ppm for 2015, which corresponds to the year of analysis in the project-specific Traffic Study.

The impact on local CO levels was assessed using the CARB-approved CALINE4 air quality model, which allows microscale CO concentrations to be estimated along roadway corridors or near intersections. This model is designed to identify localized concentrations of CO, often termed "hot spots." The highest CO concentrations occur during peak traffic hours, which would best represent a worst-case analysis for the calculation of CO impacts. Assumptions for weekday A.M. and P.M. peak hour traffic volumes for future conditions were based on the Traffic Analysis for the West Haven Specific Plan Project (URS, 2005). CO concentrations were calculated for the one-hour averaging period and compared to the State one hour CO standard of 20 ppm. CO eight-hour averages were calculated from the one-hour CO calculations using techniques outlined in the CEQA Air Quality Handbook (SCAQMD, 1993).

According to SCAQMD approved methodology, CO hotspots analyses should be conducted for intersections where the volume to capacity ratio increases by 2 percent or more for intersections with an LOS rating of D or worse and for intersections where the LOS decreases from a rating of C or worst. Therefore, nine of the intersections analyzed in the Traffic Study were analyzed. The U.S. EPA suggests that five intersections with the highest traffic volumes and five intersections with the worst level of service be modeled for CO hot spot analysis. Five intersections in the Project vicinity were modeled. Three of intersections are the worst case intersections based on LOS. Two of the intersections have LOS of D and F (A.M. and P.M.) while the third intersection has a LOS of C and E. The other two intersections have LOS of C and D. Vehicle emission factors, meteorological data, number of vehicles, street width, street geometry, and intersection data were used in the CALINE4 analysis.

Table 3.2-76, *Carbon Monoxide Concentrations Future (Year 2015) Conditions*, predicts the CO concentrations at each intersection without and with the Project. Predicted one-hour and eight-hour CO concentrations would be below the State standard without and with the Project. The incremental increase in CO emissions from the Project-related trips would be 0.2 ppm or less. The Project would not cause significant CO impacts in the Project vicinity.

Table 3.2-6 Carbon Monoxide Concentrations (ppm*) Future (Year 2015) Conditions

| Intersection | Without Project CO Concentration 1-hour** / 8-hour** | With Project CO Concentration 1-hour** / 8-hour** | Increase by the Project CO Concentration 1-hour** / 8-hour** |
|--|---|--|---|
| Archibald Ave & SR-60 EB Ramps (PM Peak) | 5.5 / 4.4 | 5.5 / 4.4 | 0.0 / 0.0 |
| Archibald Avenue & Riverside Drive (PM Peak) | 5.9 / 4.7 | 6.0 / 4.8 | 0.1 / 0.1 |
| Archibald Avenue & Chino Avenue (PM Peak) | 6.0 / 4.8 | 6.0 / 4.8 | 0.0 / 0.0 |
| Archibald Avenue & Edison Avenue (PM Peak) | 7.8 / 6.2 | 7.8 / 6.2 | 0.0 / 0.0 |
| Haven Avenue & Riverside Drive (AM Peak) | 4.6 / 3.7 | 4.6 / 3.7 | 0.0 / 0.0 |
| Haven Avenue & Riverside Drive (PM Peak) | 5.5 / 4.4 | 6.0 / 4.8 | 0.5 / 0.4 |
| Haven Avenue & Chino Avenue (AM Peak) | 6.0 / 4.8 | 6.3 / 5.0 | 0.3 / 0.2 |
| Haven Avenue & Chino Avenue (PM Peak) | 5.3 / 4.2 | 5.5 / 4.4 | 0.2 / 0.2 |
| Haven Avenue & New Edison Avenue (AM Peak) | 5.1 / 4.1 | 5.2 / 4.2 | 0.1 / 0.1 |
| Millcreek & Riverside Drive (PM Peak) | 5.7 / 4.6 | 5.7 / 4.6 | 0.0 / 0.0 |
| Milliken Avenue & Riverside Drive (AM Peak) | 5.7 / 4.6 | 5.8 / 4.6 | 0.1 / 0.0 |
| Milliken Avenue & Riverside Drive (PM Peak) | 8.0 / 6.4 | 7.6 / 6.1 | -0.4 / -0.3 |

Source: Data compiled by URS Corporation (2006)

* All data are in parts per million (ppm).

** Includes SOAMD estimate of highest ambient 1-hour CO concentration of 2.9 ppm.

3.2.4.1 Air Quality Management Plan Consistency

The population growth projections for the County and the Project site were included in the 2003 AQMP prepared by SCAQMD and SCAG for the region, therefore, the Project is consistent with the adopted AQMP.

3.2.4.2 Project Design Features

The Project includes landscaping and irrigation of large, contiguous open space features (parks, paseos, and school grounds) created through grading and construction. Landscaping and associated irrigation would also contribute toward control of fugitive dust. All landscaping maintenance equipment should be electric-powered to reduce possible VOC emissions.

Table 3.2-7 Carbon Monoxide Concentrations (ppm^a) Future (Year 2015) Conditions

| Location | Distance to Receptor Location from Roadway Centerline (meters) | Without Project CO Concentration 1-hour** / 8-hour** | With Project CO Concentration 1-hour** / 8-hour** | Increase by the Project CO Concentration 1-hour** / 8-hour** |
|--|--|--|---|--|
| Old Avenue & Schaefer Avenue (LOS C, P.M. LOS E) | 21 | 5.8 / 4.6 | 5.8 / 4.6 | 0.0 / 0.0 |
| Avenue & Chino Avenue (LOS F, P.M. LOS D) | 20 | 6.0 / 4.8 | 6.2 / 5.0 | 0.2 / 0.2 |
| Old Avenue & Edison Avenue (LOS C, P.M. LOS D) | 28 | 6.1 / 4.9 | 6.1 / 4.9 | 0.0 / 0.0 |
| Avenue & New Edison Avenue (LOS D, P.M. LOS C) | 23 | 4.7 / 3.8 | 4.7 / 3.8 | 0.0 / 0.0 |
| 7 Avenue & Riverside Drive (LOS D, P.M. LOS F) | 25 | 6.6 / 5.3 | 6.7 / 5.4 | 0.1 / 0.1 |

Source: Data compiled by URS Corporation (2005)

^a -All data are in parts per million (ppm).

^{**} -Includes SQAMD estimate of highest ambient 1-hour CO concentration of 3.6 ppm.

3.2.5 Mitigation Measures

To minimize adverse impacts to Air Quality Resources, the following measures shall be implemented:

AQ-1 Dust Control

Prior to Project site construction activities, and prior to issuance of grading permits for each phase of the Project, a Dust Control Plan (DCP) shall be submitted to, and verified by, the City Building and Engineering Department(s). The DCP shall identify actions Project applicant(s) and the Project contractor(s) shall utilize to reduce on- and off-site dust production consistent with SCAQMD guidelines. Dust Control mitigation measures for the Project shall include:

- ◆ After final grades have been established, disturbed areas shall be vegetated and mulched immediately.
- ◆ Maintain all disturbed portions of the construction site, in a damp condition, including all material excavated, filled or graded. When required, such disturbed areas shall be sufficiently watered to maintain a damp condition, no less than twice daily, at midday and the end of the work day, and more frequently if necessary, to prevent excessive amounts of dust.
- ◆ Identification of disturbed portions of the Project's construction site expected to remain inactive for longer than a period of ~~three months~~ one month. These portions shall have non-toxic soil stabilizers applied according to manufacturers' specifications or be seeded and watered until grass cover is grown.
- ◆ Retain the Project site's natural vegetation to the extent feasible on all areas that will not be disturbed for grading, except areas that must be cleared and revegetated as part of a fuel modification program.
- ◆ All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (winds greater than 15 mph until winds are less than 25 mph ~~and~~ averaged over one hour ~~20 minutes~~), or during Stage 1 or Stage 2 air quality episodes.
- ◆ Specification of the timing of grading and construction to minimize soil exposure to winter rain period experienced in Southern California.
- ◆ On-site vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- ◆ All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least two feet of freeboard (the distance between the top of the load and the top of the trailer), and shall drive through a wheel washer before entering paved right-of-way.
- ◆ Pavement of all on-site roads shall occur as soon as feasible. In the interim they shall be watered periodically or chemically stabilized. Additionally, all adjacent streets shall be cleared using SCAQMD Rule 1186 certified street sweepers or roadway washing trucks (i.e., based on lead agency supply availability recommend street sweepers use reclaim water) ~~at the end of the day of any visible soil material that has carried onto adjacent public paved roads by Project construction traffic.~~

- ◆ An inspection and maintenance program shall be included in the DCP to ensure that any erosion, which does occur, either on- or off-site as a result of the Project, shall be corrected through a remediation or restoration program within a time frame specified by City Building Department.
- ◆ If feasible, install wheel washers where vehicles enter and exit the construction site onto public paved roads or wash off trucks and any equipment leaving the site each trip.
- ◆ If feasible, appoint a construction relations officer to act as a community liason concerning on-site construction activity including resolution of issues related to PM10 generation.

AQ-2 Air Quality

During grading and construction activities, the Project site Superintendent shall submit a signed report once every three months to the City Building and Engineering Department(s). To mitigate impacts to air quality, this report shall document the past three months' performance, the planned performance for the next three months, and, certify Project site Superintendent and Project contractor(s) compliance with the following:

- ◆ Construction materials shall be received during off-peak travel periods, between 8:30 a.m. and 4:00 p.m. A written explanation for any non-compliance shall be submitted by the offending party to the City Building and Engineering Department(s).
- ◆ Lane closures and detours shall be limited to off-peak travel periods between 8:30 a.m. and 4:00 p.m., whenever possible.
- ◆ Verification by the Project site Superintendent of the construction equipment that has been on the Project site during the preceding three months, that is currently on the site, and that is anticipated to be on the site during the next three months. The Project site Superintendent shall certify that all such equipment has been and shall be selected for use based on low-emission and high-energy efficiency factors, including that such equipment has received a tune-up (or equivalent work) to assure low NO_x emissions within six months preceding delivery to the Project site, and at least once a year thereafter.
- ◆ Documentation of the estimated number of all workers anticipated to be on the Project site, the estimated number of these that plan to carpool, and an approximate number of those that did carpool in the last three months.
- ◆ If feasible and practicable, the applicant shall use high-pressure-low-volume (HPLV) paint applicators with a minimum transfer efficiency of at least 50%; use required coatings and solvents with a VOC content lower than required under Rule 1113; construct/ build with materials that do not require painting; and use pre-painted construction materials.~~Estimation of the number of painting activities (number of d/u per day) that produce equal or less than SCAQMD threshold amounts of volatile organic compounds (VOCs), in addition to the actual and planned painting activities in the three-month period preceding and following the report.~~
- ◆ It is highly recommended that all diesel trucks be prohibited from idling in excess of five minutes, both on- and off-site;

- ◆ It is highly recommended that all vehicles and equipment will be properly tuned and maintained according to manufacturer's specifications;
- ◆ It is highly recommended to include a configure construction parking to minimize traffic interference;
- ◆ It is highly recommended to provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow;
- ◆ It is highly recommended to reroute construction trucks away from congested streets or sensitive receptor areas;
- ◆ It is highly recommended to provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site;
- ◆ It is highly recommended to use clean construction equipment; emulsified diesel fuels; construction equipment that uses low sulfur diesel and is equipped with oxidation catalysts, particulate traps, or other retrofit technologies, etc.

3.2.6 Significant Effects of the Project After Mitigation

The Project would contribute significant NO_x and PM₁₀ air emissions in the short-term (construction) and long-term ROC air emissions (occupation and use of the Project site), within an air basin identified as a “non-attainment” area. Also, any project that contributes emissions to this basin will have a cumulative impact on the air quality of the region. Therefore, unavoidable significant construction, operational, and cumulative impacts on air quality will be created by the proposed Project.

3.3 BIOLOGICAL RESOURCES

This section is a summary of the Biological Resources associated with the development of the West Haven Specific Plan. Potential Biological resources and constraints were previously identified in assessments conducted by Envicom Corporation (1997) and Larry Munsey, Int'l. (LMI, 2002 and 2003). Section 3.3, *Biological Resources*, also includes the results of a United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) California Natural Diversity Data Base (CNDDDB) records search; and a review of the CNDDDB Rare Find reports for the Ontario and Guasti, California quadrangles. These biological assessments, queries, and concurrent literature searches, were used to evaluate the presence or absence of sensitive biological resources on the Project site (refer to Appendix C, *Biological Resources and Constraints*).

3.3.1 Setting

The Project site is located within a portion of a broad alluvial fan originating from the southern flank of the San Gabriel Mountains, dipping gradually southward to the confluence of Chino Creek and the Santa Ana River at the Prado Flood Control Basin in Riverside County, California. Historically, the Project site was dominated by coastal sage scrub vegetation (Kuchler, 1977). A distinct type of coastal sage scrub, Riversidean sage scrub (Holland, 1986), associated with alluvial fans and drainages, particularly along the base of the transverse and peninsular ranges, is thought to have once occupied the region, including the Project site.

3.3.1.1 Habitat

The Project habitat includes, disturbed land, open agriculture fields, grazed fallow fields, and disced land. Reptiles are expected to be uncommon in these fields, although reptile species including the Western Fence Lizard (*Sceloporus occidentalis*), Side-Blotched Lizard (*Uta stansburiana*) and the Gopher Snake (*Pituophis melanoleucus*), are common species in California and are readily seen in most parts of the state under most conditions, including the Project site. Reptiles were not observed during the biological studies conducted for the Project site. Reptiles potentially occurring in the Project site are likely to be scarce because most reptiles are closely tied to specific natural habitats, such as sage scrub or woodlands no longer present on-site, due to the Project area's historical agricultural land use.

There are several types of open water bodies throughout the Project site. Most of the dairy farm operations have a state mandated dairy farm manure retention basin, or a series of basins, to receive runoff from the dairy farming facilities in addition to other water bodies that include livestock watering and freshwater irrigation ponds. Expected amphibian species in open water bodies include Black-Bellied Slender Salamander (*Batrachoseps nigriventris*), California Toad (*Bufo boreas halophilus*), Pacific Treefrog (*Pseudacris regilla*), and the introduced Bullfrog (*Rana catesbeiana*). Amphibians were not observed during the biological studies conducted for the Project site. Amphibians potentially occurring in the Project site are likely to be scarce due to the lack of vegetation around most of the open water, its frequent disturbance, and the often poor quality of surface water from dairy farm practices

The agricultural fields are important for a number of bird species, as these fields represent the intermediate area between the Project site's windrows and wet areas. Agricultural fields are used by raptors as foraging habitat, where small rodents or birds are most likely visible. Notably, Ferruginous Hawk (*Buteo regalis*) a sensitive species that often roost on the ground in open fields, especially where vegetation is low. Several other bird species were observed in the agricultural fields during the biological studies, including Canada Goose (*Branta canadensis*), American Crow (*Corvus brachyrhynchos*), Western Meadowlark (*Sturnella neglecta*), Red-winged Blackbird (*Agelaius phoeniceus*), and the Savannah Sparrow (*Passerculus sandwichensis*).

Eucalyptus trees dominate the vegetation within the windrows of the Project site. These trees are important as perching and nesting sites for raptors. Raptors observed during the biological studies included Turkey Vulture (*Cathartes aura*), Red Tailed Hawk (*Bufo jamaicensis*), and the American Kestrel (*Falco sparverius*). Appendix C, *Biological Resources and Constraints*, lists other raptors observed and other species likely to habitat the windrows. The Raccoon (*Procyon lotor*) and the Virginia Opossum (*Didelphis virginianus*), amongst other mammals, are likely to find the windrows' trees as a biological niche. Additionally, several species of the common bat are expected to live in these trees.

3.3.1.2 Vegetation

Sensitive natural plant communities were not identified during the biological studies. Additionally, sensitive plants were not identified through web search queries conducted for the Project site via the USFWS, CDFG, or the CNDDDB. The likely occurrence of special status plants, animals, and natural communities are presented in Table 3.3-1, *Likelihood of Occurrence for California Natural Diversity Database Species Reported for the West Haven Specific Plan*.

The Project site is dominated by agricultural fields, dairy farm operations and a plant and tree nursery. Remnants of native vegetation are virtually absent. Cultivated areas are typically grazed by dairy cows after harvest, and subsequently left fallow. These grazed and fallow fields develop a characteristically ruderal vegetation, composed of a number of weeds including Cheese Weed (*Malva parviflora*), Stinging Nettle (*Urtica dioica*), Common Sunflower (*Helianthus annuus*), Prickly Lettuce (*Lactuca serriola*), Wild Radish (*Raphanus sativus*), Russian Thistle (*Salosa tragus*), and other introduced grasses such as Bromes (*bromus ssp.*), Wild Oat (*Avena ssp.*), and Bermuda Grass (*Cynodon dactylon*). Native species were evident in the ruderal areas and included Sandbur (*Ambrosia acanthicarpa*), Horseweed (*Conyza canadensis*), Jimsonweed (*Datura wrightii*), and Spurge (*Chamaesyce ssp.*).

Windrows are prevalent along the existing roadways within the proposed Project area. The most common tree occurring is the Blue Gum (*Eucalyptus globules*), while Olive (*Olea europaea*), Pines (*Pinus ssp.*), Tamarisk (*Tamarix aphylla*), and Cypress (*Cupressus ssp.*), were also observed. Common trees observed in adjacent residential yards and dairy frontages include Ash (*Fraxinus ssp.*), Mulberry (*Morus ssp.*), Persian Walnut (*Juglans regia*), and Palms (*Washingtonia and Victoria ssp.*).

Areas of intense agricultural industry such as feedlots and permanent cattle holding pens on the Project site are generally devoid of vegetation. A map of the Project site showing these areas of intense agriculture industry, cultivated fallow fields, and windrows is featured as Figure 3.3-1, *Areas of Initial Agricultural Industrial, Fields and Windows*.

3.3.1.3 Wildlife

Several raptors were identified during the biological studies. Other sensitive or protected wildlife were not identified by the USFWS, CDFG or CNDDDB queries or observed in the Project study area. The special status plant, animals, and natural communities are listed in Table 3.3-1.

The Project site has historically been altered from its natural setting under the influence of intense agricultural and dairy farming. Despite these continuing land use practices, the Project site supports a diversity of wildlife, in particular, birds. This is due, in part, to the relatively level topography that contributes to the accumulation of standing water, an attraction for numerous migratory birds. The Project's on-site basins, reservoirs, drainages, and low areas, subject to flooding, are the focus of migratory bird activity and many of the species observed, and those likely to occur, are attracted to the open water and the basin shorelines for resting habitat, food, and cover from predators. The current absence of dense urbanization, means that these open spaces may still support some native animal species

Table 3.3-1
Likelihood of Occurrence for California Natural Diversity Database
Species Reported
For the West Haven Specific Plan

| Common Name | Scientific Name | Regulatory Status | Habitat | *Likelihood of Occurring On-site |
|--|--|---|--|----------------------------------|
| Insects | | | | |
| Delhi Sands Flower-Loving Fly | <i>Rhaphiomidas terminatus abdominalis</i> | Fed: FE State: None | The Delhi Sands Flower-Loving Fly is found only in small parts of San Bernardino and Riverside counties, at the eastern edge of the Los Angeles Basin, in areas of fine sandy soil, known as Delhi series sands. | Low |
| Reptiles | | | | |
| San Diego Horned Lizard | <i>Phrynosoma coronatum blainvillei</i> | Fed: None State: None NDDDB: G4T3T4S2S3 DFG: CSC, Protected (full species) | The Coast Horned Lizard's range extends from northern California to the tip of Baja California. The subspecies found in southern California, <i>blainvillei</i> , is distributed throughout the foothills and coastal plains from Los Angeles area to northern Baja California. It frequents areas with abundant, open vegetation such as chaparral or coastal sage scrub, in arid and semi-arid climates with friable, rocky, or willow sandy soils. | Low |
| Birds | | | | |
| Burrowing Owl (Burrowing Sites) | <i>Athene cucularia</i> | Fed: SC State: None NDDDB: G4S2 DFG: CSC | The Burrowing Owl burrows in dry annual or perennial grasslands, deserts and scrubland with generally low lying vegetation. | Low |
| Coastal California Gnatcatcher | <i>Poliophtila californica californica</i> | Fed: Threatened State: None NDDDB: G3S2 DFG: CSC County: Listed | The Coastal California Gnatcatcher is predominantly found in coastal sage scrub, but will also use chaparral, riparian and grassland, including coastal sage scrub below 2,500 ft in arid washes, on mesas and slopes of Southern California. | None |
| Tricolored Blackbird (Nesting colony) | <i>Agelaius tricolor</i> | Fed: FSC State: None | The Tricolored Blackbird is a highly colonial species, and is most numerous in Central valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony. | None |
| Western Yellow Billed Cuckoo (Nesting) | <i>Coccyzus americanus occidentalis</i> | Fed: None State: None | The Western Yellow Billed Cuckoo is found in forest to open woodlands, those areas with dense undergrowth such as parks, riparian woodlands and thickets. | None |
| Mammals | | | | |
| Los Angeles Pocket Mouse | <i>Perognathus longimembris brevinasus</i> | Fed: None State: None NDDDB: G5T1T2 | The habitat of the Los Angeles Pocket Mouse has never been specifically defined, although Grinnell (1933) indicated that the subspecies "inhabits open ground of fine sandy composition" (cited in Brylski et al. 1993). This observation is supported by others who also state that the Los Angeles Pocket Mouse prefers fine, sandy soils and may utilize these soil types for burrowing (e.g., Jameson and Peeters 1988). This subspecies may be restricted to lower elevation grassland and coastal sage scrub (Patten et al. 1992). | None |
| San Diego Desert Wood Rat | <i>Neotoma lepida intermedia</i> | Fed: None State: None NDDDB: G5T3 | San Diego Desert Wood Rats are found in a variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth | Low |

| Common Name | Scientific Name | Regulatory Status | Habitat | *Likelihood of Occurring On-site |
|----------------------------|---|--------------------------|---|----------------------------------|
| Plants | | | | |
| Intermediate Mariposa Lily | <i>Calochortus weedii</i> var. <i>intermedius</i> | Fed: None State: None | Flowering late spring to mid-summer, the Intermediate Mariposa Lily inhabits dry, often heavy or rocky soil, in chaparral; less than 700 meters; California. | None |
| Mesa Horkelia | <i>Horkelia cuneata</i> ssp. <i>puberula</i> | Fed: None State: None | The Mesa Horkelia inhabits California (generally 70-700 meters) in the Outer South Coast Ranges and South Coast floristic subregions (especially the foothills edge of the Los Angeles Basin), and occurs in dry sandy places in chaparral. | None |
| Plummer's Mariposa Lily | <i>Calochortus plummerae</i> | Fed: None State: None | The Plummer's Mariposa Lily inhabits dry rocky slopes, brushy areas and openings in chaparral. | None |
| Prostrate Navarretia | <i>Navarretia prostrata</i> | Fed: FSC State: None | Prostrate Navarretia inhabits coastal scrub, valley and foothill grasslands, and vernal pools. | None |
| Robinson's Peppergrass | <i>Lepidium virginicum</i> var. <i>robinsonii</i> | Fed: None State: None | This annual herb grows in openings in chaparral and sage scrub, generally well away from the coast in Southern California in the foothill elevations. Typically sites where this species is observed are relatively dry, exposed locales, rather than beneath a shrub canopy or along creeks. | Low |
| Salt Marsh Bird's Beak | <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> | Fed: FE State: SE | The Salt Marsh Bird's Beak is an inhabitant of the coastal salt marshes, however this plant is rarely discovered very far from the highest high tide elevations, usually on the upper ecotonal edge with the surrounding habitat. | None |
| Salt Spring Checkerbloom | <i>Sidalcea neomexicana</i> | Fed: None State: None | The Salt Spring Checkerbloom occupies alkali playas, brackish marshes, chaparral, coastal scrub, lower montane coniferous forest, and Mojave desert scrub. | None |

Fish and Wildlife Service (Federal)

- FE** = Endangered: in danger of becoming extinct throughout all or a significant portion of its range.
- FT** = Threatened: likely to become endangered in the foreseeable future in the absence of special protection.
- FC** = Federal Candidate: candidate for FT or FE listing.
- FSC** = Species of Concern: sufficient information exists which warrants concern over that species status and warrants study.
- PFE** = Proposed Endangered.

California Department of Fish and Game (State)

- SE** = Endangered: in danger of becoming extinct throughout all or a significant portion of its range.
- ST** = State Threatened: likely to become endangered in the foreseeable future in the absence of special protection.
- SC** = State Candidate.
- CSC** = California Special Concern species: information exists which warrants concern over that species' status and may warrant future listing.
- RS** = Rare.
- CNPS 1B** = California Native Plant Society List: rare or endangered in California and elsewhere.

***Low** = The site is within the known range of the species but necessary habitat conditions range from poor to not present and is therefore rarely used by the species. ***None** = Necessary habitat conditions are not present.

Source: California Natural Diversity Database Wildlife and Habitat Data Analysis Branch (October, 2004).



AREAS OF INITIAL AGRICULTURAL, INDUSTRIAL, FIELDS AND WINDROWS

that have persisted though the site changed to an agricultural habitat. Additionally, numerous other migratory birds are expected, as other bird species were observed on-site (refer to Appendix C, *Biological Resources and Constraints*).

The wildlife likely to be observed near dairy farm operations and on-site residences are usually non-native, or more common native species that are tolerant of human activity. The most common species observed in the vicinity of the dairy farm structures during the biological surveys were Rock Dove (*Columba livia*), European Starling (*Sternus vulgaris*), House Finch (*Carpodacus mexicanus*), and the Brewer's Blackbird (*Euphagus cyanocephalus*). In addition to these species observed, others likely to be present are the Western Fence lizard, Norway Rat (*Rattus norvegicus*), and the House Mouse (*Mus musculus*).

In addition to the biological studies performed by Envicom (1997), 2 endangered Delhi Sands Flower-Loving Fly (DSF)-focused presence-absence studies were conducted for the USFWS by Larry Munsey International within the Project site (2002 and 2003). The study sites for DSF consists of two neighboring, but not contiguous, rectangle shaped parcels of land, Parcels 4 and 7, located at the corner of Haven Avenue and Chino Avenue. Parcels 4 and 7 were chosen for the focused DSF studies because both parcels show a potential for the correct natural substrate classified by soil maps of the USDA (1980) as Delhi Fine Sand Soil Formation. Currently, Parcel 4 is a vacant weeds lot while Parcel 7 is occupied almost entirely by an operational dairy farm, with the remainder fallow. Both sites are surrounded by dairies, power line easements, and residential neighborhoods, except for the nursery north of Parcel 4. Vegetation on the sites consist generally of ruderal mixture of non-native subshrublands, grasses, and forbs. None of the three plant species commonly considered indicative of habitat suitable for the DSF, the Telegraph Weed, Croton, or the California Buckwheat, were present on Parcel 4 or Parcel 7. Additionally, neither a DSF or DSF sign (i.e., discarded pupal cases) were observed during the biological studies (Munsey, 2002 and 2003), although a total of 71 species of insects in 42 families were recorded at the Project site.

3.3.1.4 Wildlife Movement Corridors

Wildlife Movement Corridors were assessed by reviewing aerial photos of the Project site and the current land use operations. It was determined that the Project site is a dead-end peninsula, or, a cul-de-sac habitat. A dead-end peninsula habitat denotes animals have the potential to occasionally enter from the southeast as they travel north, but their exit to the north and west is precluded by the existing surrounding human land uses.

3.3.1.5 Jurisdictional Determination

Drainage courses were not found within the Project site, therefore a jurisdictional delineation for Waters of the United States, including wetlands as defined by the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act and for California Streambeds defined by the CDFG under Section 1600 of the Fish and Game Code is not required.

3.3.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to

identify and describe the level of impacts on biological resources associated with the Project. The NOP and Appendix G suggest that a project related significant impact would occur if the Project would:

- ◆ 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.

3.3.3 Impacts

Overall, the Project impacts on habitat and vegetation are considered less than significant. Project-related construction would remove large amounts of agricultural and dairy fields, non-native grasslands, and individual or small clusters of scattered native and non-native ornamental trees. Additionally, less than significant impacts on the DSF would occur based on the lack of observation of the DSF over the two consecutive years in which environmental conditions in the region were apparently favorable for DSF emergence and aboveground activity, and during times when adults of the species were reported at other locations within its range; and DSF were not found at, or on, the Project site. The Project site also has a very low diversity of plants on-site with a high proportion of non-native invasive species in the site's plant composition that does not provide suitable habitat for the DSF. The results of the focused DSF surveys on the Project site satisfy the Federal requirement to demonstrate the absence of the DSF on the survey site (Munsey, 2002 and 2003).

The biological studies conducted for the proposed Project do indicate the construction and implementation of the Project has the potential to impact migratory and wintering birds, as well as numerous raptor, waterfowl, wading birds, and shore bird species that use the area and Project site's open water, wet fields, and windrows. Several of these migrating birds are considered sensitive by the CDFG. Furthermore, nesting birds may occur within the trees of the Project site. These birds could potentially be impacted by Project construction activities in violation of the Migratory Bird Treaty Act. This Act regulates only birds, bird parts, nests, eggs, or products of these birds and not their habitat.

3.3.4 Mitigation Measures

To minimize adverse impacts to Biological Resources, the following measures shall be implemented:

- B-1** Prior to issuance of grading permit(s), Project applicant(s) shall pay their fair share of the \$22.7 million for the habitat land acquisition within the Chino/El Prado Basin Area that shall serve as the designated Waterfowl and Raptor Conservation Area (WRCA). The fee shall be paid in accordance with the September 10, 2002 modification to NMC GPA Policy 18.1.12 and Implementation Measure I6, that state a 145-acre WRCA shall be provided through either a mitigation land bank, or by purchasing a property through development mitigation/impact fees. The habitat land acquisition shall be managed by Land Conservancy, a non-profit organization selected by the City and The Endangered Habitat's League and the Sierra Club. This mitigation measure provides funding to help ensure that the referenced habitat, which is more suitable to sustaining these species, is preserved. Thus, the chances of the prosperity of the species are increased.

- B-2** Prior to issuance of grading permit(s), a habitat land acquisition fee of \$4,320 per acre shall be paid by Project applicant(s); and placed into a trust account for use upon Project development and construction activities, for the restoration and rehabilitation of the WRCA agreed to be provided at the 145-acres within the El Prado/Chino Basin. The fee shall be paid in accordance with the September 10, 2002 modification to NMC GPA Policy 18.1.12 and Implementation Measure I-6, that states a 145-acre WRCA shall be provided through either a mitigation land bank, or by purchasing a property through development mitigation/impact fees. This measure provides the same benefits as measure B-1.
- B-3** Prior to clearing the Project site of vegetation during nesting season, a qualified biologist shall conduct a site survey and mark (to protect) all active nests. Additionally, to avoid nesting bird impacts, the Project site shall not be cleared between March 1 and September 15. Prior to clearing any vegetation from around active nests, or the clearing of any nests, a USFS Permit to Reduce Nesting Birds if Present, from the USFWS shall be secured. Not clearing/grubbing the site between March and September reduces the possibility of a disturbance to or take of nesting birds, their young, or causing the adults to abandon their nests. This increases the potential for successful breeding and propagation of the species.
- B-4** Thirty days prior to any Project construction, an ornithologist shall survey for raptor nests according to CDFG requirements. If active nests are detected, the nests shall be flagged and all Project construction activities shall be kept 300 feet of nesting raptors and 500 feet of nesting migratory birds, until the young birds have safely fledged, as determined by the ornithologist. Active raptor nests shall be avoided per CDFG requirements. The 300 and/or 500 foot exclusion buffers between construction and nesting birds reduces the chances of accidental take or nest abandonment due to construction activities and noise. This increases the potential for successful breeding and the propagation of the species.

3.3.5 Significant Effects of the Project After Mitigation

Application of Mitigation Measures B-1 through B-4 will reduce Project impacts on Biological Resources to a less than significant level.

3.4 CULTURAL RESOURCES

This section is a summary of the Cultural, Historical, Archaeological, and Paleontological Resources associated with the development of the West Haven Specific Plan. Potential Cultural resources and constraints were previously identified in an assessment report prepared by Michael Brandman and Associates (2004) (refer to Appendix D, *Cultural Resources and Constraints*). Section 3.4, *Cultural Resources*, also includes the results of previous research used to illustrate the Cultural, Historical, Archaeological, and Paleontological history of the Project site.

3.4.1 Setting

Archaeological research in southern California has resulted in a scheme for regional prehistory that is generally accepted and represented by three broad temporal periods. These periods are the Paleoindian period (12,000 to 8,000 years before present [B.P.]), the Archaic period, beginning between 9,000 and 7,000 B.P., transitioning to the Late Prehistoric period at approximately 1,000 B.P. It is important to note

that the beginning and end for each period is not concrete because slight changes in archaeological assemblages, including artifacts and botanical and faunal materials are used to characterize each period, and technological innovations often occur at different times. Archaeological assemblages are distinctive enough, however, to provide a summary of the major stages of the major cultural chronologies represented in southern California and San Bernardino County.

Several regional cultural chronologies have been developed for the western San Bernardino County area (Roger, 1939; Wallace, 1955, 1978; True, 1958, 1966, 1970; Meighan, 1959; Moriarty, 1966). Early archaeological sites in southern California are associated with the Paleoindian Period and date to roughly 10,000 B.P. In this region, this cultural period is referred to as the San Dieguito tradition and is characterized by stemmed projectile points, leaf-shaped knives, and crescents (Wallace, 1955). The San Dieguito tradition is best documented in the San Diego area where sites dating to this period are associated with nomadic hunter-gatherers who focused on large game, shellfish collection, and fishing as primary subsistence resources (Horizon I; Wallace, 1955). Around 9,000 B.P. the subsistence and settlement practices of people living in southern California began to shift in response to the changing environmental conditions associated with increasing aridity. The shift in environmental conditions resulted in Native Americans living in the region to have an increased dependence on seeds and acorns for subsistence, reflected by greater frequencies of groundstone artifacts, such as hand manos and metates, found in archaeological sites (Horizon II; Wallace, 1955). New technological innovations were also expressed in the archaeological record, with the larger projectile points associated with earlier occupations slowly replaced with smaller arrowheads.

The first appearance of ground-stone assemblages in southern California is associated with the La Jolla Complex. In coastal areas, this complex focused on small game and mollusks for subsistence. Inland groups focused on seed gathering and acorn processing. Later cultural horizons are characterized by an increased use of mortars and pestles and the first manifestation of discoidals (Horizon III, spanning 3,000 B.P. to 230 B.P.). Internment is the form of burial associated with the San Dieguito and La Jolla Periods (Strudwick et al. 1995).

Around 500 B.P., the region saw another major shift in technological innovations with the introduction of the bow and arrow, which is identified by the appearance of very small projectile points in archaeological assemblages (William Self Associates, 1999). Ceramics also became widely used during this period, millingstone assemblages are more prevalent, obsidian from the Salton Sea appears with greater frequency, and the dead were cremated rather than buried (Moratto, 1984).

California's historic period is typically divided into three periods beginning with the arrival of Spanish explorers in 1769 and extending into the American period (1846 to present). In the Project area, the Spanish Period is characterized by the establishment of Mission San Gabriel in 1771. Livestock and agriculture were introduced to the region during this period, and the Gabrieliño's traditional way of life was influenced by acculturation. After a mission rancho named San Bernardino was established in the eastern end of the valley in 1819 the name "San Bernardino" was adopted by the region. The Spanish Period ended in 1821 with the onset of the Mexican Period which lasted until 1848. The Mexican Period was characterized by large land grants that were given to people to encourage settlement of the region. As a result of these grants, the cattle industry blossomed in the valley, but was focused on meat production rather than dairy. The Mexican Period ended with the end of the Mexican-American War, and transitioned to the American Period in 1848.

The American Period continues to present (resources associated with this period must be at least 45 years old to be considered historic under CEQA). The discovery of gold in the Sierra Nevada foothills in 1849 led to an influx of immigrants to the region who practiced a variety of trades. With the completion of the Southern Pacific and Santa Fe Railroads in the early 1880s, a land boom swept across the territory. As the population grew, the landscape also was modified. Agricultural development occurred on nearly all arable lands; woodlands were cut for lumber, railroad ties, and timbers. Cattle grazed some native grasses to extinction. Transportation between San Diego, Los Angeles, Ontario, and other major cities became increasingly important, and correspondingly, railroad spurs and interstate highways were constructed. With increased ease of transportation to and from major cities and ports, development of the San Bernardino Valley area was spurred even more, as it continues today.

The Project area falls within the traditional native boundaries of California Indians that were associated with the Mission San Gabriel during the Spanish Period (1769-1821) (Bean and Vane, 1979). These Native Americans were known as the Gabrieliño and Serrano Indians (Kroeber, 1925) and spoke a language that falls within the Cupan group of the Takic subfamily of the Uto-Aztecan language family. This language family is extremely large and includes the Shoshonean groups of the Great Basin. Due to the close geographic proximity of Gabrieliño and Serrano bands living in the area, and linguistic similarities, ethnographers suggested they shared the same ethnic origins (Kroeber, 1925; Bean and Smith, 1978), therefore, these groups will be referred to as the Gabrieliño in this document. Gabrieliño territory extended from the San Bernardino Mountains to San Clemente Island, occupying most of modern day Los Angeles and Orange Counties, which was historically fertile land (Bean and Smith, 1978).

Very little is known about early Gabrieliño social organization because they were not studied until the 1920s (Kroeber, 1925), by which time the bands had already been influenced by missionaries and settlers. Kroeber's (1925) work indicates the Gabrieliño were a hierarchically ordered society with a chief who oversaw social and political interactions both within the Gabrieliño culture and with other groups. The Gabrieliño had multiple villages ranging from seasonal satellite villages to larger more permanent villages. Resource exploitation was focused on village-centered territories and ranged from hunting deer, rabbits, birds and other small game to sea mammals. Fishing for freshwater fish, saltwater mollusks, and crustaceans and gathering acorns and various grass seeds were also important (Bean and Smith, 1978). Fishing technology included basket fish traps, nets, bonefish hooks, harpoons, and vegetable poisons and ocean fishing was conducted from wooden plank canoes lashed and asphalted together (Blackburn, 1962-63; Johnson 1962). Their houses were large circular thatched and domed structures of tule, fern, or carrizo capable of accommodating several families (Johnson, 1962). Smaller, earth-covered ceremonial structures were also present in the villages and were used in a variety of ways. These structures were used as sweathouses, others as meeting places for adult males, as a ceremonial enclosure (yuva'r), and others as menstrual huts (Blackburn, 1962-63; Heizer, 1968).

3.4.1.1 Historical and Cultural Resources

According to the cultural resources record search conducted for the Project, previous surveys of adjacent land identified the Juan Batista D'Anza Trail paralleling portions of Riverside Drive on the north end of the Project site (refer to Figure 3.4-1, *Previous Surveys and Historic Trail Within One-Mile of Project Area*). The "D'Anza Trail" dates back to 1774, and marks the path followed by Juan Batista D'Anza and

his followers while on route to San Gabriel and Monterey. The D'Anza Trail cut across the property at one time. However, any traces of the trail were destroyed long ago.

In addition, two previously recorded historic structures located at 10401 E. Riverside Drive, within Parcel no. 21815120 (Appendix D) which includes an additional 16 buildings. The parcel is located on the southwest corner of the intersection of Riverside Drive and Haven Avenue. The Historic property is the West Star Dairy. The historic structures include a milking barn and a single family residence. Both structures were constructed in the 1940s (Appendix D). County assessor's documents indicate that the first modification improvements occurred in 1952. The structures are still currently present within the Project area. However, these structures are in a severe deteriorated condition and have been badly vandalized. Also, there is evidence to indicate that homeless individuals and/or 'drug users' occupying these structures. The structures are currently not listed on the California Register of Historic Places.

3.4.1.2 Archaeological and Paleontological ResourcesThe Project site area rests on surface exposures of Quaternary younger fan deposits (Qyf) dating to the late Holocene Epoch. This rock unit has low paleontological sensitivity. It is possible that older Pleistocene sedimentary rock units will be encountered at a depth of 15 feet below the modern ground surface. Paleontological resource monitoring is recommended only if excavations take place more than 15 feet below the modern ground surface.

3.4.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on cultural resources associated with the Project. The NOP and Appendix G suggest that a Project related significant impact would occur if the Project would:

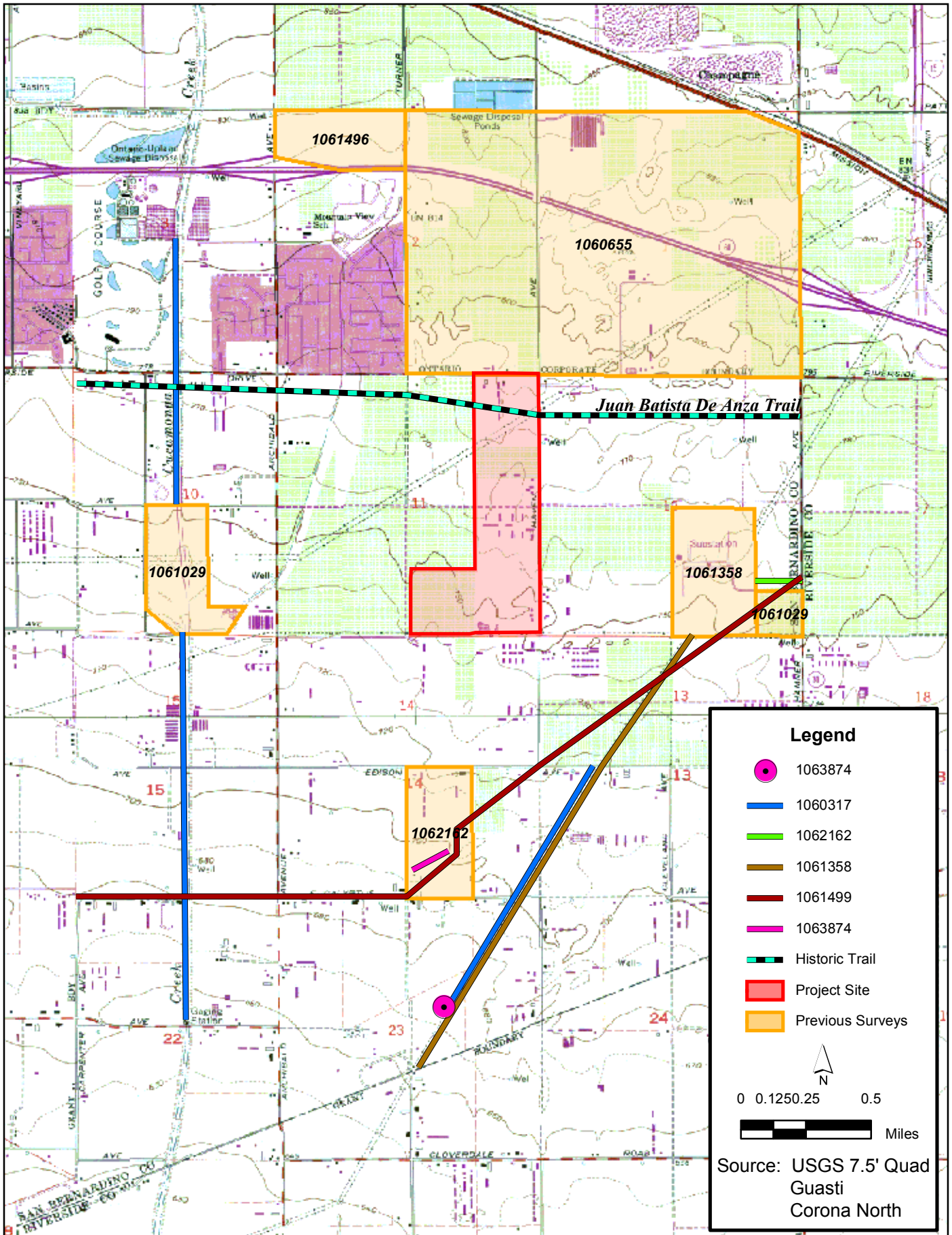
- ◆ Cause a substantial adverse change in the significance of a historical and archaeological resource pursuant to Section 15064.5.
- ◆ Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.4.3 Impacts

For potential impacts to historical resources to be considered significant, the resources in question must be listed in or determined to be eligible for listing in the California Register of Historic Places (CRHR), be included in a local register of historic resources, or be determined by the lead agency to be historical resources. The term "historical resource" may also apply to archaeological sites. However, for an archaeological site that does not meet the criteria of "historical resources," a determination must be made as to whether it qualifies as a "unique archaeological resource."

3.4.3.1 Unanticipated Finds

Despite efforts at comprehensive resource identification, there remains the possibility that previously unidentified cultural resources may be discovered during Project implementation in areas encompassed by survey and areas omitted. Pursuant to 36 CFR §800.13(b), and consistent with the Programmatic Agreement in effect for this Project, the "City" will require the construction crew to stop work in the immediate vicinity of the discovery and retain a qualified archaeologist to fully delineate the resource prior to work proceeding in the area. The "City" will report any discoveries that, after analysis by a qualified archaeologist, appear to be eligible to the National Register of Historic Places (NRHP). The



PREVIOUS SURVEYS AND HISTORIC TRAIL WITHIN ONE-MILE OF PROJECT AREA

“City” will take all reasonable measures to avoid or minimize harm to the resource until consultation with the State Historic Preservation Office (SHPO). Any discovery of human remains and associated objects would be treated in compliance with the Native American Graves Protection and Repatriation Act (NAGPRA).

Should human remains be encountered, work in the vicinity must halt and the County Coroner will be notified immediately. If the remains are determined to be Native American, the coroner will contact the Native American Heritage Commission (NAHC). Specific protocol, guidelines and channels of communication outlined by the NAHC (1991), and in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and SB 447 (Chapter 44, Statutes of 1987) will be followed. Section 7050.5 (c) will guide the potential Native American involvement, in the even of discovery of human remains.

Section 7050.5 (c) states:

“If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she will contact by telephone within 24 hours the Native American Heritage Commission.”

Under typical circumstances, the Most Likely Descendent(s) (MLD) of the discovered remains will then be contacted by the NAHC. The MLD has 24 hours to make recommendations to the Project owner regarding treatment and disposition of the identified remains.

3.4.3.2 Historical and Cultural Resources

The D’Anza Trail has been identified as a potential historical resource. The Juan Batista D’Anza Trail crosses through the northern portion of the Project area. This area has been extensively disturbed by development and is currently under dairy farming; no vestiges of the trail are intact in the Project site, therefore the proposed Project should not have any impacts on the trail. The cultural resources study identified two potentially historic structures at 10401 E. Riverside Drive. The existing structures are associated with the West Star Diary. The structures include a milking barn and single family residence built in the 1940s. The structures are owned by the Slegers Family and were recorded by Claudia Hearbert of Galvin & Associates on April 24, 2004 for the City-wide cultural resources survey. These structures are potentially significant and would, therefore, need to be evaluated for listing on the CRHR or the NRHP.

In addition, the cultural resources study recorded five structures dating from the late 1950s to the early 1960s. CEQA requires resources at least fifty years old to be evaluated per the criterion of the California Register. NEPA requires resources at least fifty years old to be evaluated per the criterion of the National Register. These structures would, therefore, need to be evaluated for listing on the CRHR if the Project was not built prior to 2005, due to the 45 year stipulation on historic structures. With the exception of these historic structures, no significant prehistoric or cultural resources were identified in the Area of Potential Effect established in the Project cultural resources study, or by URS’s review of the area within this APE. While no resources were found during the intensive pedestrian survey, it is possible significant

cultural resources are still present in the subsurface areas occupied by the large manure piles, dairy farms and tree and plant nurseries that were not surveyed.

3.4.3.2.1 Regulatory Requirements and Methods of Evaluation

California has established criteria for the protection of historic resources to reflect that of the federal government. According to California Public Resources Code (PRC) §5020.1 an historic resource includes objects, buildings, structures, sites, areas, places, records, or manuscripts which are historically or archaeologically significant, or are significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. PRC§5024.1 established the California Register of Historical Resources (CRHR), in which historical resources can be nominated by state and local agencies as well as private groups and citizens in an effort to protect historic properties from substantial adverse change. A historic resource may be eligible for the CRHR if it meets the requirements of PRC§5024.1(c):

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important to prehistory or history.

PRC§5024.1(e)(4) further establishes that the California Register may include any historical resources or historic districts designated or listed as city or county landmarks or historic properties or districts pursuant to any city or county ordinance as long as the nominating process is in accordance with the California Register criteria.

The following is taken from the California Office of Historic Preservation (OHP) publication, *Instructions for Recording Historic Resources*:

A broad threshold is set here for the kinds of resources that may be recorded for inclusion in the OHP's filing system. That threshold is designed to encompass resources that have been formally evaluated, as well as those whose importance has not yet been determined. **Any physical evidence of human activities over 45 years old may be recorded for purposes of inclusion in the OHP's filing system.** Documentation of resources less than 45 years old also may be filed if those resources have been formally evaluated, regardless of the outcome of the evaluation.

The 45 year criteria recognize that there is commonly a five year lag between resource identification and the date that planning decisions are made. It explicitly encourages the collection of data about resources that may become eligible for the NRHP or California Register of Historic Resources (CRHR) within that planning period. More restrictive criteria must be met before the resources included in OHP's filing system are listed, found eligible for listing, or otherwise determined to be important in connection with federal, state, and local legal statutes and registration programs (OHP 1995:2).

Federal regulations contain specific information concerning adverse effects on historic properties. In 36 CFR Part 800.5(a)(1) an adverse effect is encountered whenever the characteristics of an historic property, which may qualify for inclusion in the National Register, are diminished. Adverse effects may

include “reasonably foreseeable effects that may occur later in time, be further removed in distance, or be cumulative.” Examples of adverse effects under 36 CFR Part 800.5(a)(2) include:

- i. Physical destruction or damage to all or part of the property;
- ii. Alteration of a property that is not consistent with the Secretary’s Standards for Treatment of Historic Properties (36 CFR Part 68);
- iii. Removal of the property from its original location;
- iv. Change of the character of the property’s use or of physical features;
- v. Introduction of visual, atmospheric or audible elements that diminish the properties historic integrity;
- vi. Neglect of a property which causes its deterioration; and
- vii. Transfer, lease, or sale of a property out of Federal ownership without insurance for its long term protection.

CEQA is similar to NEPA in its approach for the protection of historic properties that may be eligible for the California Register. Specific CEQA regulations regarding the adverse effects to historic properties include:

- Public Resources Code Part 5020.1(k): any project that has a substantial negative impact on any historic resource is deemed to also have a significant impact on the environment. In this section are included historic resources already listed in or potentially eligible for listing in the California Register. Also included are local register of historic resources as defined by;
- California Environmental Quality Act, §15064.5: “Determining the Significance of Impacts to Archeological and Historical Resources.” Section 15064.5(b)(1) of this Act states that a “substantial change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.” Furthermore, Section 15064.5(b)(3) suggests that any project that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstruction Historic Buildings (Weeks and Grimmer, 1995) or Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings shall be considered mitigated to a level of less than a significant impact on the historical resource; and
- California Environmental Quality Act, §21084.1: “Historical Resource; Substantial Adverse Change”

3.4.3.3 Archaeological and Paleontological Resources

There are no archaeological resources on the Project site. Since the Project site is located on Qyf deposits dating to the late Holocene Epoch, the proposed Project’s construction and development has a high potential to uncover paleontological resources that could potentially be located 15 feet below the modern ground surface.

3.4.4 Mitigation Measures

To minimize adverse impacts to Cultural, Historical, Archaeological, and Paleontological Resources, the following measures shall be implemented:

- CR-1** Prior to the issuance of grading permit(s), the Project applicant(s) shall retain a qualified cultural resource specialist, to the satisfaction of the City Planning Department, to monitor the Project's subsurface areas occupied by the large manure piles, dairy farms, and the tree and plant nursery during grubbing and land disturbance from construction activities that previously were not surveyed. The cultural resource specialist shall examine, evaluate, and determine the most appropriate disposition of any potential artifact and shall have the authority to temporarily halt work until any identified artifacts can be recovered, handled, and/or surveyed in the appropriate manner.
- CR-2** Prior to issuance of grading permit(s) and prior to excavation to a depth of more than 15 feet below the modern ground surface, the Project applicant(s) shall retain an archaeological and paleontological resource specialist, to the satisfaction of the City Planning Department, to conduct archaeological, and paleontological resource monitoring.

3.4.5 Significant Effects of the Project After Mitigation

Application of Mitigation Measures CR-1 and CR-2 will reduce Project impacts to Cultural, Archaeological, or Paleontological Resources to a less than significant level.

3.5 GEOLOGY/SOILS

This section is a summary of the Geological and Soil Resources associated with the development of the West Haven Specific Plan. Potential Geological and Soil resources and constraints were previously identified in three separate reports prepared by Associated Soils Engineering, Inc. (2004), Leighton and Associates (2002), and LOR Geotechnical Group, Inc. (2000) (refer to Appendix F, *Geological and Soil Resources and Constraints*).

Section 3.5, *Geology/Soils*, also features information procured from the County Erosion and Sedimentation Control Ordinance, the Uniform Building Code, and the Regional Water Quality Control Board to evaluate the significance of geology/soil resources and constraints on the Project site.

3.5.1 Setting

3.5.1.1 Topography

The Project site is located within the Chino Basin in the northern portion of the Peninsular Range of California. The San Gabriel Mountains lie to the north and the Chino/Puente Hills lie to the west. The Puente Hills were formed by the Puente Hills Thrust System composed of the Coyote Hills, Santa Fe Spring and Los Angeles blind thrust faults. The Puente Hills expose Miocene and Pliocene-age marine sedimentary units and Holocene-age alluvial deposits and sediments. The San Gabriel Mountains to the north are part of the Transverse Mountain Range that were formed by tectonic compression related to the "big bend" on the San Andreas fault. The Cucamonga Fault zone is an east-west conjugate fault system running along the base of the southern flank of the San Gabriel Mountain range.

3.5.1.2 Geology

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone, and there are no known active or potentially active faults on the Project site. The primary seismic hazard at the Project site would be a result of ground shaking due to an earthquake occurring along the many known active and potentially active faults in Southern California. The major faults that could produce significant ground shaking at the Project site, include the San Andreas, San Jacinto, Cucamonga, Rialto-Colton, and the San Jose (refer to Table 3.5-1, *Regional Faults and Related Potential Seismic Activity*).

The San Andreas Fault zone extends a distance of approximately 1,000 miles. In Southern California, this fault zone consists of three segments, the Mojave, San Bernardino, and the Coachella Valley. The Project site is located closest to the San Bernardino segment. The San Jacinto Fault zone consists of a series of fault strands extending from the Salton Sea northwestward to the San Gabriel Mountains. The northern half of this fault zone is divided into the San Jacinto Valley and the San Bernardino Valley segments. The Cucamonga Fault zone is the eastern continuation of the Sierra Madre Fault system. The Cucamonga Fault zone extends east-west for a distance of 18 miles along the base of the San Gabriel Mountains through the communities of Claremont, Upland and Rancho Cucamonga.

3.5.1.3 Seismicity

Ground shaking intensity at a given location depends primarily on the earthquake magnitude, the distance from the epicenter to the site of interest, and the response characteristics of the soils or bedrock units underlying the site. Earthquakes are normally classified as to severity according to their magnitude (as measured from seismographs) or their seismic intensity. The destructiveness of an earthquake at a particular location is commonly reported using a seismic intensity scale. Because the impact of a seismic event generally decreases with increasing distance away from the epicenter, earthquakes are assigned several intensities, but only one magnitude. Seismic intensities are subjective classifications based on observations of damage caused by past earthquakes. The amount of damage is also controlled, to a certain extent, by the size, shape, age, and engineering characteristics of the affected structures. Table 3.5-1, *Regional Faults and Related Potential Seismic Activity*, lists the earthquake faults in the vicinity of the Project site, their distance from the Project site, earthquake magnitude at the Project site, peak acceleration of an earthquake, and likely intensity of a future earthquake.

3.5.1.4 Liquefaction

A secondary phenomenon associated with strong seismic shaking is liquefaction. Liquefaction most often occurs in earthquake-prone areas underlain by young alluvium where the ground water table is less than 50 feet below ground surface (bgs). The soils underlying the Project site consist of Pleistocene age marine sedimentary units and Holocene-age alluvial deposits and sediments (Leighton and Associates, 2002). The youngest surficial deposit is Quaternary-age eolian sand (Qhs) of fine to medium-sized, wind-blown sands. The groundwater level underlying the Project site is estimated to be approximately 230 feet bgs. Neither site soils, nor site groundwater depth, are conditions associated with liquefaction.

Table 3.5-1: Regional Faults and Related Potential Seismic Activity

| Fault | Distance from Project Site (Approx. miles) | Earthquake Magnitude ¹ at Project Site | Peak Acceleration ² | Intensity |
|---------------|--|---|--------------------------------|-----------|
| San Jacinto | 15 | 6.5 | 0.52 g | IX |
| San Andreas | 20 | 8.0 | 0.23 g | IX |
| Cucamonga | 10 | 7.0 | 0.32 g | IX |
| Rialto-Colton | 15 | 6.5 | 0.52g | IX |
| San Jose | 15 | 6.0 | 0.32g | IX |

¹ Richter scale magnitude.

² The symbol g describes the acceleration of gravity, equal to 32 feet per second squared.

Source: Data compiled by the USGS (2004).

3.5.1.5 Soil Erosion

The erosion potential of many of the deposits present on the Project site is considered to be low to moderate. The site would be prone to erosion during the construction period, especially during the rainy season.

3.5.1.6 Subsidence

Subsidence related to man's activities has been attributed in California to withdrawal of subsurface fluids. Common withdrawals causing subsidence include oil, groundwater, the oxidation of subsurface organic material such as peat and coal, and the hydrocompaction of clays in arid and semi-arid areas that have been irrigated extensively. Extraction of oil has not occurred at the Project site, nor do organic rich soils underlie the site that would lend to subsidence, although subsurface cow manure deposits may be found on the Project site from past dairy farm operations on the site.

3.5.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on, or from, geology/soils associated with the Project. The NOP and Appendix G suggest that a Project related significant impact would occur if the Project would:

- ◆ Exposure of people or structure to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Strong seismic ground shaking;
 - Seismic related ground failure, including liquefaction;
 - Result in substantial soil erosion or loss of topsoil; and
 - Location on expansive soil, creating substantial risks to life or property.

3.5.3 Impacts

The Project site contains parcels that are currently used for dairy operations. The surficial soils have been impacted from dairy operations, which tends to disturb and mix the upper three feet of topsoil. Potential impacts of rumen methane gas resulting from cow manure should also be considered. Methane gas is odor

less and colorless and direct exposure to methane gas does not pose a direct health risk. However, methane gas in soil could build up in structures or crawl spaces at unsafe levels.

3.5.3.1 Seismicity

The Project site, as is all of Southern California, is subject to future moderate to high intensities of ground shaking. Although there is no realistic way to avoid seismic shaking of structures, potential impacts can be reduced to below a level of significance by designing the buildings in accordance with the City of Ontario building codes, the Uniform Building Code, and current professional engineering standards applied at the time of construction. City building and grading codes include standard conditions and requirements intended to reduce certain earth-related impacts of development. Table 3.5-2, *Standard Conditions and Uniform Codes Related to Geologic/Soils Hazards*, identifies a list of impacts and hazards by type, and the corresponding code that addresses the impact or hazard. The City subdivision process typically requires the Project applicant demonstrate that each residential and non-residential lot proposed for construction is developable consistent with applicable codes. Recordation of a final subdivision map or issuance of a grading permit may be denied or delayed pending satisfactory mitigation of any potential geological hazard.

Table 3.5-2 Standard Conditions and Uniform Codes Related to Geologic/Soils Hazards

| Typical Impacts and Hazards | County Codes | | UBC ² | RWQCB ³ |
|---|--------------|----------------------|------------------|--------------------|
| | Building | Grading ¹ | | |
| ▪ Seismic-related effects, e.g., | ✓ | ✓ | ✓ | |
| ▪ Ground-shaking | ✓ | ✓ | ✓ | |
| ▪ Soil conditions | | ✓ | | |
| ▪ Liquefaction | ✓ | ✓ | ✓ | |
| ▪ Disposal of excavated material | ✓ | ✓ | | |
| ▪ Unstable cut and fill slopes | ✓ | ✓ | ✓ | |
| ▪ Erosion of graded areas | ✓ | ✓ | | |
| ▪ Alteration of runoff | ✓ | ✓ | | |
| ▪ Unprotected drainage ways | ✓ | ✓ | | |
| ▪ Increased impervious surfaces and associated urban runoff | ✓ | ✓ | | ✓ |

¹ Reference includes the County Erosion and Sedimentation Control Ordinance.

² Uniform Building Code.

³ Regional Water Quality Control Board.

Source: Data compiled by URS Corporation (2005).

3.5.3.2 Erosion of Top Soil

The local soils, Delhi and Hilmar series, are deposited on the local valley floors and gentle slopes derived primarily of Holocene and Pleistocene alluvium eroded from the San Gabriel Mountains. The unconsolidated geologic unit is subject to both wind and water erosion, and maintains a low to moderate erosion potential, especially where vegetation has been removed and the soil is not protected from weathering and erosion. The site would be prone to erosion during the construction period, especially during the rainy season.

Additionally, it is estimated that 1 million cubic yards (cy) of raw cut soil would be moved during the proposed Project development. Figure 2.3-2, features the *Conceptual Grading Schedule*. Earthwork is estimated at 250,000 cy of excavated soil, and 330,000 cy of soil is estimated to be used as fill.

3.5.3.3 Expansive Soils

The Geotechnical Investigation document (Associated Soils Engineering, Inc, April 21, 2004) concluded that through previous investigation and their experience, the Project area consists of “Low to Very Low” expansion potential. The thickness of the manure on-site varied between 6”-24” over approximately 20 test pit areas. As such, expansive soils are not expected to have an adverse impact on the planned development. Additional testing should be required during future geotechnical investigation at the site.

As identified in the West Haven Specific Plan, grading will generally consist of the removal of any manure left over from the dairy operations, clearing and grubbing, demolition of existing structures and moving surface soils to construct residential and commercial building pads and streets. The amount of removals and depth of overall excavation will vary within the properties in the West Haven Specific Plan depending on prior use of the land.

3.5.4 Mitigation Measures

To minimize adverse impacts to geological/soil resources, the following measures shall be implemented:

- G-1** Prior to construction activities the Project applicant(s) shall submit for review and approval a Removal Action Work plan to applicable state and local agencies outlining the best method to address methane gas at the Project site. Possible methods methane removal methods include: excavation and off-site disposal or the installation of a methane collection and passive venting system, and monitoring.
- G-2** Prior to issuance of building permits, the Project applicant(s) shall submit a SWPPP for the City’s Building and Engineering Department’s approval. In compliance with City standards and the State General Storm Water Permit for Construction Related Activities, the SWPPP shall identify (1) specific Project methods and (2) site locations for permanent drainage control that shall be incorporated into the Project design to adequately control erosion and sediment. Additionally, the SWPPP shall identify temporary erosion and sediment control methods and locations, such as sand bags, hay bales, and soil covers that shall be utilized at the Project site.
- G-3** During construction activities surficial slumps shall be removed by Project contractor(s) and replaced as compacted fill in graded areas to the satisfaction of the City Building Department.
- G-4** Prior to issuance of building permit(s) the City Planning Department shall approve a landscaping plan. Native plant species shall be used wherever feasible to reduce the potential for erosion, although slopes shall be landscaped with both native and non-native drought-tolerant, low-maintenance plants.
- G-5** Prior to the issuance of grading permit(s) and during Project development, the Project applicant(s) shall ensure Project contractor’s compliance with the following to the satisfaction of City Building and Engineering Department(s):

- Graded slopes will be designed at a 2:1 horizontal to vertical gradient. Soil compaction will be performed in accordance with the recommendations outlined in the geotechnical assessment (refer to Appendix E: Geology/Soils Supporting Documentation), unless otherwise recommended by the City Building and Engineering Department(s).
- Slope stabilization methods, such as construction of engineered replacement fills to buttress the weak planes and/or reduce the slope gradient to a flatter angle, shall be designed into the Project.
- As part of the site grading and prior to the commencement of building construction, unconsolidated fill materials, organic rich soils having an organic content greater than 2%, and manure shall be excavated and removed off-site and shall be replaced with engineered fill material. Prior to construction, the applicant shall coordinate and identify an acceptable site location.
- At the conclusion of site grading, if the tested soils at the finished grade elevation exhibit a low, or higher, potential for expansion, the following construction measures shall be implemented: stiffened foundation design in accordance with the Uniform Building Code; deepened footings; and pre-saturation of the building pad to a specified moisture content.

3.5.4 Significant Effects of the Project After Mitigation

Application of Mitigation Measures G1 through G5 will reduce Project impacts from geological/soil resources to a less than significant level.

3.6 HAZARDS AND HAZARDOUS MATERIALS

This section is a summary of the hazards and hazardous materials associated with the development of the West Haven Specific Plan. Potential hazards and hazardous materials were previously identified in three separate reports prepared by LOR Geotechnical Group, Inc. (2000 and 2004) (refer to Appendix F, *Hazards and Hazardous Materials*).

Section 3.6, *Hazards and Hazardous Materials*, also features information provided by the County Erosion and Sedimentation Control Ordinance, the Uniform Building Code, and the Regional Water Quality Control Board to evaluate the significance of hazards and hazardous materials on the Project site.

3.6.1 Setting

3.6.1.1 35-Acre Parcel (APN: 218-151-19 , 218-151-23)

This 35-acre parcel is located approximately one-quarter mile west of Haven Avenue and one-half mile north of Edison Avenue. The parcel is currently an undeveloped, rectangular-shaped property that historically performed as vineyards until approximately 1962. At the time the 2002, Phase I Environmental Site Assessment (ESA) was performed, the parcel was relatively flat, covered with weeds, brush, and minor quantities of trash that consisted mostly of green waste and slight amounts of wood, concrete, and furniture. The trash was found along the perimeter of this 35-acre parcel, as well as in a small pile, at its center.

Based on the 2002 ESA, this parcel reportedly did not contain Recognized Environmental Conditions (RECs) or, other environmental concerns. Neither methane (related to adjacent dairies) nor pesticide use (related to the historical vineyards) were considered on-site environmental concerns/uses. The parcel did not harbor any drums or barrels commonly used to store hazardous wastes. Four borings and 12 exploratory borings drilled on-site did not reveal soil staining, buried trash, subsurface structures, or unusual odors.

Properties adjacent to this parcel also reportedly were also found to lack environmental concerns. To the north, these properties consisted of residences and a nursery, while a SCE power line easement is located northeast of the parcel. Tuner Avenue bordered the parcel to the west, followed by residential homes. Eastern bordering properties consisted of a SCE power line easement and several dairy farm operations. Schaefer Avenue bordered the parcel to south, in addition to another SCE power line easement, and a dairy. Dairy farms adjacent to this parcel maintained two, approximately 150-diameter retention ponds, for their dairy farm operation wastewater disposal. Both ponds reportedly received wastewater from various surrounding dairies. One retention pond was located near the southeast corner of the parcel, the other was located near the parcel's northeastern corner.

An adjacent dairy farm, the Dyksta Dairy, located at 10129 Schaefer Avenue, just south of the parcel's southern border reported a historic underground storage tank (UST), although the 2002 ESA did not document any known violations for the UST. The dairy was also listed on the State Water Resources Control Board Waste Discharge System Database because it disposed of waste and water run-off related to dairy farm operations. The dairy also filed reports with the California Regional Water Quality Control Board, Santa Ana Region (RWQCB) concerning its handling of manure, storm water, and storm water runoff. The ESA did not list Dyksta Dairy as posing an environmental concern to the proposed Project site.

3.6.1.2 36-Acre Parcel (APN: 218-151-20)

The second property is a 36-acre parcel located at the northeast corner of Riverside Drive and Haven Avenue. This parcel is an operational dairy farm with a history of agricultural activities. Site structures included:

- One house;
- Garage buildings;
- Storage structures;
- Milk barn facilities;
- Corrals;
- Calf pens;
- Commodity barn (feed storage area);
- Storage structure;
- Concrete basin used for feed storage;
- Diesel aboveground storage tank (AST);
- Two groundwater production wells; and
- Twelve waste water retention basins.

Subsurface structures on this parcel included irrigation lines, water lines, septic tanks, leach lines, and underground utilities. A high-pressure natural gas pipeline also passes southwest through the parcel.

On-site activities reportedly utilized chemicals common to dairy farm operations, and the waste generated by these activities. These chemicals included gasoline, oil, lubricant, paint, acid, bleach, and iodine. The waste present on-site consisted of cow manure (found throughout the Project site), trash, and other debris, considered suitable for disposal at a Class III landfill. Old tires, requiring special disposal considerations, were also present on-site.

Other chemicals found on-site were related to the historical agricultural operations. To assess the presence and content of these chemicals, LOR (2004) conducted a Limited Site Characterization (LSC). The LSC involved seven soil samples collected at randomly-selected locations and their analysis for organochlorine pesticides. The results identified DDD and DDE (degradational products of DDT) at trace to low levels, which did not exceed Preliminary Remediation Goals (PRGs) established by the U.S. EPA Region IX for residential properties.

The absence of other environmental concerns was substantiated by a geotechnical investigation (LOR, 2004). This investigation involved the excavation of 20 exploratory trenches to a depth of ten feet. Reportedly, these trenches encountered “no soil staining, no underground structures, or unusual odors.” It was not confirmed in the investigation’s report whether these trenches encountered evidence of methane emissions, considered a potential environmental concern. But these trenches did not encounter groundwater, which has been impacted by nitrate and total dissolved solids (TDS) from regional dairy farm operations.

3.6.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on hazards and hazardous materials associated with the Project. The NOP and Appendix G suggest that a Project related significant impact would occur if the Project would:

- ◆ 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.
- ◆ Be located on a site, which is included on a list of hazardous materials sites, and as result create a significant hazard to the public or the environment.

3.6.3 Impacts

Neither of the parcels on the Project site, nor other properties in the Project vicinity are considered to pose an environmental concern to the Project site. Hazards and hazardous wastes at the 35- and 36-acre parcels with the potential to cause these concerns are limited to chemicals used in dairy farm operations: residual herbicides, pesticides, animal waste, methane (caused by animal waste), wastewater, trash/debris, and groundwater impacted by nitrate and total dissolved solids (TDS). Official records show the structures on the Project site were constructed between the mid-1960’s and mid-1980’s. It is uncertain that the structures were built utilizing lead based paint and/or asbestos containing materials. The use of asbestos in most building materials was banned from 1988 to 1999, the ban did not extend to roofing materials and many roofs constructed after 1987 do contain asbestos (usually in the mastics). However, these substances exist in relatively low quantities, and will be removed from the site during demolition of the structures on the Project site.

As referenced in this document, Section 3.4 Cultural Resources, CR-3 states “Prior to Project construction and development, the Project applicant(s) shall retain an architectural historian who meets the Secretary of Interior professional qualifications for Architectural History, as outlined in *National Register Bulletin 24: Guidelines for Local Surveys* (1985:22).”

The next Project phase, development, is also expected to involve relatively limited quantities of fuels, oils, paints, and other chemically-based substances. After Project completion, during use and occupancy, the Project site would realize an incremental increase in the use of household and commercial chemicals by the new residents, commercial center, park, and school. Residents would use nominal amounts of household chemicals, such as cleaners, automotive fluids, and possibly chlorine for pools. Residents may also use pesticides and herbicides for gardening purposes. Using these and other types of household chemicals, residents most likely will generate limited quantities of chemically-based residuals. Operations of the proposed commercial uses and the concept elementary school are also anticipated to use and generate small amounts of similar chemicals to maintain these land uses.

For development proposals, such as the Project, the City routinely requires the Applicant(s) to document to the satisfaction of County Fire/Hazardous Material Division a response plan for hazardous or toxic substances prior to issuance of demolition, grading, and building permits. If a hazardous or toxic substance is discovered or released during construction, the Applicant(s) or construction contractor would be required to properly clean-up and remove any contaminated soil or other material; restore the affected area to background conditions or to regulatory threshold levels for the contaminant(s) accidentally released or discovered; and deliver the contaminated material to an appropriate treatment, recycling, or disposal facility in accordance with the regulations for the type of contaminant accidentally released and collected for management. This standard requirement further reduces anticipated nominal impacts associated with the use, storage, and handling of hazardous or toxic substances to below significant levels.

The Applicant(s)'s response plans will be augmented by periodic agency inspections. Local agencies perform periodic inspections of development projects and typically monitor for activities and conditions that involve the release of hazardous materials and require mitigation of these conditions.

Once the three Applicant(s) complete the Project and vacate the property, all appropriate regulatory guidelines will be followed to remove chemical and/or hazardous materials from the Project site. This requires that residential units be readied for occupancy, and subjected to regulatory guidelines concerning household chemicals/wastes and the transport of these chemicals on adjoining roads.

Residents desiring additional information on the proper handling and disposal of household hazardous waste (HHW) can refer to a portion of the website maintained by the County of San Bernardino Fire Department (SBCFD). This website is located at <http://www.sbctfire.org/hazmat/hhw.asp>. To comply with applicable regulations for disposing HHW, residents are required to transport HHW to an appropriate HHW collection center operated by the SBCFD. In the City of Ontario, this collection center is located at 1408 East Francis Street. Additionally, in an effort to manage HHW, the City contracts with the SBCFD HHW Program. The SBCFD HHW Program is based on the California Health and Safety Code Section 25179.4. This section of the code contains provisions on hazardous waste management practices designed to ensure: (a) reduction of hazardous waste generated; (b) recycling of hazardous waste; (c) treatment of hazardous waste; and, (d) land disposal of residuals from hazardous waste recycling and treatment. In an effort to comply with the Health and Safety Code, the County has designated a number of HHW collection centers. The HHW collection center located at 1408 East Francis Street accepts household generated motor oil, oil filters, antifreeze, auto and household batteries, pesticides, fertilizers, paint products, chemical cleaners, and hobby/pool supplies. West Haven Specific

Plan compliance with the SBCFD HHW Program will reduce impacts associated with the Project potential household hazardous waste to a less than significant level.

Based on proposed property use of the Project site and surrounding areas, spills or releases may also include transporters of hazardous materials/wastes. In the State of California, regulations governing the transport of these materials are codified in Title 22, Division 4.5, Chapter 13, of the California Code of Regulations (22 CCR) and California Vehicle Code, Section 31303. Based on this regulatory framework, hazardous wastes are to be transported by companies licensed in the State of California. When transporting hazardous waste, these companies must follow the most direct route, using State or interstate highways, to the extent practicable (California Department of Toxic Substances [DTSC], 2001). When carrying these materials in the City, transporters must obtain approval from the City of Ontario Police Department and use streets designated by that agency (California Highway Patrol, personal communication, 2004). If transporters discharge or spill hazardous materials/waste, they must notify local authorities (such as the SBCFD), dike the discharge area, and take whatever steps are necessary and appropriate to protect human health and the environment. The transporter's responsibilities also include remediating the discharge, in accordance with 22 CCR Sections 66263.30 and 66263.31 (DTSC, Hazardous Waste Transporter Requirements, Fact Sheet, November 2001).

Mitigating hazards and hazardous wastes at the Project site will most likely constitute control of pollutants migrating from the Project site. The control of such releases is addressed in the Water Quality Management Plan (WQMP) discussed in Section 3.7, *Hydrology/Water Quality*. The potential for off-site releases will be mitigated by a Storm Water Pollution Prevention Plan (SWPPP) developed for grading and construction work at the Project site. It is anticipated that the SWPPP will be submitted with the Project site's grading application plan and monitored by the City's Building and Safety Department. (Copies of the Notice of Intent and the SWPPP will also be submitted to the State Water Resources Control Board (SWRCB) and/or California Regional Water Quality Control Board, Santa Ana Region (RWQCB)).

3.6.4 Mitigation Measures

To minimize adverse impacts from hazards and hazardous materials, the following measures shall be implemented:

- HA-1** Prior to Project grading and construction activities Project contractor(s) shall ensure the:
- ◆ Site structures shall be assessed for asbestos containing materials and lead-based paints in accordance with local and state applicable hazardous material regulations. (i.e., the Asbestos Hazard Emergency Response Act (AHERA) guidelines). Also, reference the Cultural Resources section of this document (i.e. Mitigation Measure CR-3)
 - ◆ Removal of all subsurface structures encountered in accordance with applicable local and state regulations, verifying compliance to the City Building and Engineering Departments.
 - ◆ Abandonment of all wells on-site in accordance with applicable regulations, verifying compliance to the City Building and Engineering Departments.

- HA-2** During site preparation and during construction activities Project contractors shall:
- ◆ Dispose of all tires found on-site at a disposal/recycling facility that accepts automobile tires in accordance with local and state regulations to the satisfaction of the City Building Department.
 - ◆ Remove on-site animal waste creating methane gas, if encountered, and dispose of at an accepting Class III Landfill in accordance with local and state regulations to the satisfaction of the City Building Department.
- HA-3** During Project construction activities, Project applicant and Project contractors shall properly handle all hazards and hazardous substances to minimize their potential environmental impact to the Project site in accordance with applicable local, state, and federal regulations to the satisfaction of the City Building Department.
- HA-4** During Project construction, implementation, and use Project contractors, employees, caretakers, and residents, shall:
- ◆ Handle, store, transport, and dispose of all chemicals, including herbicides and pesticides, runoff, hazardous materials and waste used on, or at, the Project site, in accordance with applicable local, state, and federal regulations to the satisfaction of the City Building Department.
 - ◆ Properly dispose of all trash and debris found on, or at, the Project site, as appropriate, at a Class III landfill in accordance with local regulations to the satisfaction of the City Building Department.
 - ◆ Comply with the requirements of the County of San Bernardino's Household Hazardous Waste Program regulations to the satisfaction of the City Building Department.

3.6.5 Significant Effects of the Project After Mitigation

Application of Mitigation Measures HA-1 through HA-4 will reduce Project impacts from hazards and hazardous materials to a less than significant level.

3.7 HYDROLOGY/WATER QUALITY

Section 3.7 incorporates the findings and conclusions of the Master Plan of Drainage (MPD) for the NMC prepared by L.D. King, 2000. This section summarizes the information presented in the West Haven Draft Specific Plan document and the NMC MPD in terms of surface drainage and improvement concept. Section 3.7, *Hydrology/Water Quality*, provides the results of a preliminary hydrology calculation to compare the existing and proposed Project conditions.

3.7.1 Setting

Only a limited portion of the site is covered with impervious surfaces. Normal rainfall is able to percolate through the on-site soils and usually does not produce significant volumes of surface runoff. However, during periods of heavy rainfall when the ground surface is saturated, surface runoff sheet flows in a south to southwesterly direction. Refer to Figure 3.7.1, *Project Area General Topographic Pattern*.

The existing drainage system throughout the NMC area is generally unimproved, consisting of primarily open earthen swales along the roadways within the NMC. To evaluate the existing drainage characteristics, a hydrology analysis using the San Bernardino County Rational Method Hydrology Program was conducted. This analysis estimated the peak flow rates resulting from a 100-year rainfall within and along the boundaries of the Project site. The method provides an estimate of the peak flow rate during a storm, taking into account rainfall intensity, basin area, and runoff potential based on soil types, vegetation, and antecedent ground moisture. The total peak discharge estimated at the corner of Schaefer Avenue and Turner Avenue, where the on-site runoff exits, is 167 cubic feet per second (cfs). A watershed map depicting the drainage boundaries under existing conditions is featured in Figure 3.7.2, *Project Area Hydrology Map – Undeveloped Conditions*.

3.7.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on hydrology/water quality associated with the Project. The NOP and Appendix G, State CEQA Guidelines, suggest that a Project related significant impact would occur if the Project would:

- ◆ 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).
- ◆ Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- ◆ 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 offsite.
- ◆ 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 or otherwise substantially degrade water quality.

The only threshold for water quality are the requirements as presented by the Santa Ana Regional Water Quality Control Board. The specifics of these requirements are presented in the following sections.

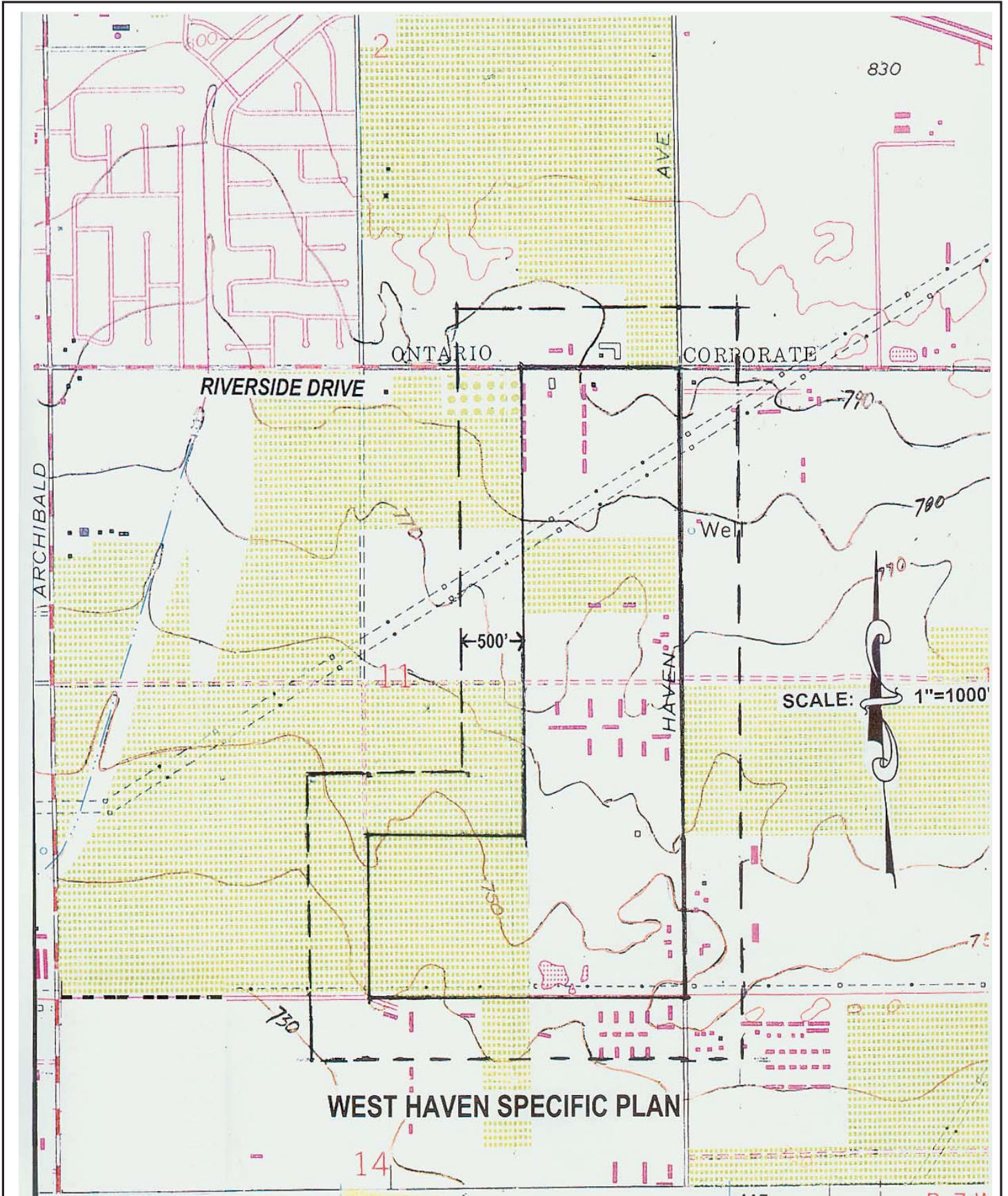
3.7.3 Impacts

Although founded on similar causes from the development process, the hydrologic and water quality impacts on this site have been separated for explanation purposes.

3.7.3.1 Hydrology

Based upon a Project condition hydrology calculation, the Project area would produce a peak discharge of 288 cfs under the 100-year storm. Refer to Figure 3.7.3, *Project Area Hydrology Map – Developed Conditions*. This represents an approximately 70 percent increase from the 100-year runoff under the existing condition.

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WEST HAVEN SPECIFIC PLAN

SCALE: 1"=1000'

01/03/05

446

35'

447

R. 7 W

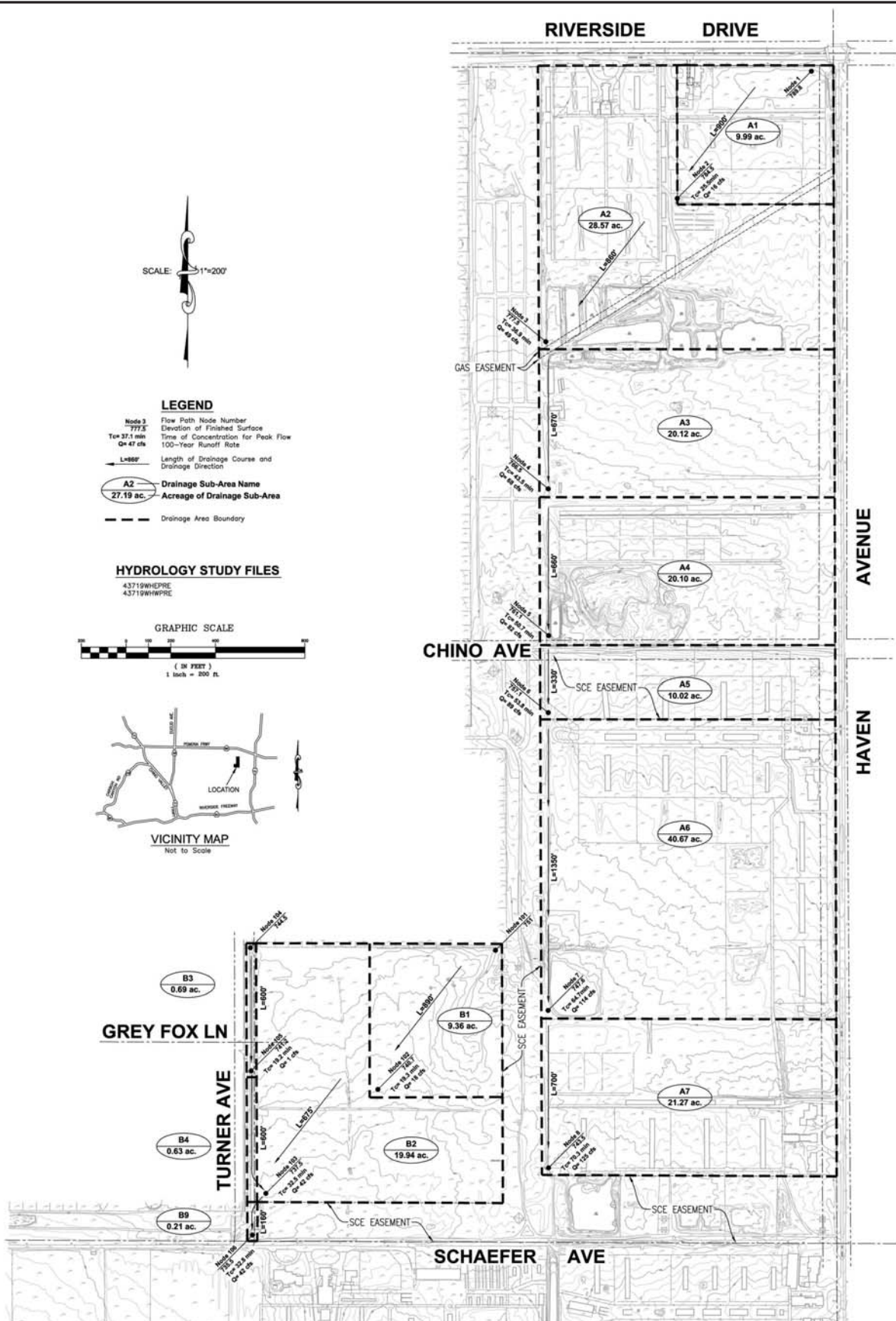
Source: L.D. King, 2004. West Haven Draft Specific Plan

PROJECT AREA GENERAL TOPOGRAPHIC PATTERN

| | | | |
|-----------------------|------------------|---------------------------------------|--------------|
| Project No.: 38000774 | Date: MARCH 2005 | Project: WEST HAVEN SPECIFIC PLAN EIR | Figure 3.7-1 |
|-----------------------|------------------|---------------------------------------|--------------|



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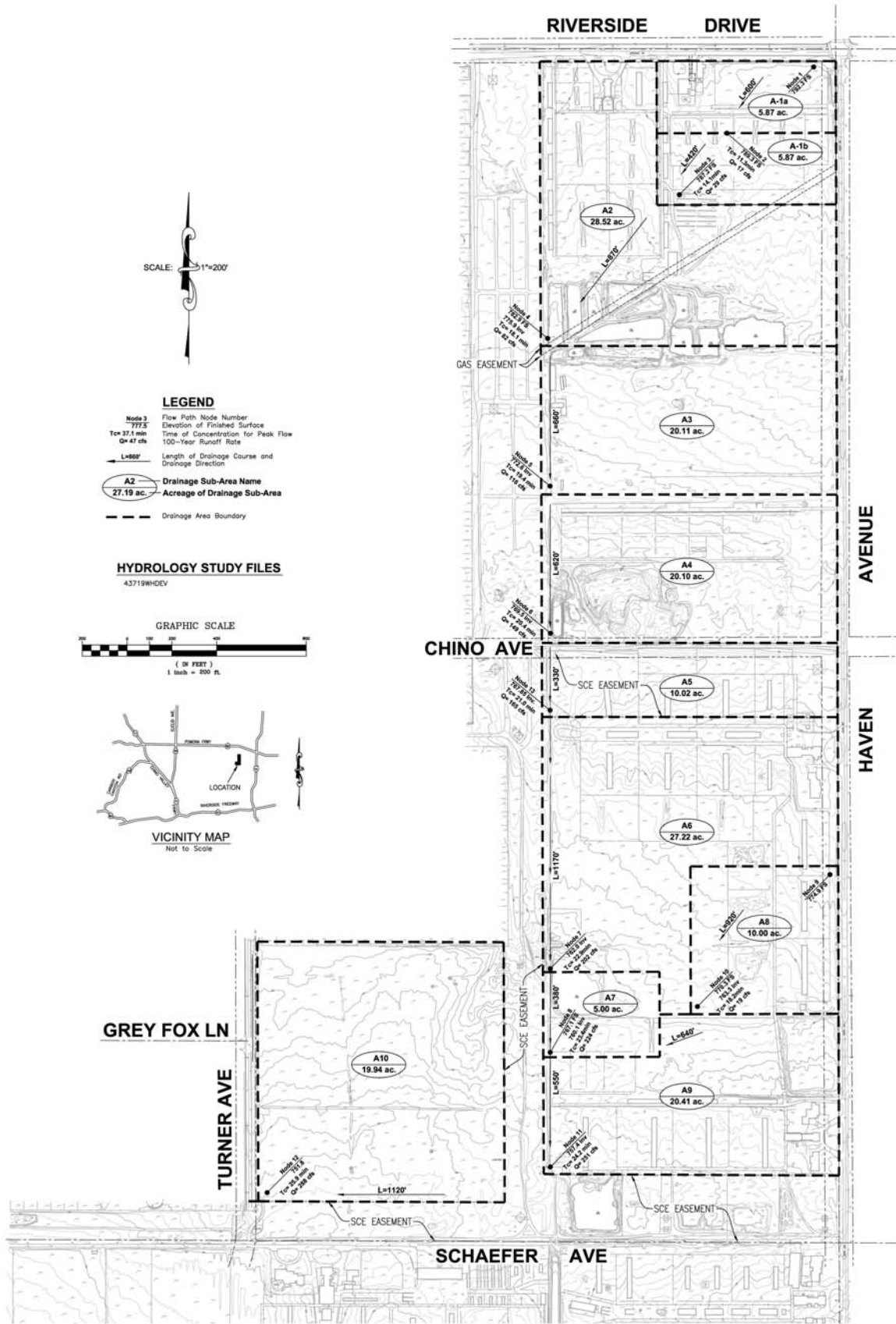


PROJECT AREA HYDROLOGY MAP - UNDEVELOPED CONDITIONS

| | | | |
|-----------------------|------------------|---------------------------------------|--------------|
| Project No.: 38000774 | Date: MARCH 2005 | Project: WEST HAVEN SPECIFIC PLAN EIR | Figure 3.7-2 |
|-----------------------|------------------|---------------------------------------|--------------|



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PROJECT AREA HYDROLOGY MAP - DEVELOPED CONDITIONS

| | | | |
|-----------------------|------------------|---------------------------------------|--------------|
| Project No.: 38000774 | Date: MARCH 2005 | Project: WEST HAVEN SPECIFIC PLAN EIR | Figure 3.7-3 |
|-----------------------|------------------|---------------------------------------|--------------|



There is an existing storm drain system adjacent to the Project site, serving the Archibald Ranch Projects. This storm drain system outlets into Chris Basin, which outlets into the Cucamonga Creek Channel. Approximately 15 acres of the NMC, adjacent to Turner Avenue, was tabled to drain to the existing Archibald Ranch storm drain. Upon further study of the capacity of the Archibald Ranch storm drain, it was determined that the storm drain is at capacity and cannot accept additional flows. There are no other permanent storm drainage facilities near the Project that can be used for on-site storm flows.

According to the NMC MPD, streets would be used to convey the 25-year storm runoff and storm drains would contain 100-year flows. The runoff in excess of the storm drain capacity would be collected by streets. It was not stated where the water would be conveyed to for retention/and or detention. The NMC MPD also states that a storm drain system ranging from 30 inches in diameter to 84 inches in diameter RCPs will be constructed to convey flood runoff generated by the Project area. Refer to Figure 3.7.4, *Storm Drain System Improvements*. The on-site portion of the storm drain system will originate north just below Riverside Avenue and continue south along the east edge of a Southern California Edison right-of-way to connect to an off-site storm drain facility running south along Turner Avenue. This storm drain will eventually terminate at the existing County Line Channel.

The construction of the County Line Channel is a joint project of the City of Ontario and County of Riverside Flood Control District, which began construction in May 2004. The channel originates near the intersection of I-15 and Bellegrave Avenue, is constructed within Bellegrave and follows the Riverside/San Bernardino County line terminating in the Cucamonga Creek Channel. This channel is expected to have a design capacity to convey the 100-year flood runoff from the NMC.

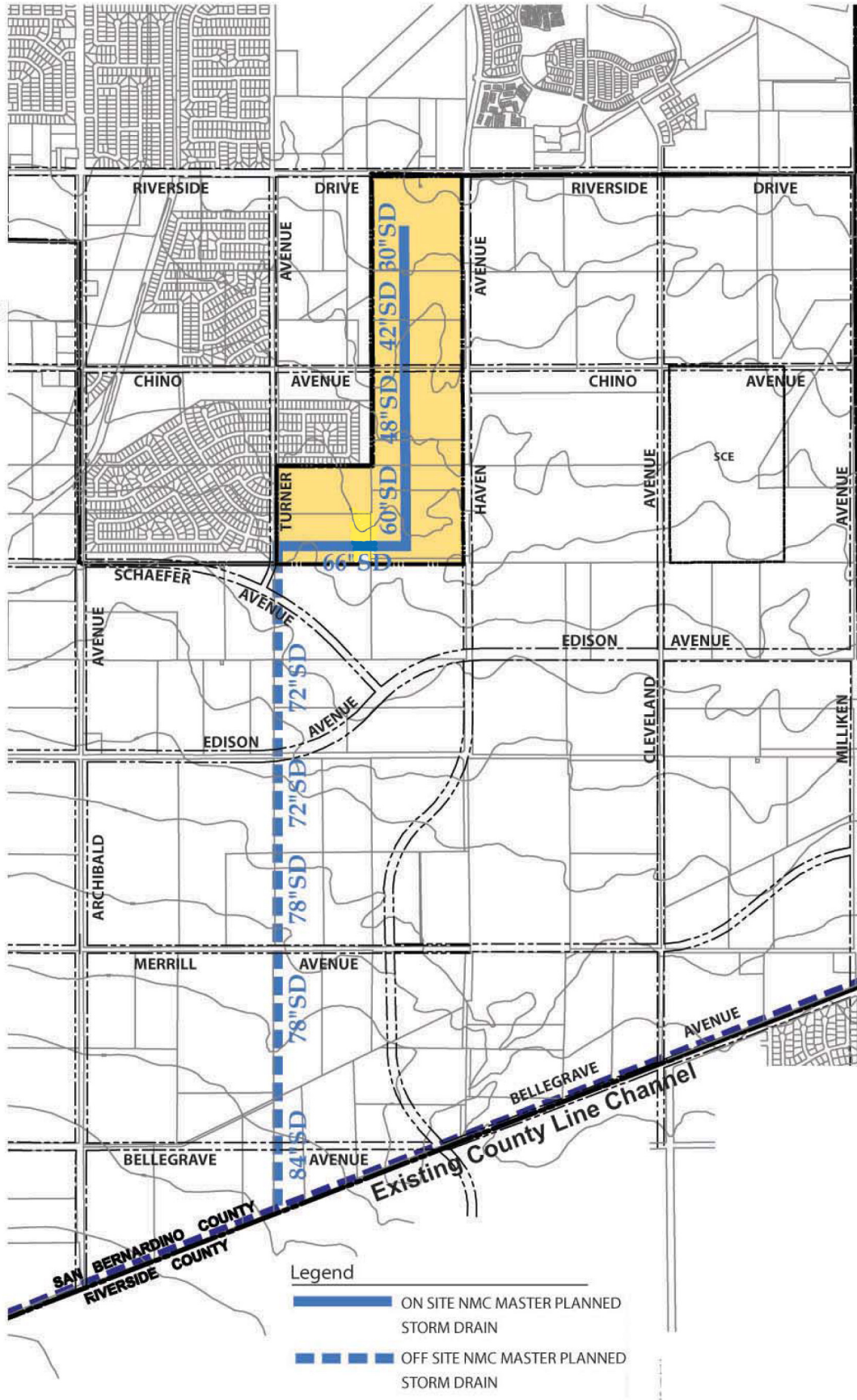
Since flood runoff generated on-site from the Project area will be collected by the proposed storm drain system, flooding resulting from a 100-year storm event is not anticipated. According to the West Haven Specific Plan, the Project site applicant(s) will be responsible for all required in-tract storm drain system improvements to serve the proposed Project site. In-tract storm drain facilities will be designed and compatible with the requirements of the City of Ontario Storm Drain Master Plan. The Project site storm drains will be connected to the proposed Turner Avenue Master Plan Storm Drain in Turner Avenue. The Turner Avenue storm drain will discharge into the County Line Channel.

Interim facilities like on-site detention basins of adequate size(s) will be required to be constructed if no outlet storm drain system is built or existing at the time of development of this Project.

Storm Drain facilities will be required to include water quality Best Management Practices (BMP) as required by the National Pollution Discharge Elimination System (NPDES). Drainage outlets and other drainage facilities will be designed to control urban runoff pollutants caused by the development of the Project. Individual projects, within the Specific Plan, will construct on-site BMP's, which may be incorporated into the storm drain systems, include water quality basins, catch basin filtration devices, grass lined drainage ditches or a combination thereof. The proposed BMP's will be maintained partially by the City of Ontario

If the permanent NMC programmed master plan storm drain improvements have not been completed prior to the commencement of construction activities of the residential component, a temporary or interim on-site detention basin would be required. The size and location of these temporary basins would be identified, for City approval, at the submittal of the tentative tract map. According to the City's MPD,

L:\west haven specific plan/masterplan drainage.fh10 3/05



Source: L.D. King, 2004. West Haven Draft Specific Plan

STORM DRAIN SYSTEM IMPROVEMENTS

Project No.: 38000774

Date: MARCH 2005

Project: WEST HAVEN SPECIFIC PLAN EIR

Figure 3.7-4



these temporary storm drain facilities would be required to accept 100 percent of excess flow from a Project site, which is determined as the quantity of additional runoff in a 100-year storm event caused by the increased impervious surface on the Project site over and above the existing conditions. Also, the MPD states that the interim basins should be designed using the criteria for sizing increased runoff detention facilities developed by the San Bernardino County Flood Control District.

3.7.3.2 Water Quality

Current Conditions

From a water quality perspective, there are both positive and negative impacts associated with the Project. As stated in the West Haven Specific Plan, since the Project area is currently highly pervious, storm water remains on site and there is minimal runoff. Only during larger storm events, when the subgrade soils are saturated, does runoff sheetflow off the site in a south to southwesterly direction.

Regionally there are known contamination problems, linked to the historical dairy farm use, including nitrate and total dissolved solids in elevated concentrations in both the subgrade soils and groundwater. Development of the area for residential and other “non-agricultural” uses will provide for a decrease in the amount of these pollutants.

Proposed Project Conditions

The Project will cause a complete reversal of the pervious and impervious areas ratio. According to the West Haven Specific Plan, only a limited portion of the Project site is now covered with impervious surfaces. Once completed, the combination of street improvements, roof areas, sidewalks and parking lots will cause a significant increase in the amount of runoff from all storm events. The 2002 San Bernardino County Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (Permit) includes requirements for mitigation of all increases of run-off flows for subdivisions of 10 units or more. As such, “Hydrologic Conditions of Concern” is specifically delineated in the County of San Bernardino WQMP Guidance document. The City of Ontario is complying with this requirement through requiring and enforcing the Project-specific Water Quality Management Plan (WQMP).

The change in the types of pollutants that will be of concern for the Project is significant. The current pollutant loading will decrease significantly for nitrate and total dissolved solids. However, as presented in the County of San Bernardino WQMP Guidance document, it is mandated for the proposed land uses of Residential Development (Detached and Attached), Commercial and Streets that at a minimum the following pollutants of concern be addressed: bacteria, heavy metals, nutrients, pesticides, organic compounds, sediments, trash and debris, oxygen demanding substances and oil and grease.

According to the West Haven Specific Plan document, the Project proponents are responsible for all required in-tract storm drain system improvements including the Best Management Practices as required by the Permit. As of June 2004, the Permit also requires the development and implementation of the WQMP. According to the documents provided for this analysis, most of the local storm drain infrastructures have not been constructed. As stated in the West Haven Specific Plan document, if the local storm drain system is not completed at the time of the Project, interim flood control facilities, such as detention basins, will be required. These interim facilities will also need to address the requirements of the WQMP.

Project-specific, on-site Best Management Practices (BMPs) are typically developed by the Project civil engineer and would be presented in detail in the WQMP document. BMPs for a project like this would include a combination of public education, source control and treatment controls. An option for this Project may be to develop a “local regional” BMP that only this Project would discharge to. This would be a private treatment facility, typically to be maintained by a Special District or other approved, legal long-term funded mechanism.

Therefore, the Project would produce significant impacts to the local receiving waters through the increase in surface imperviousness associated with the proposed development. The Project is expected to increase and potentially degrade storm water runoff and impact the existing hydrologic conditions from a water quality perspective.

3.7.3.3 SCAG Regional Policies

The Project would be consistent with SCAG goals and policies related to water quality. The detention basins proposed as part of the Project are not only intended for flood control but would also function as infiltration for urban run-off. Infiltration over natural grassy swales and detention ponds is an effective manner of removing incidental pollutants typically present in urban runoff such as oil, grease, sediment, and vegetation.

3.7.3.4 Standard Conditions and Compliance with Existing Water Quality Regulations

The Porter–Cologne Water Quality Control Act §13000 directs each Regional Water Quality Control Board (RWQCB) to develop a Water Quality Control Plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB’s regulatory programs. The proposed Project site is located within the purview of the Santa Ana River Water Quality Control Board (SARWQCB)-Region 8), and must comply with applicable elements of the region’s Basin Plan, as well as the Porter-Cologne Water Quality Control Act, and the federal Clean Water Act.

In 1972, the Federal Water Pollution Control Act (Clean Water Act) was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The Clean Water Act focused on tracking point sources, primarily from waste water treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The Clean Water Act was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial storm water discharges. In November 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish application requirements for specific categories of industries, including construction projects that encompass greater than or equal to 5 acres of land. The Phase II Rule became final in December 1999, expanding regulated construction sites to those greater than or equal to 1 acre. The regulations require that storm water and non-storm water runoff associated with construction activity, which discharges either directly to surface waters or indirectly through municipal separate storm sewer systems (MS4s), must be regulated by an NPDES permit.

The SARWQCB administers the NPDES permit program regulating storm water from construction activities for projects greater than one acre in size. The main compliance requirement of the NPDES permits is the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The purpose of a SWPPP is to identify potential on-site pollutants, identify and implement appropriate storm water

pollution prevention measures to reduce or eliminate discharge of pollutants to surface water from storm water and non-storm water discharges. Storm water best management practices (BMPs) to be implemented during construction and grading, as well as post-construction BMPs, will be outlined in the SWPPP prepared for the proposed Project. The Project proponent will be required to obtain coverage under the General NPDES Permit for construction activities prior to site disturbance, and will need to meet San Bernardino County's requirements for new development that are specified in its Water Quality Management Plan (WQMP). Impacts other than water quality impacts that pertain to construction and grading are discussed in Section III-2, Air Quality and Section III-5, Geology/Soils. Examples of construction BMPs include: detention basins for capture and containment of sediments, use of silt fencing, sandbags, gravel bags, or straw bales to control runoff and identification of emergency procedures in case of hazardous materials spills.

The San Bernardino County Flood Control District, as principal permittee under the County's MS4 permit (Order No. R8-2002-0012), has recently revised its WQMP, which was approved by the SARWQCB and made available to the public starting June 1, 2004. The Model WQMP Guidance document supersedes the "Guidelines for New Development and Redevelopment," dated June 2000. The purpose of the new WQMP is to guide the Permittees that have land-use planning and development authority in the development and implementation of a program to minimize the detrimental effects of urbanization on the beneficial uses of receiving waters, including effects caused by increased pollutant loads and changes in hydrology. The City of Ontario enacted Chapter 6 of Title 6 of the City's Municipal Code ("Storm water Drainage System") pursuant to the authority conferred by Order No. 2002-0012 in order to prescribe regulations to effectively prohibit non-storm water discharges into the City's storm water drainage system.

Pursuant to San Bernardino County Flood Control District's MS4 permit (Order No. 2002-0012) of which the City of Ontario is a co-permittee, the Project's Water Quality Management Plan would be required to:

- Incorporate and implement Site Design BMPs. Justification is required for any Site Design BMPs not incorporated into the Project.
- Incorporate and implement all Source Control BMPs, unless not applicable to the Project due to Project characteristics. Justification is required for any Source Control BMP not incorporated into the Project.
- Either incorporate and implement Treatment Control BMPs, by including a selection of such BMPs into the Project design; or participate in or contribute to an approved regional-based treatment program. Site Design and Source Control BMPs are required for projects participating in regional-based treatment programs.
- The combination of Site Design, Source Control, and/or Treatment Control BMPs or Regional-based treatment program must address all identified pollutants and hydrologic conditions of concern.
- The City of Ontario General Plan (1992) contains many Goals and Policies that apply to the proposed Project. The following is considered the most applicable to the Project:

The City would require the Project to use registered civil engineers in preparation of subdivision, grading, and construction plans, and adhere to City standard plans for infrastructure features (streets and drains). Construction permits for drainage related improvements would be obtained prior to the issuance of a grading

permit, involving review and approval by the City Transportation/Flood Control Division. The City would require the applicant to identify the proposed design specifics (i.e. size, location, etc.) for the water quality/storm water detention basin facilities as needed to support the proposed 202-acre development.

On-site erosion could occur as a result of soil disturbance, wind or water. Implementation of the required NPDES permit SWPPP shall reduce to less than significant levels erosion due to grading and storm waters.

The Project would be required to comply with the National Pollution Discharge Elimination System (NPDES) Permits administered by the Regional Water Quality Control Board (RWQCB). Specifically, compliance with the NPDES General Construction Activity Storm Water Program, and a County of San Bernardino Municipal Separate Storm Sewer System Waste Discharge Permit (SBC MS4 Permit) would also be required. The NPDES Permits will first require a WQMP to be prepared for the entire Project site. A WQMP emphasizes the development and implementation of a program to minimize the affects of a proposed Project on the beneficial uses of receiving waters, including effects caused by increased pollutant loads and changes in hydrology. A WQMP must be approved during the Project planning process and would be active for the life of the Project. The next step would involve a Notice of Intent filed with the RWQCB and preparation of a SWPPP, including Best Management Practices (BMPs) for the control of storm water runoff from point and non-point sources of urban pollutants during Project construction. These requirements are listed as Conditions of Approval H/WQ-1 and H/WQ-2.

3.7.4 Mitigation Measures

The following mitigation measures are provided to further reduce the Project impacts on hydrology, water quality, and flood risk.

H/WQ-1 Prior to issuance of a grading permit or construction permit for the residential component, whichever would occur first, the City Engineer shall determine whether a temporary water quality/storm water detention basin or other treatment BMP shall be required on-site. Plans shall be submitted to the City Engineer identifying the location and size of the temporary water quality/storm water detention basin or other treatment BMP. The City would require the applicant to identify the proposed design specifics (i.e. size, location, etc.) for the water quality/storm water detention basin facilities as needed to support the proposed 202-acre development. All proposed detention basins shall be designed in accordance with the applicable standards of the State Water Resources Control Board Construction Storm Water Permit, the Regional Water Quality Control Board, Santa Ana Region, Area-Wide Urban Storm Water Runoff Permit, the San Bernardino County Flood Control District, and the City of Ontario.

H/WQ-2 In order to provide long term mitigation measures (BMPs) for the Project prior to tract map approval, the Project applicant(s) shall demonstrate to the satisfaction of the City (or NPDES/Storm water Coordinator) its compliance with the requirements of the SBC MS4 Permit as follows:

- a) The Project applicant(s) shall prepare and submit a WQMP to the City (or NPDES Coordinator) for review and approval. The WQMP shall recommend permanent post-development improvements to existing drainage features to prevent uncontrolled

runoff and to accommodate the increase in runoff associated with the development for the life of the Project. The San Bernardino County WQMP Guidance document requirements must be met.

- b) Compliance shall be demonstrated by obtaining an approval for the WQMP from the City.

H/WQ-3 In order to ensure that construction activities associated with the West Haven Specific Plan will not cause a violation of any water quality standard or waste discharge requirements and to assure no substantial degradation of water quality occurs, and to implement the intent of mitigation measures included in the Final EIR for the NMC GPA, developments within the Project area shall comply with all applicable provisions of the state's General Permit for Construction Activities (Order No. 99-08-DWQ, or most recent version) during all phases of construction. A copy of evidence of the receipt of a Waste Discharge Identification Number from the State Regional Water Quality Control Board shall be filed with the City Engineer along with a copy of the Storm Water Pollution Prevention Plan (SWPPP) maps and BMPs. The City Engineer shall review and approve the provisions of the SWPPP prior to implementation of any SWPPP provision or starting any construction activity.

H/WQ-4 In order to conserve water and to mitigate for any potential unforeseen adverse impacts to a Water Conservation District, landscaping within individual development projects will retain and percolate both applied irrigation water and storm water in vegetated areas of parking lots and other areas, where appropriate. Depressed planted swales bordered by shrubbery screens will be implemented rather than "mounded" grass and shrubbery planted screens. Neighborhood Edges and parks will be irrigated via reduction in ground water recharge, the following measure has been recommended by the Chino Basin reclaimed water.

H/WQ-5 In order to reduce pollutants in post construction run-off and to implement mitigation measures included in the Final EIR prepared for the NMC GPA, the individual Project owners and operators (e.g., homeowner associations, retail center owners, school district, parks department, etc.) shall ensure that all pest control, herbicide, insecticide and other similar substances used as part of maintenance of Project features are handled, stored, applied and disposed of by those conducting facility maintenance in a manner consistent with all applicable federal, state and local regulations. The City Engineer shall monitor and enforce this provision.

3.7.5 Significant Effects of the Project After Mitigation

Application of mitigation measures H/WQ1 shall reduce Project impacts on existing hydrologic conditions to less than significant levels. Application of mitigation measures H/WQ2 through H/WQ5 shall reduce Project water quality impacts on local receiving water to less than significant levels.

Future land development projects within the NMC would cumulatively impact water quality in the region due to increased urban runoff. The nature of the pollutants found in runoff is expected to change from pollutants associated with agricultural land uses, such as bacteria, ammonia, nitrates, phosphorous and salts, to urban uses which produce contaminants such as oil and grease, trash and debris, and pesticides. Currently, dairies within the NMC operate under the authority of NPDES Permit No. CAGO18001

(Waste Discharge Requirement Order No. 99-11). However, because this permit is concerned with dairy operations, existing non-dairy properties would not be covered along with portions of dairy properties not developed with dairies. Future development of Subareas would be required to obtain prepare and implement SWPPPs and WQMPs for all proposed development affording a more extensive amount of storm water and nuisance water quality protection. Therefore, development of the Project area with the implementation of water quality BMPs as required by the SWPPPs and WQMPs and above mitigation measures has the potential to produce a net beneficial cumulative impact on the quality of downstream surface waters and groundwater within the Chino Basin.

3.8 RECREATIONAL RESOURCES

This section summarizes the recreational resources associated with the development of the West Haven Specific Plan. Section 3.8, *Recreational Resources*, evaluates the proposed Project's compatibility with the existing and planned surrounding land uses, and appraises the proposed Project's compliance with City's General Plan (1992) and the 1998 NMC GPA's Land Use/Planning and Recreational Resources goals and objectives. As noted in NOP (Appendix A), the Land Use/Planning element was not identified as being potentially affected by the project and/or having a "potentially significant impact" to the environment.

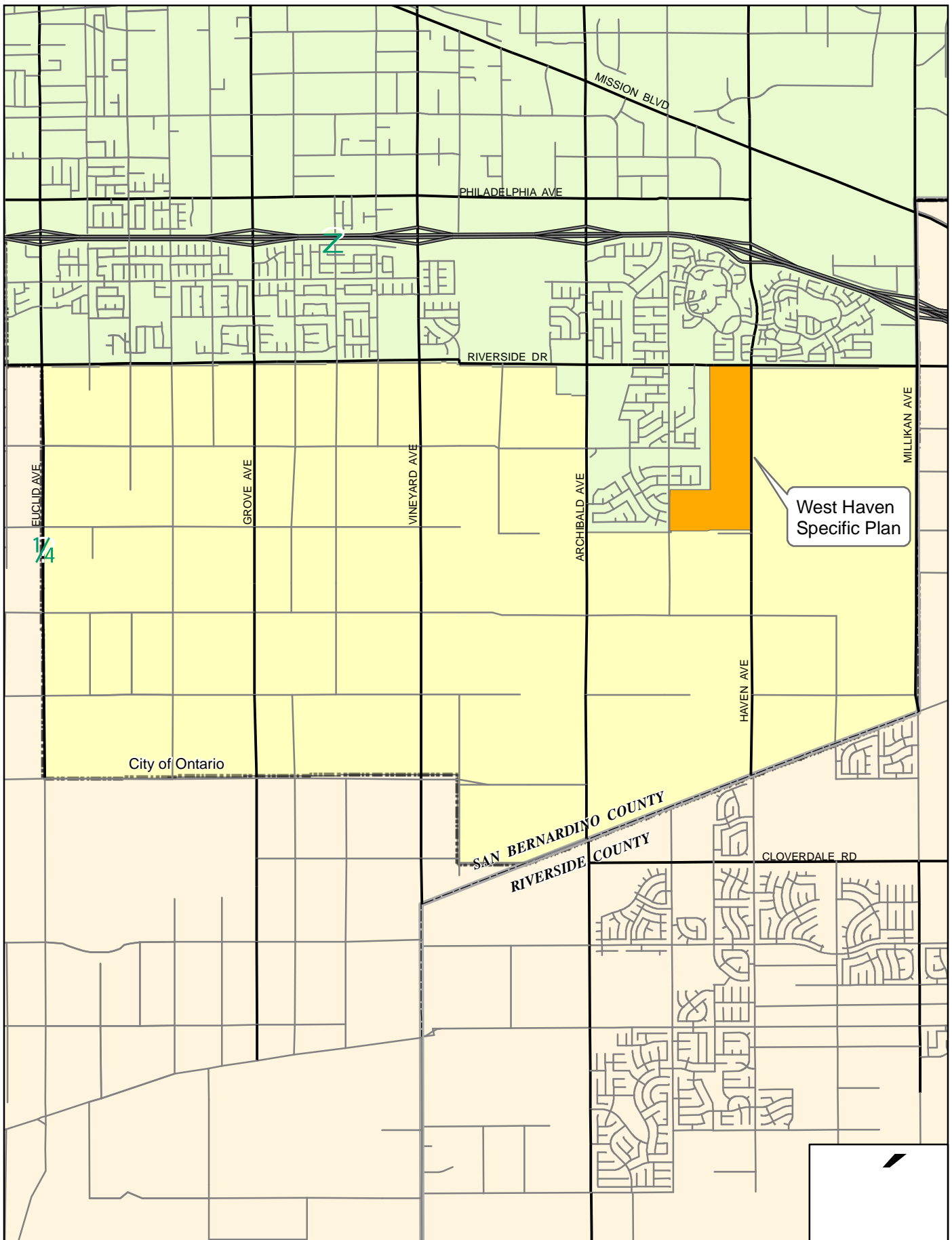
3.8.1 Setting

3.8.1.1 On-site and Surrounding Land Uses

The Project site is gently sloping approximately two percent to the southwest with approximately 50 feet of fall diagonally from the northeasterly corner to the southwesterly corner. The Project site has historically been used for agricultural purposes. Figure 3.8-1, *Project Site Within the Sphere of Influence*, features the location of the proposed Project area within the NMC, formerly referred to as the SOI. Agricultural activities have included dairy farming, vineyards, and row crop production. Dairy farms were once found on portions of the Project site. Ancillary uses such as feedlots, feed storage, dairy panels, feed crop growing areas, and residences associated with dairy farm operations are found within the area. The portion adjacent to Turner Avenue was utilized for vineyard but is now vacant. There is an existing plant nursery located approximately 1,245 feet south of the intersection of Haven Avenue and Riverside Drive. Several SCE easements are located within the Project boundary. The surrounding land uses are as follows:

- ◆ North: Single-family residential and Creekside Golf Course.
- ◆ South: Dairy Farm Operations and Residences.
- ◆ East: Dairy Farm Operations, Crops, Nursery, and Residences.
- ◆ West: Residences, Utility Corridor and Nursery.

In addition to these existing land uses, the City has approved the NMC GPA defining the development of the 8,200 NMC acres. Figure 3.8-2, *NMC Subarea Land Use Plan*, features the Project site and surrounding distribution of land use uses by type and intensity throughout the NMC. Thirty specific planning areas and 11 distinct residential neighborhoods are proposed within the NMC.



West Haven
Specific Plan

PROJECT SITE WITHIN THE SPHERE OF INFLUENCE

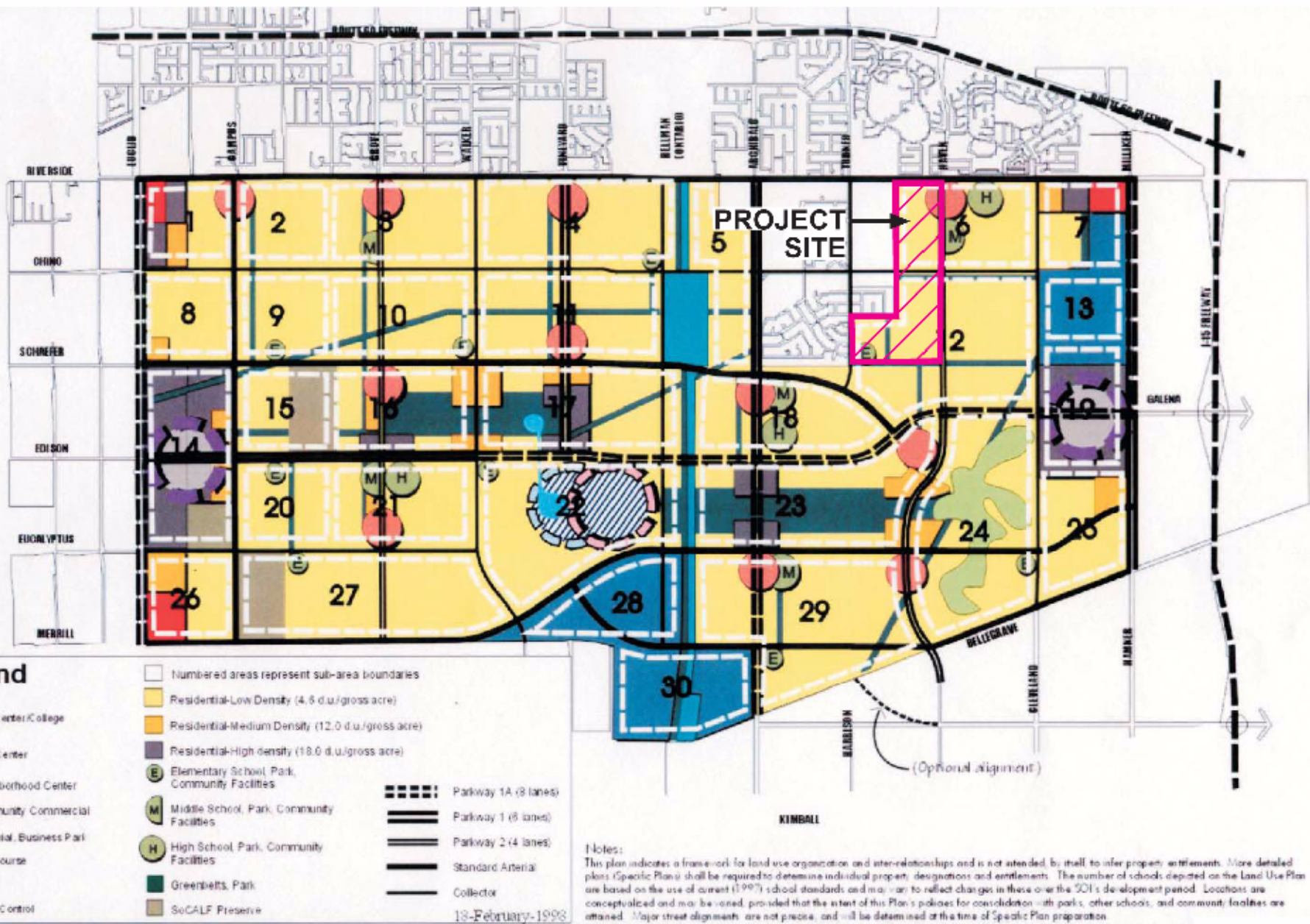
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MARCH 2005

WEST HAVEN SPECIFIC PLAN EIR

FIGURE 3.8-1



SOURCE: City of Ontario, 1998

NEW MODEL COLONY SUB-AREA LAND USE PLAN

| | | | |
|-----------------------|--------------------|---------------------------------------|--------------|
| Project No.: 38000774 | Date: OCTOBER 2004 | Project: WEST HAVEN SPECIFIC PLAN EIR | Figure 3.8-2 |
|-----------------------|--------------------|---------------------------------------|--------------|

3.8.1.2 Existing Land Use Plans

General Plan Designation and Zoning

The General Plan designation for the West Haven Specific Plan is Residential-Low Density and Commercial Neighborhood Center. The Residential-Low Density land use designation emphasizes the development of a variety of housing types to serve the needs of residents, including large lot, estate, executive, affordable, and live/work housing. The development of mobile home parks are not allowed. This designation accommodates the development of an overall average of 4.6 dwelling units per gross acre in areas designated as Residential-Low Density, within which a variety of parcel sizes and housing types are allowed. Densities will vary throughout the residential neighborhoods, as long as the average density is not exceeded.

The Commercial Neighborhood Center land use designation intends to provide the necessary retail, office and service uses in close proximity to residents within the West Haven Specific Plan in addition to surrounding neighborhoods and developments. This land use designation accommodates proposed small-scale commercial centers that introduce minimal impacts on residential neighborhoods. Commercial Neighborhood Center permitted uses will include local serving commercial, i.e., small restaurants, community/public meeting facilities, public plazas, performance spaces, and similar uses. This land use designation will allow also multi-family housing and mixed use structures to incorporate housing units above the ground level retail shops, offices, or community facilities, where appropriate.

The Zoning designation for the West Haven Specific Plan, as well as the rest of the NMC, is (AG) Specific Plan Agricultural Preserve. The Specific Plan designation is established to enable land to be planned and developed as coordinated, comprehensive projects providing for the systematic implementation of the City's General Plan. The Specific Plan designation includes policies requiring that a Specific Plan be approved for the Project site to implement the NMC land uses. Permitted and conditional uses included as part of the Specific Plan will be compatible with permitted and conditional uses established within the Development Code for residential, commercial, industrial and other districts. The Agricultural Preserve designation would be removed upon approval of the West Haven Specific Plan.

New Model Colony General Plan Amendment

In January 1998, the City approved the NMC GPA, an amendment to the City of Ontario General Plan adopted in 1992. The NMC GPA allowed for the development of 8,200 acres in Ontario's SOI bounded by Riverside Drive to the north, Milliken Avenue and Hammer Avenue to the east, the Riverside County line and Merrill Avenue to the south, and Euclid Avenue (State Route 83) to the west.

The NMC GPA contains each of the seven General Plan elements required by California State Law. As defined by State General Plan Guidelines, the mandated and optional elements overlap in subject matter and policy. The NMC GPA is organized by resource topic rather than each of the mandated and optional elements, and mirrors the City's General Plan organization. The following sections provide a brief discussion of the NMC GPA's Elements/Topics as they apply to the proposed Project, including a listing of applicable goals, objectives, and policies.

Community Development

The Community Development Element of the General Plan contains the Land Use, Agriculture, Housing, and Airport Environs Topics. According to the City's General Plan, the *Land Use* Topic provides for the types, density/intensity, design, distribution of residential, commercial, industrial, and open space development. The *Agriculture* Topic provides for the preservation and expansion of existing agricultural uses while other areas of the NMC undergo urbanization. The *Housing* Topic provides for the manner in which new housing will be produced in context of the areas permitted for development by the Land Use Topic. The *Airport Environs* Topic ensures land use compatibility between the NMC and the Ontario and Chino Airports. The following are the applicable City Community Development goals, objectives, and policies as adopted in the City's 1992 General Plan and 1998 NMC GPA. The proposed Project meets all the City's General Plan goals, objectives, and policies.

- Goal 1A** A plan that guides the overall structural organization and distribution of uses within the NMC, in accordance with the defined General Plan Vision.
- Objective 1.1** Accommodate the development in accordance with the organizational principles and standards of the NMC GPA as implemented through subsequent specific plans.
- Goal 1B** A cohesive and distinctly identifiable mixed-use community that integrates a diversity of residential neighborhoods, regional centers, industrial and business parks, and open spaces.
- Objective 1.2** Accommodate the development of neighborhoods, corridors, and centers that are clearly definable from each other, focused on public and private amenities, and are interlinked by a network of greenways and open spaces.
- Goal 1C** Distinct neighborhoods that offer a high quality of life and a variety of housing types for the NMC's residents.
- Policy 1.2.2** Provide for a balance of land uses within each neighborhood and district.
- Policy 1.2.3** Link neighborhoods, centers, and corridors by transportation, utility, greenways and open space networks. These networks may also be used to establish clear boundaries between distinct neighborhoods and/or centers.
- Policy 1.2.8** Site and design development to minimize potential impacts of environmental hazards including flooding, and noise. Consider the use of electrical transmission corridors, flood channels, and similar elements to form "edges" for residential neighborhoods and centers and/or accommodate public greenways.
- Objective 1.3** Accommodate the development of residential neighborhoods as unified areas that contain a full range of uses that support residential needs; emphasize a sense of "community" that offers a balance of social interaction, both individual and family privacy; incorporate uses and places that serve as the central focus for local identity, activity, and celebration; may be developed around amenities that promote local identity and character such as golf courses, lakes, open spaces, and similar elements; and emphasize walkability.
- Policy 1.3.3** Accommodate a mix of land uses and a diversity of housing types and parcel sizes within each residential neighborhood and design each to create a unified and distinct character.
- Objective 1.6** Develop schools to serve the needs of the NMC's population and as a focal point for neighborhood activity.
- Policy 1.6.2** Provide schools to meet resident needs in accordance with pertinent school district standards.
- Policy 1.6.3** Distribute schools throughout the NMC to promote accessibility from all "Residential

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| | Neighborhoods.” |
| Policy 1.6.5 | Integrate public schools with other community serving uses such as parks, libraries, public meeting rooms, day care, and similar uses. |
| Goal 1K | A comprehensive network of greenways and open spaces that interconnect the NMC’s land use neighborhoods and districts. |
| Policy 1.16.7 | Develop principal roadways including Grove Avenue, Vineyard Avenue, Archibald Avenue, Haven Avenue, Euclid Avenue, Milliken Avenue, and Edison Avenue as “parkways” with expanded right-of-ways containing landscaped medians and frontages, pedestrian paths, and other elements. |
| Goal 1L | Integration of electrical energy transmission corridors with development. |
| Policy 1.16.3 | Jointly use the SCE easement-owned corridors, storm drainage, and other infrastructure rights-of-way for greenways, where feasible and compatible with the intended primary use. |
| Goal 1M | A community that balances housing with supporting retail, employment, parks, schools, and other supporting uses. |
| Objective 1.18 | Phase development to ensure that adequate retail, schools, parks, services, and other local serving uses are available to support the needs of NMC residents and contribute adequate revenue to support public services and infrastructure. |
| Policy 1.18.1 | Require the formulation of a development phasing plan as a component of NMC subarea specific plans that ensures that adequate supporting public services, retail, parks, schools, and other uses are in place to support residential uses. These should establish increments of residential development that “trigger” and cannot be exceeded until the construction of appropriate improvements has been initiated. Standards for schools, infrastructure, and other public services should be determined in collaboration with pertinent service agencies. Standards for local serving retail, parks, and other uses should be confirmed by the City and reflect other policies contained in this Plan. |
| Policy 1.18.3 | Require that applicants commit to the provision of supporting uses and services through Development Agreements, Conditions of Development, bonds, and other appropriate techniques. |
| Goal 3A | Adequate housing to support household and job growth and facilitate mobility within the ownership and rental markets. |
| Objective 3.1 | Maintain a supply of developable residential land adequate to accommodate the amount and type of projected household and job growth. |
| Objective 3.2 | Ensure that residential sites are served by adequate infrastructure and services |
| Policy 3.2.1 | Require the provision of infrastructure needed to support anticipated residential development and ensure the proper integration of all services. |
| Policy 3.2.2 | Maintain internal consistency among the City’s General Plan Elements to provide the necessary services and infrastructure for urban development. |

Infrastructure and Public Services

The Infrastructure and Public Service Element of the General Plan presents and illustrates public utilities and facilities, such as water, wastewater, storm drainage, solid waste, schools, police protection, fire protection, and emergency medical services. According to the General Plan, *Water, Wastewater, Storm Drainage and Flood Hazards, Solid Waste, and Circulation Topics* primarily address the planning, design, and construction of basic urban facilities. The *Schools, Police Protection, Fire Protection and Emergency Medical Services Topics* address the siting and design of these facilities and address the

provision of special services and programs that would enhance local residents' lives. The following are the applicable City's Infrastructure and Public Services goals, objectives, and policies as adopted in the City's 1992 General Plan and 1998 NMC GPA. The proposed Project meets all of these goals, objectives, and policies.

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| Goal 5.0 | Adequate supply of safe water for all uses in the NMC. |
| Objective 5.1 | Provide for the development of water supply sources, storage, transmission mains, and distribution mains that will enable the orderly development of the NMC. |
| Policy 5.1.3 | Require specific plans and large development projects to prepare a water system planning study. |
| Objective 5.2 | Ensure adequate water supply facilities are provided and properly maintained. |
| Policy 5.2.1 | Require new development to construct and dedicate water supply facilities. |
| Policy 5.2.3 | Monitor the demands for water and manage development to ensure adequate water facilities. |
| Policy 5.2.1 | Require new development to construct and dedicate water supply facilities. |
| Objective 5.3 | Ensure the costs of water infrastructure improvements are borne by those who benefit. |
| Policy 5.3.1 | Require improvements to the water supply facilities necessitated by new development are borne by the new development benefiting from the improvements, either through the payment of fees, or the actual construction of the improvements. |
| Goal 6.0 | Adequate wastewater collection system that supports planned land uses. |
| Objective 6.2 | Ensure that existing and new development do not degrade the City's surface waters and/or groundwater basins. |
| Policy 6.2.2 | Require that sewer capacity and facilities are available before building permits are issued for new development. |
| Objective 6.3 | Ensure the costs of wastewater infrastructure improvements are borne by those who benefit. |
| Policy 6.3.1 | Require the costs of improvements to the existing wastewater collection facilities necessitated by new development be borne by the new development benefiting from the improvements; either through the payment of fees, or by the actual construction of improvements. |
| Objective 7.1 | Ensure the storm drainage system provides for the orderly development of the NMC. |
| Policy 7.1.2 | Require specific plan and development projects to prepare a storm drainage planning study for the affected drainage area. |
| Policy 7.1.5 | Require refined backbone infrastructure plan be used in the development process to ensure each project will construct adequate drainage facilities. A detailed drainage master plan must be in place and must have San Bernardino County Flood Control Districts concurrence prior to any major development approval. |
| Policy 7.1.7 | Specific development plans are to be consistent with and implement the City's adopted Master Plan of Drainage for the area. |
| Objective 7.2 | Ensure adequate storm drain and flood control facilities are provided and properly maintained to protect life and property from flood hazards. |
| Policy 7.2.1 | Require new development to control surface run-off through on-site measures. |
| Policy 7.2.2 | Require new development to construct and dedicate flood control and storm drainage |

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| | facilities. |
| Policy 7.2.9 | Require applicants to provide evidence to the City Engineer that a NPDES permit has been obtained from the SWRCB prior to moving construction equipment onto the NMC. Once obtained, the NPDES permit will be retained on the construction site throughout the construction period, and a copy will be filed with the City Engineer. |
| Policy 7.2.10 | Ensure compliance with all the terms and conditions outlined in the NPDES permit, including the implementation of BMPs. |
| Policy 7.2.11 | Require applicants to prepare a SWPPP for individual proposed projects prior to issuance of grading permits. These plans will be submitted to the City Engineer for review and comment prior to implementing any SWPPP provisions or starting any construction activity. A copy of the SWPPP will be held by the construction contractor(s) on the construction site throughout development of each project. The City Engineer will monitor and enforce provisions of the SWPPP. |
| Objective 7.3 | Ensure costs of infrastructure improvements to the storm drain and flood control system are borne by those who benefit. |
| Goal 8.0 | A high level of educational quality for the NMC's residents. |
| Objective 8.1 | Provide adequate educational facilities and programs that meet the needs of NMC's residents by coordinating development activities with the Mountain View School District, Chaffey Joint Union High School District, Chino Unified School District, and Chaffey Community College District. |
| Policy 8.1.1 | Work with the school districts to ensure that school facilities and programs are expanded to commensurate with the NMC's population growth and development. |
| Goal 9.0 | A high level of police protection for the NMC's residents, businesses, and visitors. |
| Objective 9.1 | Coordinate development activities with the City's Police Department to ensure adequate facilities and services are maintained for the City's residents, businesses and visitors. |
| Objective 9.2 | Increase the residents' and the City Police Department's ability to minimize crime and improve security for all uses of public and private buildings, sites, and open spaces. |
| Objective 10.1 | Ensure that the City's Fire Department facilities, personnel, and equipment needs keep pace with the NMC's growth. |

Recreational Resources

This Recreational Resources Element of the General Plan contains the *Parks and Open Space*, *Trails and Bikeways*, *Scenic Highways and Vistas*, *Historic and Cultural Resources*, and *Libraries* Topics. According to the General Plan, the *Parks and Open Space* Topic provides for open space and park facilities location, unification and phasing to meet the needs of future residents. The *Trails and Bikeways* Topic provides for the establishment of a network of greenways, pedestrian paths, and bike trails. The *Scenic Highways and Vistas* Topic provides for the creation of scenic roadways and view corridors in order to maximize the NMC's visual quality. The *Historic and Cultural Resources* Topic provides for the preservation of archaeological, historical and cultural resources in a manner that preserves and/or enhances the resources' inherent value. The following are the City's applicable Aesthetic, Cultural, Open Space, and Recreational Resources goals, objectives, and policies as adopted in the City's 1992 General Plan and 1998 NMC GPA. The proposed Project meets all of these goals, objectives and policies.

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| <i>Policy 1.3.5</i> | Incorporate supporting recreational, educational, retail, cultural, and institutional uses within each Residential Neighborhood based on appropriate service standards. To the extent feasible, these uses will be integrated in Neighborhood Centers.” |
| <i>Policy 1.3.7</i> | Establish a comprehensive greenways network for pedestrians and biking that links housing with parks, Neighborhood Center amenities, and adjacent neighborhoods and activity centers. |
| <i>Policy 1.4.1</i> | Accommodate single- and multi-family housing, parks, and open spaces in areas designated as Residential-Low Density. |
| <i>Policy 1.5.7</i> | Design and develop Neighborhood Centers as pedestrian oriented villages that consider: <ul style="list-style-type: none"> • Development of public spaces that support casual gatherings, outdoor dining and retail, entertainment, artistic exhibitions and performances, community events, and similar functions. |
| <i>Policy 1.5.11</i> | Promote the consolidation of school campuses within or linked to Neighborhood Centers sharing common facilities such as play fields, gymnasiums, auditoriums, and other facilities, where feasible. |
| <i>Policy 1.5.13</i> | Link Neighborhood Centers with adjacent residential areas by the use of greenways, pedestrian walkways, and bicycle paths. |
| <i>Policy 1.6.4</i> | Promote the consolidation of school campuses sharing common facilities such as play fields, gymnasiums, auditoriums, and other facilities, where feasible. |
| <i>Policy 1.6.6</i> | Link the public schools with adjacent housing, parks, and other schools by a pedestrian greenways network. |
| <i>Goal 1D</i> | High-density residential uses that provide population support for adjacent centers characterized by a high level of activity, and/or capitalize on the presence of lakes, golf courses, parks, and other amenities. |
| <i>Objective 1.7</i> | Development of multi-family residential areas adjacent to primary activity centers and/or amenity that convey the sense of an integrated urban corridor or center. Such places may also incorporate community services and facilities as the focal point of neighborhood activity. |
| <i>Policy 1.7.2</i> | Require the inclusion of sufficient on-site recreational amenities in higher density developments to meet resident needs. |
| <i>Policy 1.7.3</i> | Encourage the inclusion of community-oriented uses such as public meeting rooms, plazas/courtyards, day care facilities, and similar uses. These may be developed as single-purpose buildings or incorporated with residential uses. |
| <i>Goal 1E</i> | A Town Center that serves as the focal point of the NMC’s identity and activity. |
| <i>Objective 1.8</i> | Accommodate a diversity of retail, office, entertainment, housing, cultural, public, and similar uses that serve the entire NMC, integrated in a highly active, pedestrian oriented environment. |
| <i>Policy 1.8.1</i> | Accommodate development of retail commercial, professional offices, entertainment, art galleries, dining establishments, hotels, and similar uses in areas designated as Town Center. |
| <i>Policy 1.8.4</i> | Encourage the development of government office, cultural uses (libraries, museums, performance venues, etc.), religious facilities, schools, recreational facilities, multi-modal transportation hub, and similar public and quasi-public uses. |

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| <i>Policy 1.8.5</i> | Encourage the inclusion of community meeting rooms, day care facilities, and public and private plazas, courtyards, and open spaces. |
| <i>Policy 1.8.8</i> | Integrate development of individual parcels to create a cohesive pedestrian oriented center. Design considerations should include: <ul style="list-style-type: none"> • Develop sidewalks and other public spaces to support casual gatherings, outdoor dining and retail, entertainment, arts exhibitions and performances, community events, and similar functions. |
| <i>Policy 1.8.9</i> | Incorporate at least one major public plaza/square as a centerpiece of community activity and identity of sufficient size to accommodate events and celebrations, outdoor performances, community meetings, picnics, farmers markets, and similar functions. |
| <i>Policy 1.9.6</i> | Integrate development of individual parcels to create a cohesive center, which considers the: <ul style="list-style-type: none"> • Inclusion of one or more public square to serve as a gathering place for public activity and events. |
| <i>Objective 1.15.1</i> | Development of a major community park as the focal point of community identity. |
| <i>Goal 1K</i> | A comprehensive network of greenways and open spaces that interconnect the NMC's land use neighborhoods and districts. |
| <i>Objective 1.16</i> | Development of a comprehensive network of greenways, pedestrian paths, open spaces, and other corridors that serve as transitions between and link residential neighborhoods, schools, parks, neighborhood, regional, and community centers, the town center, educational campus, and other key uses. They should provide visual and physical balance to developed urban and suburban uses. |
| <i>Policy 1.16.2</i> | Develop an area-wide greenways network that links all residential neighborhoods, activity centers, and amenities and directly connect to and abut parks and schools as nodes along its length. |
| <i>Policy 1.17.1</i> | Establish, as a priority, the inclusion of pedestrian and bicycle trails in the electrical energy transmission corridors to link neighborhoods and districts. |
| <i>Goal 12.0</i> | High quality parks, trails, and recreational services for the NMC's residents. |
| <i>Objective 12.1</i> | Provide open space and park facilities to meet the needs of future residents. |
| <i>Policy 12.1.2</i> | Update the City's Parks and Bike Trail Master Plan to provide specific criteria and guidelines for the siting, design, and programming of parks and recreational facilities. Consider the following when creating the criteria for acquiring or receiving dedicated parkland: <ul style="list-style-type: none"> • The preservation of unique and valuable natural resources and the conservation of historic and cultural assets; • The usability of proposed parklands and the ease of accessibility for future users; and, • Balance of passive and active recreational opportunities and facilities designed to meet the existing and future needs of all user groups. |
| <i>Policy 12.1.3</i> | Require that all specific plans incorporate a comprehensive and unified parks and recreation plan that: <ul style="list-style-type: none"> • Identifies mini, neighborhood, and community park sites in accordance with the service standards and updated Parks and Bike Trail Master Plan criteria; • Integrates neighborhood parks with neighborhood centers and schools; • Links parks by pedestrian greenway and bike trail networks; • Incorporates passive and active recreational uses as specified in the Parks and Bike Trail |

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| | Master Plan; and, |
| | <ul style="list-style-type: none"> • Defines a park acquisition and improvement financing plan. |
| <i>Policy 12.1.4</i> | Encourage: <ul style="list-style-type: none"> • School and park facilities be located in a manner that permits shared use of auditoriums, playing fields, etc.; • Public facilities (auditoriums, amphitheaters, day care centers, public meeting rooms) be integrated into park design; and, • Drainage channels developed as an open space amenity. |
| <i>Policy 12.1.7</i> | Require residential neighborhoods located next to a park provide pedestrian greenway and bike trails to the park. |
| <i>Policy 12.1.8</i> | Encourage storm drainage detention basins be designed to accommodate passive and active recreational uses during the dry periods. |
| <i>Policy 12.1.9</i> | Require the use of extensive landscaping along street frontages. Landscaping elements should include tree and plant specimens currently found within the NMC. |
| <i>Policy 12.1.10</i> | Require the dedication and development of future community neighborhood park sites before a significant proportion of a new population to be served by the park exists. |
| <i>Policy 12.1.11</i> | Require that new multi-family residential developments of five or more units provide recreational or open space facilities on-site and contribute appropriate fees that aid in the public development of other facilities to offset additional demands generated by their resident population. |
| <i>Policy 12.1.12</i> | Require that large-scale commercial developments, such as the Town Center, community centers, regional centers, provide open space facilities within the development for passive or active recreation or contribute fees for the public development of such uses. |
| <i>Goal 13.0</i> | A comprehensive and interconnected public and bikeway trail system. |
| <i>Objective 13.1</i> | Create a trail system that provides the NMC residents with safe, useable, and attractive bicycle and pedestrian trails. |
| <i>Policy 13.1.1</i> | Require that a comprehensive network of greenways, pedestrian paths, and bike trails be established linking the Town Center, educational campus (if developed), regional centers, community commercial, neighborhood centers, “Village Green,” neighborhood parks, and schools. |
| <i>Policy 13.1.2</i> | Require developments to link their internal trail system with the surrounding NMC network. |
| <i>Policy 13.1.3</i> | Encourage infrastructure rights-of-ways or easements to be designed and developed to accommodate trails and bikeways where feasible and where compatible with the intended primary use. |
| <i>Policy 13.1.4</i> | Jointly use SCE easement-owned rights-of-way for trails and bikeways where feasible and compatible with the intended primary use. |
| <i>Policy 13.1.5</i> | Jointly use SCE’s fee-owned rights-of-way for trails and bikeways where feasible and compatible with SCE’s secondary land use licensing program. |
| <i>Policy 13.1.6</i> | Work with the surrounding jurisdictions to ensure trail connections between the NMC and other regional recreational destinations or amenities. |

3.8.1.3 Parks and Recreation

The area surrounding the Project site has traditionally been a rural agricultural area. Thus the need for parks and recreation facilities has not existed in the past. Some regional recreational facilities and several local parks exist to serve the area today.

Community, Neighborhood, and Mini parks are owned and operated by the City of Ontario, or master property owners associations throughout the City. Regional recreational facilities in the area are provided by the San Bernardino County Regional Park Department within San Bernardino County, and by Riverside County Regional Parks and Open Space District within Riverside County. Also, considering the proposed Project's proximity to the County of Riverside, future residents of the Specific Plan could easily access local park and recreation facilities within this neighboring jurisdiction, and vice versa. Local parks currently located proximate to the Project site (within 5 miles) are provided by the Jurupa Community Services District (Eastvale) or Jurupa Parks and Recreation District (Mira Loma), in addition to the Cities of Ontario and Chino.

The closest local parks within the City of Ontario are located in the Creekside residential development within 1 mile north of the proposed Project site. These parks are operated by home owners association and are not open to the general public. Westwind Park is a City park located within 1 mile north of the Project site on Riverside Drive west of Archibald Avenue. Adjacent to this park is the Whispering Lakes Golf Course. Outside of the City, neighborhood parks exist within the Eastvale Specific Plan area (Jurupa Community Services District) located approximately 2.5 miles to the south, along Archibald Avenue and Mountain View Park located approximately 4.5 miles to the west in the City of Chino. San Bernardino County maintains regional parks and recreation facilities within 4 to 6 miles of the Project site. Regional recreation facilities include the Cucamonga-Guasti Regional Park located 6 miles north of the Project site. The Prado Regional Park and El Prado Golf Course approximately 3-½ miles southwest of the Project site is a 1,837-acre open space park with picnicking and hiking facilities that is operated by Riverside County. Riverside County's Santa Ana River Regional Park is located approximately 4 miles south of the site. Within the existing residential areas of the City, the present parks ratio is 2.9 acres per 1,000 residents. The GPA for the NMC standard for park and recreation areas is 5 acres for every 1,000 residents. The City's General plan designated three sizes of parks; first, the Mini-Park (up to one acre serving a ¼-mile radius) second, the Neighborhood Park (5 to 10 acres serving a ½-mile radius) and third, the Community Park (ten to thirty acres serving a ½-mile radius). Current City policy is directed at Neighborhood Parks of no less than 5 acres.

The Project proposes a total of approximately 13.8 acres of parks/open space/recreation. This is based on 6.2 acres of proposed pocket parks; 5.0 acres of a Neighborhood Park; and 2.6 acres of 30-foot wide paseo to be developed by 'West Haven' within the SCE Easement, adjacent to the proposed Project boundary. Based on the City's parks/recreation requirement for new residential development required ratio per 1,000 residents, and need for a minimum of 7.68 acres of parks/recreation created by the estimated Project population, less than significant impacts to parks and recreational facilities would result from Project implementation. In addition, the buildout of the NMC anticipates the development of a total of 163 acres of parks that would also be usable by Project residents.

3.8.1.4 Other Development Plans

Habitat Conservation Plan/Natural Community Conservation Plan

The San Bernardino Valleywide Multi Species Habitat Conservation Plan (SBMSHCP) encompasses approximately 500 square miles. The SBMSHCP contains six unique habitat types, six state endangered or threatened species, 13 federally endangered or threatened species, and over 53 species of special concern within San Bernardino County. San Bernardino County, through their Natural History Museum staff, has been conducting biological and botanical surveys for the past several years in order to identify habitat needs and requirements for the various sensitive species. The Project site is not within the proposed SBMSHCP boundaries.

3.8.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on recreational resources associated with the Project. The NOP and Appendix G suggest that a Project related significant impact would occur if the Project would:

- ◆ 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.
- ◆ Project includes recreational facilities or requires the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

The NMC Final EIR included a threshold that determined a significant impact would occur if parks and recreational facilities demand exceed current park standards.

3.8.3 Impacts

3.8.3.1 Impacts to On-site and Surrounding Land Uses

Potential direct and indirect land use impacts can occur due to construction and operation of the Project. These impacts include short-term disruptions to existing land uses during Project construction and long-term impacts due to changes in land use as a result of Project build-out. Specific land use impacts could include:

- ◆ Short-term disruptions to existing developed land uses (residential, dairy farming, agricultural production) due to increased noise, potential disruption to circulation, and potential interruptions in utility service during construction;
- ◆ Long-term displacement of existing land uses; and,
- ◆ The compatibility or incompatibility of future land development with adjacent existing land uses.

Construction of the Project would result in temporary disturbances such as noise and dust from construction activities and increase traffic. These impacts would be most pronounced in the residential areas where traffic and noise levels are lower than in industrial and commercial areas. Potentially sensitive residential land uses are located north, south, east, and west of the Project site. The land use disturbances during construction near these areas would be an adverse, but not a significant impact since

the disturbances would be short-term and localized. Refer to Section 3.9, *Noise*, for a discussion of potential noise impacts and mitigation measures.

Implementation of the proposed Project would accommodate the development of the Project's master planned community thereby establishing new land use relationships with adjacent lands. Most of the existing Project area is currently being utilized for dairy farming, although a transition to urban land uses is occurring. Land uses within the Project and surrounding areas will be converted to residential, neighborhood commercial centers, schools, and parks as buildout under the NMC GPA occurs. Section 2.0, *Project Description*, provides a complete description of each proposed land use type within the Project site within the NMC. Figure 2.3-1, *Project Land Use Map*, features the Project site and proposed surrounding distribution of land use uses by type and intensity/density throughout the Project boundaries.

Based on the proposed layout of the proposed Project and its consistency with the long-term NMC GPA uses identified for the Project site and surrounding areas, no impacts to existing and proposed future land use relationships are anticipated. Conversion of these land uses is consistent with the NMC GPA and NMC GPA.

3.8.3.2 Consistency with General Plan Designation and Zoning Code

The proposed Project would be consistent with the City's General Plan land use designations for the Project site, Residential-Low Density and Neighborhood Commercial Center. The residential land use designation allows for the development of an overall average of 4.6 dwelling units per gross acre in areas designated as Residential-Low Density, in addition to accommodating a variety of parcel sizes and housing types. The proposed Project will include the residential densities as shown in Table 2.3-2, *Residential Lot Development*.

The proposed Project also would be consistent with the Neighborhood Commercial Center land use designation. The permitted uses allowed within the designation which include local serving commercial (food and beverage sales, small retail shops, personal services, etc.), small restaurants, community/public meeting facilities, libraries, government facilities, cultural facilities, parks, schools, religious facilities, public plazas and performance spaces, and similar uses.

Following adoption of the NMC GPA and prior to annexation into the City of Ontario, properties in the SOI were pre-zoned as "SP" (Specific Plan). The agricultural component would permit the use of the properties for agricultural use until such a time a Specific Plan designates the property for another use (Agricultural Preserve, otherwise referred to as the "Ag Preserve"). The Specific Plan Zone includes policies requiring that a Specific Plan be approved for the Project site to implement the NMC land uses. The proposed Project includes the preparation and approval of a Specific Plan. Designation of land uses permitted by the NMC GPA would occur at the time of the City's approval of the Specific Plan.

The West Haven Specific Plan is designed to meet the requirement of the State of California Government Code and the City's NMC GPA. The City would adopt the West Haven Specific Plan by resolution thereby establishing the land use regulations for the development of the Project site. The requirements of the Specific Plan would take precedence over the City's Development Code; however, in instances where the Specific Plan does not address specific zoning requirements, development standards or guidelines, the City's Development Code will prevail.

3.8.3.3 Consistency with NMC General Plan

Community Development

The following analysis is based upon the current NMC GPA. The Project would be compatible with the land use goals and objectives listed in Section 3.8.1.2, *Existing Land Uses*, of this EIR. The Project includes the preparation of a Specific Plan that would guide development in accordance with the organizational principles and standards of the NMC GPA (Goal 1A and Objective 1.1). The Project includes the development of a mixed-use community that integrates a diversity of residential neighborhoods, commercial center, and open spaces (Goal 1B and Objective 1.2). The Project offers a variety of housing types and incorporates a full range of uses such as open space, commercial center, and a school that supports the local residential needs and provides for the development of a self-contained and land use balanced neighborhood (Goals 1C and 1M; Objectives 1.3, 1.18; and Policies 1.2.2, 1.2.3, 1.3.3).

The Project would include the development of a school and neighboring park to serve the needs of the local population and would serve as a focal point for neighborhood activity (Objective 1.6 and Policies 1.6.2, 1.6.3, and 1.6.5). The Project includes the development of 6.2 acres of paseos and pocket parks and a five-acre park that would serve to interconnect the community (Goal 1K, Objective 1.16, and Policy 1.16.2). The Project also includes the integration of an existing SCE easement within the Project boundaries (Goal 1L and Policy 1.16.3).

The Project includes the development of 753 residential units that will provide adequate housing to support the projected job and household growth within the City (Goal 3A and Objective 3.1). Infrastructure Master Plans for all development within the NMC have been developed and the Project would be required to comply with these plans (Objective 3.2, Policies 3.2.1 and 3.2.2).

Infrastructure and Public Services

The Project would alter the need for various services and utilities in the area. The public services and utilities agencies have been contacted during the preparation of this EIR. Specific impacts to these services are discussed in detail in the Public Services and Utilities Section of this EIR. Refer to Sections 3.10 and 3.12 of this EIR for a complete discussion of the *Public Services* and *Utilities/Service Systems* impacts and mitigation measures associated with the proposed Project.

The Project would obtain applicable permits and approval such as the NPDES and SWPPP. Refer to Section 3.7 *Hydrology/Water Quality* of the EIR for a discussion of impacts and mitigation measures associated with the Project.

Recreational Resources

The Project would include the development of a school and a park to serve the needs of the local population and would serve as a focal point for neighborhood activity (Objectives 1.6 and Policies 1.15.1, 12.1.3 and 12.1.4). The Project includes the development of 6.2 acres of paseos and pocket parks and a five-acre park that would serve to interconnect the community (Goals 12.0 and 13.0, Objectives 1.8, 1.16 and 13.1, and Policies 1.16.2, 1.3.7, 1.5.13, 1.6.6, 1.8.8, 1.16.2, 12.1.7, and 13.1.1). The Project also includes the integration of an existing SCE easement within the Project boundaries (Goal 1L and Policies 1.16.3, 13.1.3, 13.1.4, and 13.1.5).

The Project proposes a total of approximately 13.8 acres of parks/open space/recreation. This is based on 6.2 acres of proposed pocket parks and the 30-foot wide paseo to be developed within the proposed Project boundary; 5.0 acres of a Neighborhood Park; and 2.6 acres of 30-foot wide paseo to be developed by 'West Haven' within the SCE Easement, adjacent to the proposed Project boundary. Based on the City's parks/recreation requirement for new residential development and need for 7.68 acres of parks/recreation created by the estimated Project population, less than significant impacts to parks and recreational facilities would result from Project implementation.

The City currently collects three acres of parkland or in-lieu fees from new residential subdivisions for every 1,000 residents in accordance with California Government Code Section 66477 (Quimby Act). Additional sources for the City to obtain parkland include alternative funding sources for adding park acreage and/or park improvements. Such sources include general fund revenues, applicant impact fees, state and federal grants, user group contributions and school district joint use contributions. Other methods that the City pursues to supplement their current parkland include encouraging the development of private open space and recreational amenities, beyond public park requirements, to be incorporated in large residential projects.

3.8.3.4 Other Development Plans

City requirements for development projects such as the West Haven Specific Plan Project include the use of registered civil engineers and other professionals in preparation of site plans, landscape plans, subdivisions, grading, and construction plans. The development review process ensures adherence to City policies, development regulations, and engineering standards for site planning and subdivision design, and coordination of such plans with the properties adjoining a Project site, neighboring jurisdictions, and other stakeholders with interest in the outcome of a proposed Project. Additionally, the Project would not conflict with SBMSHCP because the Project site is not located within the boundaries of the Conservation Plan.

3.8.4 Mitigation Measures

There are no mitigation measures specified and/or required for Recreational Resources.

3.8.5 Significant Effects of the Project After Mitigation

The Project will have less than significant impacts on local land use, planning, and recreational resources with application of the standard conditions, Uniform Building Codes, and the mitigation measures delineated in Sections 3.2, *Air Quality*; Section 3.7, *Hydrology/Water Quality*; Section 3.9, *Noise*; Section 3.10 *Public Services*; Section 3.11, *Transportation/Traffic*; and in Section 3.12, *Utilities*.

3.9 NOISE

This section analyzes anticipated levels of Project related noise. Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and which interferes with or disrupts normal activities. Although exposure to high noise levels has been demonstrated to cause hearing loss, the principal human response to environmental noise is annoyance. The response of individuals to similar noise events is diverse and influenced by the type of noise,

perceived importance and suitability of the noise in a setting, time of day and type of activity during which the noise occurs, and sensitivity of the individual.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium such as air and are sensed by the human ear. Sound is generally characterized by a number of variables including frequency and intensity. Frequency describes the sound's pitch and is measured in Hertz (Hz), while intensity describes the sound's loudness and is measured in decibels (dB). Decibels are measured using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort and eventually pain at still higher levels. The minimum change in the sound level of individual events that an average human ear can reliably detect in a community environment is approximately 3 dB, while a change in sound level of 5 dB is readily detected by the average person. A change in sound level of 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness; this relation holds true for loud sounds and for quieter sounds. For informational purposes, typical community sound levels are presented in Table 3.9-1, *Sound Levels of Typical Noise Sources and Noise Environments*.

Because of the logarithmic nature of the decibel unit, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. However, some simple rules of thumb are useful in dealing with sound levels. First, if a sound's intensity is doubled, the sound level increases by 3 dB, regardless of the initial sound level. Thus, for example: 60 dB plus 60 dB equals 63 dB, and 80 dB plus 80 dB equals 83 dB.

Sound frequency is a measure of how many times each second the crest of a sound pressure wave passes a fixed point. For example, when a drummer beats a drum, the skin of the drum vibrates at a certain number of times per second. The vibration of the drum skin at a rate of 100 times (or cycles) per second generates a sound pressure wave that is said to be oscillating at 100 Hz, and this pressure oscillation is perceived as a tonal pitch of 100 Hz. Sound frequencies between 20 Hz and 20,000 Hz are within the range of sensitivity of the best human ear.

Sound from a tuning fork contains one single frequency and may therefore be referred to as a "pure tone"; however, most sounds heard in the environment do not consist of a single frequency, but rather a broad band of frequencies differing in individual sound level. The method commonly used to quantify environmental sounds consists of evaluating sound according to a weighting system that replicates human hearing, which is less sensitive to low frequencies and high frequencies than mid-range frequencies. This frequency-dependent modification is called A-weighting, and the decibel level measured is called the decibel A-weighted sound level (dBA). In practice, the level of a noise source is conveniently measured using a sound level meter that includes a filter corresponding to the dBA curve.

Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a mixture of noise from distant sources that create a relatively steady background noise in which no particular source is identifiable. A single descriptor called the L_{eq} (equivalent sound level) is used. L_{eq} is the energy-mean A-weighted sound level present or predicted to occur during a specified time interval. It is the "equivalent" constant sound level that a given source would need to produce to equal the fluctuating level measured. It is often desirable to also know the range of acoustic levels of the noise source being

measured. This is accomplished through the L_{\max} and L_{\min} noise descriptors. They represent the root-mean-square maximum and minimum obtainable noise levels measured during the monitoring interval. The L_{\min} value obtained for a particular monitoring location is often called the “acoustic floor” for that location.

To describe the time-varying character of environmental noise, the statistical noise descriptors L_{10} , L_{50} , and L_{90} are commonly used. They are the noise levels equaled or exceeded 10, 50, and 90 percent, respectively, during the measured time interval. Sound levels associated with the L_{10} typically describe transient or short-term events, while levels associated with the L_{90} typically describe the background noise conditions.

Other descriptors of noise are also commonly used to help determine noise/land use compatibility and to predict an average community reaction to adverse effects of environmental noise including traffic-generated and industrial noise. One of the most universal descriptors is the Day-Night Average Noise Level (DNL). The DNL (shown in formulae as L_{dn}) noise metric represents a 24-hour period and applies a time-weighted factor designed to penalize noise events that occur during nighttime hours, when relaxation and sleep disturbance is of more concern. Noise occurring during the daytime hours between 7:00 a.m. and 10:00 p.m. receives no penalty. Noise occurring between 10:00 p.m. and 7:00 a.m. is penalized by adding 10 dB to the measured level. Another noise metric, the Community Noise Equivalent Level (CNEL), differs slightly from the DNL metric in that noise occurring during the evening hours of 7:00 p.m. to 10:00 p.m. is penalized by adding 5 dB (as opposed to 10 dB using the DNL metric) to the measured level.

3.9.1 Setting

The primary noise source in the Project vicinity is vehicular traffic from nearby arterial roadways, such as Haven Avenue and Riverside Drive. More distant traffic noise also has an influence, such as noise from the SR-60 and the I-15 freeways, to the north and east respectively. Noise from aircraft operations and overflights from Ontario International Airport, located to the north of the Project area and from Chino Airport, located to the west of the Project area, are secondary contributors to the local noise environment. The Project site is located well outside the 65 dBA CNEL noise contours from these two airports. Similarly, noise from nearby agricultural operations and residential community noise are secondary contributors to the noise environment in the area.

The land use surrounding the Project site consists of residential and agricultural uses. Residential land uses exist on the northern and western sides of the Project site, while agricultural land uses predominate to the east and south. Several residences and commercial/industrial uses also exist near the eastern and southern Project boundaries. The nearest existing noise-sensitive receptors to the Project site are the residences to the north, east and west.

Noise measurements were conducted on September 28 and 29, 2004 to quantify the existing acoustical environment in the Project area. Figure 3.9-1, *Noise Monitoring Locations*, features the noise measurement locations. The noise measurements represent the typical ambient noise levels for the Project area. Four short-term (15 minutes in duration) attended sound level measurements were

**Table 3.9-1. Sound Levels of Typical Noise Sources and Noise Environments
(A-Weighted Sound Levels)**

| Example Noise Source (at a Given Distance) | Scale of A-Weighted Sound Level in Decibels | Example Noise Environment | Human Judgment of Noise Loudness (Relative to a Reference Loudness of 70 Decibels*) |
|---|---|------------------------------------|---|
| Military Jet Take-off with After-burner (50 ft) | 140 | Carrier Flight Deck | |
| Civil Defense Siren (100 ft) | 130 | | |
| Commercial Jet Take-off (200 ft) | 120 | | Threshold of Pain *32 times as loud |
| Pile Driver (50 ft) | 110 | Rock Music Concert | *16 times as loud |
| Ambulance Siren (100 ft) | 100 | | Very Loud |
| Newspaper Press (5 ft) | | | *8 times as loud |
| Power Lawn Mower (3 ft) | | | |
| Motorcycle (25 ft) | 90 | Boiler Room | *4 times as loud |
| Propeller Plane Flyover (1,000 ft) | | Printing Press Plant | |
| Diesel Truck, 40 mph (50 ft) | | | |
| Garbage Disposal (3 ft) | 80 | High Urban Ambient Sound | *2 times as loud |
| Passenger Car, 65 mph (25 ft) | | | Moderately Loud |
| Living Room Stereo (15 ft) | | | *70 decibels |
| Vacuum Cleaner (3 ft) | 70 | | (Reference Loudness) |
| Electronic Typewriter (10 ft) | | | |
| Normal Conversation (5 ft) | 60 | Data Processing Center | *1/2 as loud |
| Air Conditioning Unit (100 ft) | | Department Store | |
| Light Traffic (100 ft) | 50 | Private Business Office | *1/4 as loud |
| Bird Calls (distant) | 40 | Lower Limit of Urban Ambient Sound | Quiet *1/8 as loud |
| Soft Whisper (5 ft) | 30 | Quiet Bedroom | |
| | 20 | Recording Studio | Just Audible |
| | 0 | | Threshold of Hearing |

Source: Data compiled by URS Corporation (2005).

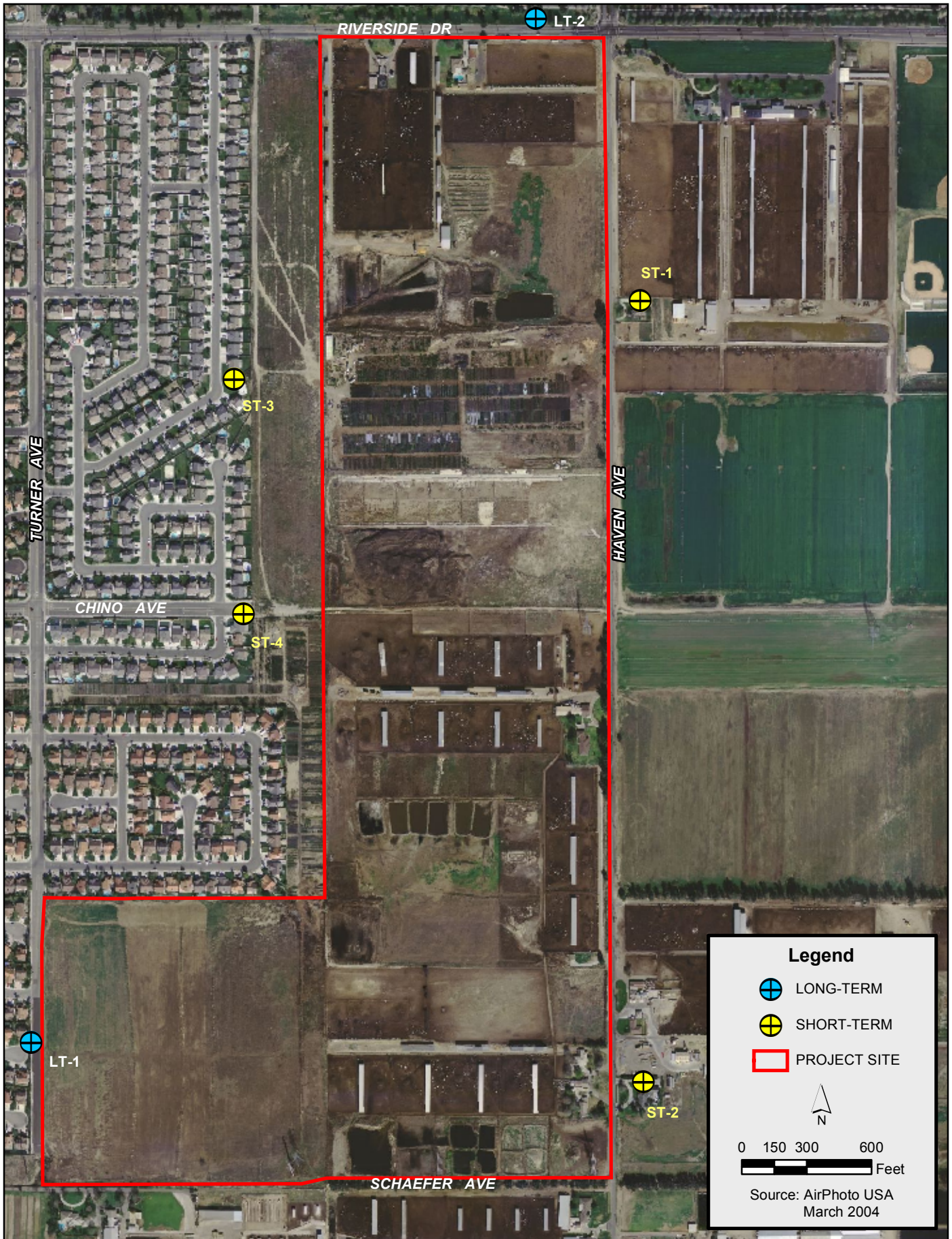
conducted with a Brüel and Kjær Model 2231 Sound Level Meter (SLM). This instrument is categorized as Type 1 - Precision Grade. Two long-term (24 hours), unattended Community Noise Analyzers (CNAs) measured noise levels continuously, in 15-minute intervals, during a 24-hour period from September 28 to September 29, 2004. The monitoring location designated Long-Term 1 (LT-1) was positioned on a tree at the southwestern boundary of the Project area, adjacent to an existing residential neighborhood. LT-2 was located on a tree at the northeastern boundary of the Project area, adjacent to an existing residential neighborhood. The instruments used for the long-term noise measurements were Metrosonics db-308 CNAs, categorized as Type 2 – General Purpose.

The sound measuring instruments used for the survey were set to the slow-time response and the dBA scale for all of the noise measurements. To ensure accuracy, the laboratory calibration of the instruments was field checked before and after each measurement period. The accuracy of the acoustical calibrator is maintained through a program established through the manufacturer and traceable to the National Institute of Standards and Technology. The sound measurement instruments meet the requirements of the American National Standard S 1.4-1983 and the International Electrotechnical Commission Publications

804 and 651. In all cases, the microphone height was 5 feet above the ground and the microphone was equipped with a windscreen.

During the field measurements, physical observations of the predominant noise sources were noted. The noise sources in the Project area typically included traffic on nearby local arterials, birds and distant aircraft. At several of the measurement locations (ST-1 and ST-2), agricultural activity noise could be heard in addition to other local noise sources. At locations ST-3 and ST-4, at the western side of the Project boundary, a dominant noise source in the absence of major traffic or other noise sources was corona discharge noise from the overhead power lines in the area. Figures 3.9-2 and 3.9-3, *Hourly Noise Levels – LT-1 (2900 East Archibald Ranch Road)* and *Hourly Noise Levels – LT-2 (2920 St. Tropez Drive)* respectively, graphically explain the hourly L_{eq} sound levels measured at the long-term monitoring locations LT-1 and LT-2. The measured CNELs at LT-1 and LT-2 were 57 dBA CNEL and 63 dBA CNEL, respectively.

The results of the attended short-term sound level measurements are summarized in Table 3.9-2, *Short-Term Noise Measurement Data*. As presented in Table 3.9-2, below, measured short-term noise levels during daytime hours in the Project area varied from 52 dBA L_{eq} (at ST-4) to 57 dBA L_{eq} (at ST-1 and ST-2).



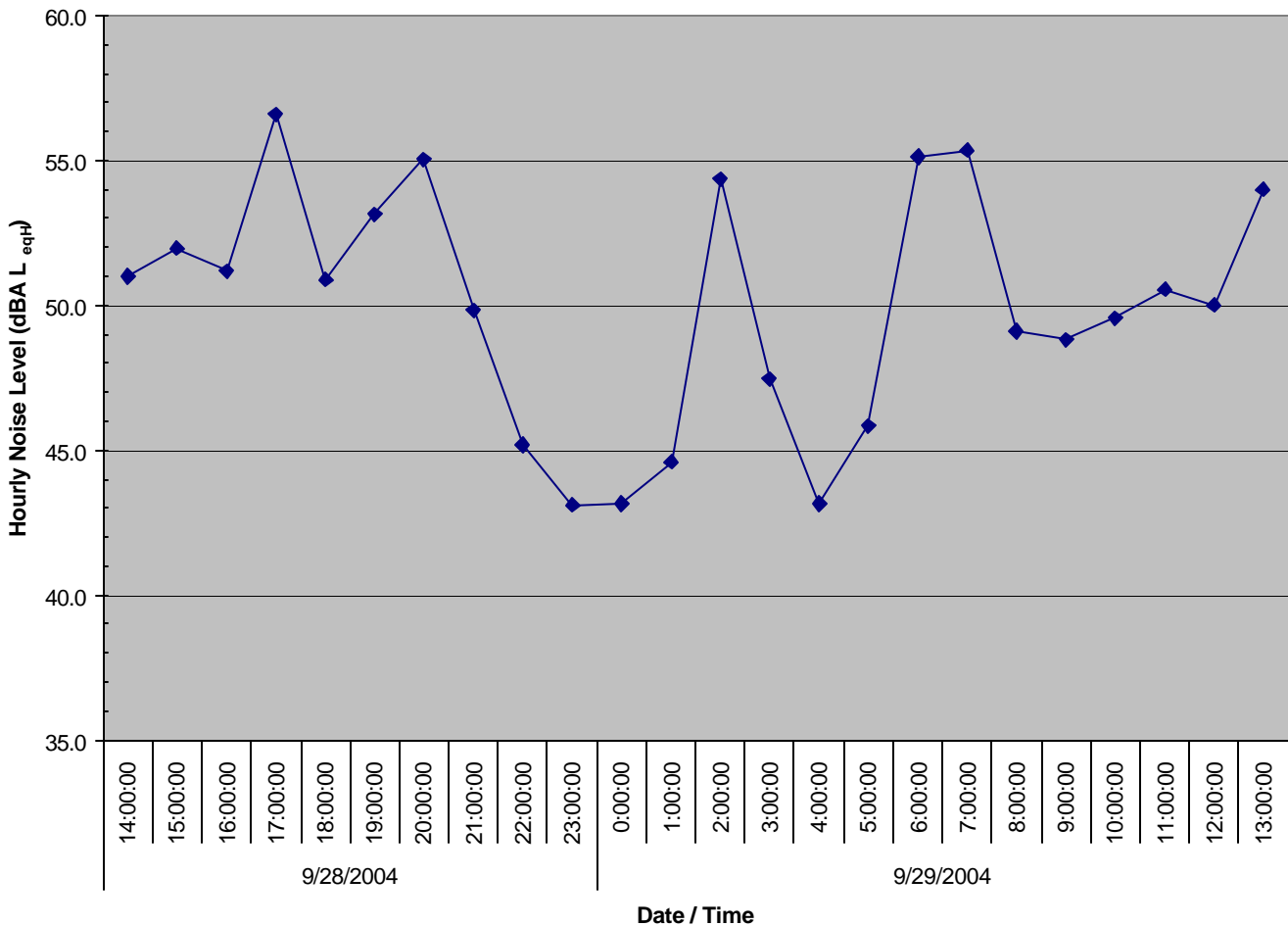
NOISE MONITORING LOCATIONS

Table 3.9-2. Short-Term Noise Measurement Data

| Measurement ID | Measurement Location | Measurement Period | | | Noise Sources | Measurement Results, dBA | | | | | |
|----------------|---|--------------------|------------|--------------------|--|--------------------------|------------------|------------------|-----------------|-----------------|-----------------|
| | | Date | Start Time | Duration (minutes) | | L _{eq} | L _{max} | L _{min} | L ₉₀ | L ₅₀ | L ₁₀ |
| ST-1 | 13191 Haven Avenue, side yard | 9/28/2004 | 14:20 | 15 | Traffic, rustling leaves, birds, distant landscaping equipment, distant farm machinery | 57.1 | 71.1 | 43.5 | 46.0 | 52.0 | 60.5 |
| ST-2 | 13661 Haven Avenue, side yard | 9/28/2004 | 14:45 | 15 | Traffic, distant aircraft, rustling leaves, birds, distant farm machinery | 57.0 | 73.3 | 44.1 | 46.0 | 51.0 | 60.5 |
| ST-3 | 3292 Pony Drive, side yard | 9/29/2004 | 14:00 | 15 | Distant aircraft, distant barking dogs, birds, corona electrical discharge noise, distant trash pickup (brief) | 53.9 | 67.1 | 47.9 | 49.0 | 50.5 | 57.0 |
| ST-4 | Adj. to 3411 Clover Avenue at E. of Chino Ave | 9/29/2004 | 14:25 | 15 | Corona electrical discharge noise, distant aircraft, distant traffic, rustling leaves, distant barking dogs | 51.9 | 56.3 | 49.7 | 50.5 | 51.5 | 53.0 |

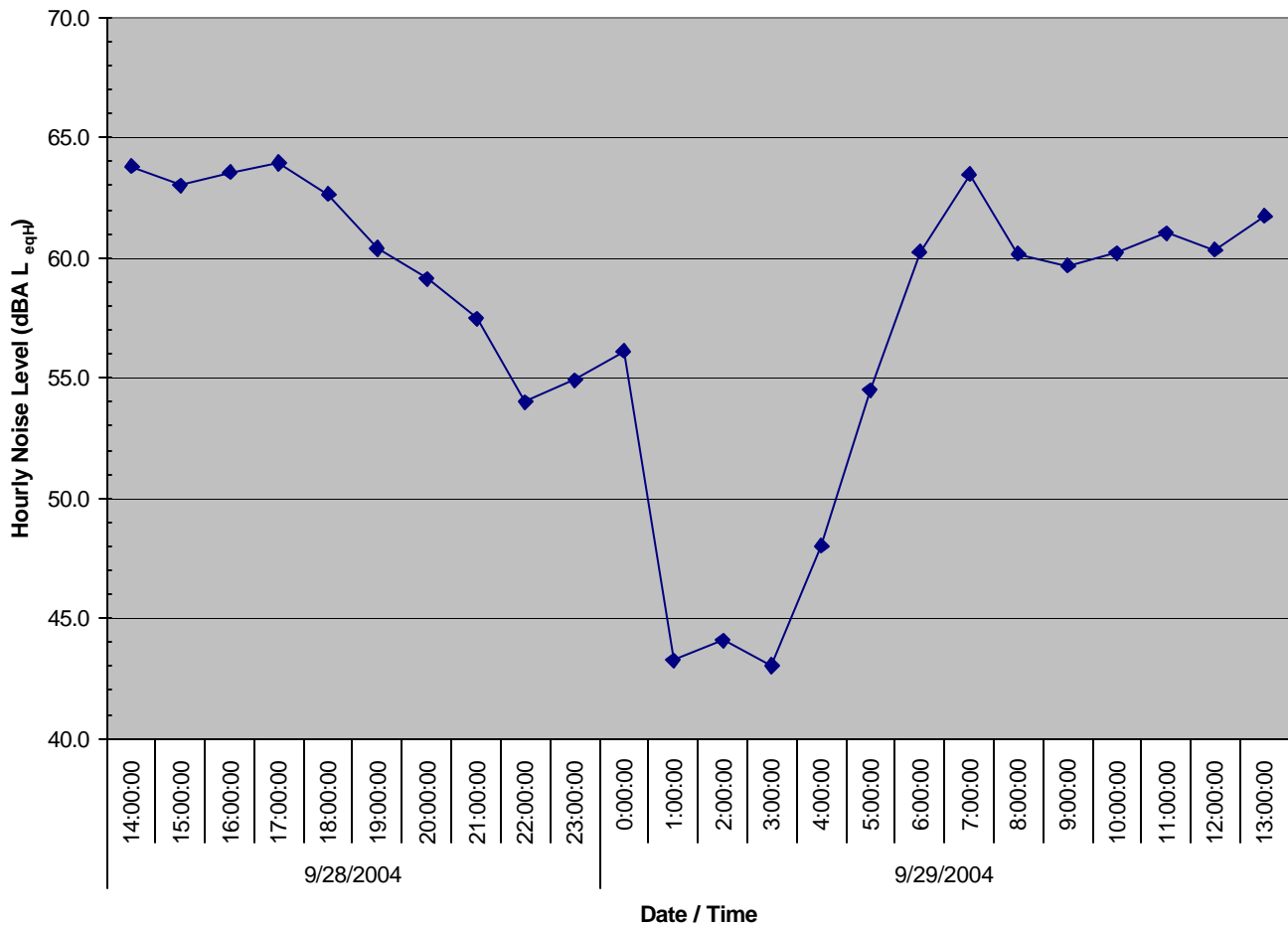
Source: Data Compiled by URS Corporation (2004)

Figure 3.9-2. Hourly Noise Levels – LT-1 (2900 East Archibald Ranch Road)



Source: Data compiled by URS Corporation (2004).

Figure 3.9-3. Hourly Noise Levels – LT-2 (2920 St. Tropez Drive)



Source: Data compiled by URS Corporation (2004).

3.9.2 Thresholds of Significance

The City of Ontario General Plan Noise Element utilizes the CNEL scale as the criterion for assessing the compatibility of residential land uses with transportation related noise sources. Table 3.9-3, *Interior/Exterior Noise Level Standards*, lists the City interior and exterior noise standards. For residential areas, an exterior noise level of up to 65 dBA CNEL is permitted if the exterior areas are substantially mitigated and the interior noise exposures do not exceed 45 dBA CNEL with windows and doors closed. If windows and doors are required to be closed to achieve an acceptable interior noise level, then the use of air conditioning or mechanical ventilation would be required.

The City regulates noise from non-transportation related, stationary sources such as fans, pumps, compressors or other mechanical equipment. Article 33: Environmental Performance Standards of the City’s Development Code (Title 9) sets performance standards for affected (receiving) land uses from stationary and mobile sources, during daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods. For single-family residential land uses, the daytime noise standard is 65 dBA L_{eq} , while the nighttime noise standard is 45 dBA L_{eq} . For multi-family residential land uses, the daytime noise standard is 65 dBA L_{eq} , while the nighttime noise standard is 50 dBA L_{eq} . For commercial land uses

including Agricultural Preserve, the daytime and nighttime noise standards are 65 dBA L_{eq} , and 60 dBA L_{eq} , respectively. Exemptions from these standards include motor vehicles not under the control of the City, industrial uses, emergency equipment, vehicles and devices, and temporary construction, repair or demolition activities taking place between the hours of 7 a.m. and 7 p.m., Monday through Saturday, excluding Federal holidays.

A Project consisting of new construction or additions would be required to meet the City Noise Element and Noise Ordinance standards as a condition of building permit approval. In addition, under the CEQA Guidelines, a Project would normally be deemed to produce a significant or potentially significant effect on the environment if the Project would:

- ◆ Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- ◆ Expose persons to or generation of excessive groundborne vibration or groundborne noise levels.
- ◆ Produce a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.
- ◆ Produce a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.

A change of 1 dB or less is not readily detectable in the context of a community noise environment and as such would not be considered a substantial change in ambient noise levels. Use of a 3 dB or greater “perceptible” change in noise levels is the industry standard for defining a “substantial” increase in ambient noise levels.

Off-site roadway noise impacts would be considered significant if the Project increases noise levels by 3 dBA CNEL and if (1) the existing noise levels already exceed the 65 dBA CNEL residential standard or (2) the Project increases noise levels from below the 65 dBA CNEL standard to above the 65 dBA CNEL. Noise impacts would also be considered significant if the Project would increase the existing noise level by 5 dBA CNEL and the noise levels remain below the 65 dBA CNEL, which is the standard for residences, schools and parks.

3.9.3 Impacts

The primary noise sources expected to affect existing and planned noise sensitive land uses in the Project vicinity would be construction-related activities during development and traffic from area roadways during Project operations. Additional potential noise impacts could result from operational noise from the proposed elementary school, the proposed park and the proposed neighborhood commercial center.

Table 3.9-3. Interior/Exterior Noise Level Standards

| Land Use | | dBA (CNEL) | |
|---|---|---|-----------------------|
| Categories | Uses | Interior ¹ | Exterior ² |
| Residential | Single and Multi-family, Duplex, | 45 | 65 ³ |
| | Mobile home | N/A | 65 ⁴ |
| Commercial | Hotel, motel, transient lodging | 45 | 65 ³ |
| | Commercial retail, bank, restaurant | 55 | N/A |
| | Office building, research and development, professional offices | 45 | 65 |
| | Amphitheater, concert hall, auditorium, meeting hall | 45 | N/A |
| | Gymnasium (Multi-purpose) | 50 | N/A |
| | Sports Club | 55 | N/A |
| | Manufacturing, Warehousing, Wholesale, Utilities | 65 | N/A |
| | Movie Theaters | 45 | N/A |
| Institutional/Public | Hospital, nursing home, school classroom, | 45 | 65 |
| | Church, library | 45 | N/A |
| Open Space | Park | N/A | 65 |
| ¹ Indoor environment excluding: bathrooms, kitchens, toilets, closets and corridors. | | | |
| ² Outdoor environment limited to: | | | |
| <ul style="list-style-type: none"> ▪ Private yard of single-family dwellings ▪ Multi-family private patios or balconies ▪ Hospital/office building patios | | <ul style="list-style-type: none"> ▪ Park picnic areas ▪ School playgrounds ▪ Hotel and motel recreation areas | |
| ³ An exterior noise level of up to 65 dBA CNEL would be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dBA CNEL with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level would necessitate the use of air conditioning or mechanical ventilation. | | | |
| ⁴ Exterior noise level should be such that interior noise level will not exceed 45 dBA CNEL. | | | |

Source: City of Ontario Noise Element to the General Plan, Section 3.9; Table HA-2 (1992).

3.9.3.1 Construction

Construction noise represents a short-term impact on ambient noise levels. The Project-related construction would result in temporary increases in noise levels at locations within and adjacent to the Project site. Construction of the Project would occur in phases over an approximately two-and-a-half-year period. Noise from construction activity is generated by the broad array of powered, noise-producing mechanical equipment used in the construction process. This equipment ranges from hand-held pneumatic tools to scrapers, dozers and water trucks. The exact complement of noise-producing equipment that would be in use at a given construction site during any particular period is difficult to predict. However, the noise levels from construction activity during various phases of a typical construction project have been evaluated, and their use is believed to yield an acceptable prediction of a project's potential noise impacts.

The evaluation of Project construction noise impacts would be based on typical noise level emissions from residential construction sites, as developed for the U.S. EPA. Average noise levels associated with various construction phases where all pertinent equipment is present and operating at a reference distance of 50 feet are presented in Table 3.9-4, *Typical Construction Noise Levels by Activity*.

Table 3.9-4. Typical Construction Noise Levels (in L_{eq}) by Activity

| | |
|--------------------------|-----------|
| Ground Clearing | 83±8 dBA |
| Excavations | 88±8 dBA |
| Foundations | 81±10 dBA |
| Erection of Structures | 81±10 dBA |
| Finishing (i.e., Paving) | 88±7 dBA |

Source: U.S. EPA (1971).

Because of vehicle technology improvements and more strict noise regulations enacted during the last 30 years, the midpoint noise levels shown above for the loudest construction phase should be used. This information indicates that the overall noise level generated on a construction site could be 88 dBA L_{eq} at a distance of 50 feet. Noisy construction activities could be in progress on more than one part of the Project site at a given time. The noise levels presented are average values, typically the magnitude of construction noise emission varies over time because construction activity is intermittent and power demands on construction equipment (and the resulting noise output) are cyclical.

Noise levels generated by construction equipment (or by any “point source”) decrease at a rate of approximately 6 decibels per doubling of distance away from the source (Diehl, 1973). Therefore, if a particular construction activity generated average noise levels of 88 dBA at 50 feet, the L_{eq} at 100 feet would be 82 dBA, 76 dBA at 200 feet, 70 dBA at 400 feet, and 64 dBA at 800 feet. This calculated reduction in noise level is based only on losses resulting from spreading of the sound wave as it leaves the source and travels outward, which is termed geometric spreading. The noise levels would continue to decrease at this rate due to geometric spreading (also referred to as the inverse square law effect). Shielding, such as buildings, which block the line of sight would attain an additional 5 dBA or more reduction. The effects of molecular air absorption and anomalous excess attenuation would reduce the noise level from construction activities at more distant locations at the rates of 0.7 dBA and 1.0 dBA per 1,000 feet, respectively.

Project-related construction would result in short-term increases in noise levels. The nearest existing residences to the Project site (those located along the western boundary of the Project site, along Turner Avenue) are located approximately 75 feet from the property line. Residences located east, north and south of the Project have a slightly greater setback, with residences to the north approximately 150 feet or more from the Project boundary. For the construction noise analysis, the estimated closest distance from the “centroid” of nearby construction activity to adjacent noise-sensitive land uses is 150 feet. Thus, the resultant worst-case noise levels from construction noise at existing, nearby noise-sensitive land uses is 78 dBA L_{eq} . Similarly, future residential land uses would be exposed to construction noise from nearby, adjoining development activities. Assuming a similar typical distance from construction centroid to receptor, these future receptors would also experience construction noise levels of approximately 78 dBA L_{eq} . Based upon ambient noise measurements conducted in this area (at LT-1), this would represent a temporary noise increase of as much as 17 decibels, which would be readily audible and would dominate the noise environment in the area during nearby construction operations.

Although the City's Noise Ordinance (Development Code) exempts construction activities from the noise standard (providing that such activities take place between the hours of 7:00 a.m. to 7:00 p.m.), control measures are recommended to reduce the noise levels to the extent practicable.

Based upon the construction noise data, noise levels on the construction site could exceed federal Occupational Safety and Health Act (OSHA) and California Department of Industrial Relations, Division of Occupational Safety and Health (Cal OSHA) regulations (8 CCR, General Industrial Safety Orders, Article 105, Control of Noise Exposure, §5095, et seq.) for worker noise exposure. Compliance with Cal/OSHA regulations will ensure that construction personnel are adequately protected from potential noise hazards. The noise exposure level to protect hearing of workers is regulated at 90 dBA Time-Weighted Average (TWA) over an eight-hour work shift. Areas above 85 dBA sound pressure level will be posted as high noise level areas and hearing protection will be provided and required to be worn. The Project owners will implement or require implementation of a hearing conservation program for applicable employees as outlined in Cal/OSHA regulations.

3.9.3.2 Operations

Off-Site Traffic Noise

Project-related traffic could alter noise levels in the surrounding area. The expected traffic noise levels at existing and future noise-sensitive receptors were predicted using Sound32, a version of the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108) developed by the California Department of Transportation (Caltrans). The parameters used to estimate vehicular traffic noise included: the typical distance between roadway centerline and receiver; the typical AM/PM traffic volumes and the posted speed limits; the percentages of automobiles, medium trucks, and heavy trucks; the roadway grade; the site conditions ("hard" or "soft"); and the percentage of total average daily traffic (ADT), which flows each hour throughout a 24 hour period.

The projected traffic volumes and travel speeds used for this study were provided by the traffic study completed for the Project (URS, 2004). The resultant modeled traffic noise levels for the existing scenario were compared with peak-noise-hour noise levels and found to be within one decibel; hence no further adjustment or calibration of the noise model was necessary.

The predicted traffic noise levels for the existing scenario are presented in Table 3.9-5, *Summary of Traffic Noise Modeling Results*. Existing traffic noise levels at noise-sensitive land uses vary from 49 dBA CNEL at Schaefer Avenue, east of Archibald Avenue, to 65 dBA CNEL at Archibald Avenue, north of Edison Avenue.

Future (Year 2015) Without Project and Future With Project traffic noise levels were also predicted using Sound32 and are presented in Table 3.9-5. As Table 3.9-5 presents, Future Without Project traffic noise levels are predicted to increase 1 to 10 decibels compared to existing levels, as a result of increases in traffic volumes. Future Without Project traffic noise levels would range from 51 dBA CNEL at Schaefer Avenue, east of Archibald Avenue to 71 dBA CNEL at Archibald Avenue, north of Edison Avenue. Future With Project noise levels would range from 52 dBA CNEL at Schaefer Avenue, east of Archibald Avenue to 71 dBA CNEL at Archibald Avenue, north of Edison Avenue. The difference in predicted noise levels between the Future With Project and Future Without Project scenarios (when rounded to

whole numbers) is zero to one decibel. Thus, direct Project-related increases in traffic noise are predicted to be less than 1 dBA.

On-site Traffic Noise

The findings of the noise study indicate that the maximum future unmitigated noise impacts from traffic or on-site land uses would not exceed the 65 dBA CNEL exterior standard at residential dwelling units. Assuming a typical setback from roadway centerline to noise-sensitive use of 75 feet and an average speed of 40 miles per hour, noise levels near the interior roadways are predicted to range from 57 dBA CNEL to 61 dBA CNEL, as presented in Table 3.9-5. The “Future With Project” column was analyzed with mitigation consideration.

3.9.3.3 Other Project Noise Sources and Receivers

The proposed Project would include several land uses (including residential housing of varying densities, a park and an elementary school) that would constitute a noise generator and noise-sensitive receptor area. The Project also includes a neighborhood commercial center, which, unless designed and constructed to prevent excessive noise from mechanical equipment, parking lot activities and truck deliveries could result in exceedances of local noise standards.

Noise from elementary school recreation yards and from parks has been measured by URS for prior projects, and is utilized here for purposes of assessing relative effects. Noise levels from children playing at an elementary school were approximately 58 dBA L_{eq} at a distance of approximately 100 to 150 feet. Operation of an elementary school also typically entails noise from such things as the periodic, short sounding of bells, bus and passenger vehicle parking, noise from fans and other mechanical equipment, yard maintenance and occasional truck deliveries. Similarly, community parks can be expected to include noise from recreational activities of children and adults, vehicle parking (car door slams, engine startups, occasional car alarm noise), and maintenance activities. Noise from a large group of children playing at a community park was approximately 67 dBA L_{eq} at a distance of approximately 50 to 100 feet.

Provided that noise is taken into account during the individual project design process, neither the proposed commercial center, elementary school or the park are anticipated to result in an incompatible land use for a residential community. The mitigation measures for the Project will ensure that noise is a design consideration for these projects and that construction of the projects does not exceed the City’s noise ordinance (Development Code).

Table 3.9-5. Summary of Traffic Noise Modeling Results

| Roadway | Segment | Existing | Future without Project | Future with Project | Change: Future with Project - Existing | Change: Future with Project - Future without Project | Standard 1: If existing levels >65 dBA CNEL, and increase over existing is >=3dBA CNEL | Standard 2: if Project increases CNEL levels from <65 dBA CNEL to >= 65 dBA CNEL. | Standard 2: If future w/ Project levels <65 dBA CNEL, and increase over existing is >=5dBA CNEL |
|------------------------|-------------------------|----------|------------------------|---------------------|--|--|--|---|---|
| Archibald Avenue | North of Riverside Dr. | 60 | 63 | 63 | 3 | 0 | No Impact | No Impact | No Impact |
| Archibald Avenue | North of Chino Ave. | 61 | 64 | 64 | 3 | 0 | No Impact | No Impact | No Impact |
| Archibald Avenue | North of Schaeffer Ave. | 61 | 65 | 65 | 4 | 0 | No Impact | No Impact | No Impact |
| Archibald Avenue | North of Edison Ave. | 65 | 71 | 71 | 6 | 0 | No Impact | No Impact | No Impact |
| Turner Avenue | North of Chino Ave. | 56 | 57 | 57 | 1 | 0 | No Impact | No Impact | No Impact |
| Turner Avenue | North of Schaefer Ave. | 56 | 57 | 57 | 1 | 0 | No Impact | No Impact | No Impact |
| Haven Avenue | North of Riverside Dr. | 59 | 60 | 60 | 1 | 0 | No Impact | No Impact | No Impact |
| Haven Avenue | North of Chino Ave. | 60 | 68 | 69 | 9 | 1 | No Impact | No Impact | No Impact |
| Haven Avenue | North of Edison Ave. | 58 | 68 | 68 | 10 | 0 | No Impact | No Impact | No Impact |
| Riverside Drive | East of Archibald Ave. | 61 | 64 | 65 | 4 | 1 | No Impact | No Impact | No Impact |
| Riverside Drive | East of Turner Ave. | 61 | 66 | 66 | 5 | 0 | No Impact | No Impact | No Impact |
| Riverside Drive | East of Haven Ave. | 62 | 68 | 68 | 6 | 0 | No Impact | No Impact | No Impact |
| Riverside Drive | East of Milliken Ave. | 60 | 66 | 66 | 6 | 0 | No Impact | No Impact | No Impact |
| Chino Avenue | East of Archibald Ave. | 62 | 66 | 66 | 4 | 0 | No Impact | No Impact | No Impact |
| Chino Avenue | East of Turner Ave. | n/a | 66 | 66 | n/a | 0 | No Impact | No Impact | n/a |
| Chino Avenue | East of Haven Ave. | n/a | 66 | 66 | n/a | 0 | No Impact | No Impact | n/a |
| Schaefer Avenue | East of Archibald Ave. | 49 | 51 | 52 | 3 | 1 | No Impact | No Impact | No Impact |
| Turner Avenue | North of Edison Ave. | n/a | 52 | 53 | n/a | 1 | No Impact | No Impact | n/a |
| Edison Avenue | East of Archibald Ave. | 61 | 64 | 65 | 4 | 1 | No Impact | No Impact | No Impact |
| Edison Avenue | East of Schaefer Ave. | 61 | 65 | 66 | 5 | 1 | No Impact | No Impact | No Impact |
| Edison Avenue | East of Haven Ave. | 61 | 65 | 66 | 5 | 1 | No Impact | No Impact | No Impact |
| East-West Internal St | North of Chino Ave. | n/a | n/a | 61 | n/a | n/a | No Impact | No Impact | n/a |
| East-West Internal St | North of Chino Ave. | n/a | n/a | 61 | n/a | n/a | No Impact | No Impact | n/a |
| North-South Internal S | North of Chino Ave. | n/a | n/a | 57 | n/a | n/a | No Impact | No Impact | n/a |
| North-South Internal S | South of Chino Ave. | n/a | n/a | 60 | n/a | n/a | No Impact | No Impact | n/a |
| East-West Internal St | North of Edison Ave. | n/a | n/a | 57 | n/a | n/a | No Impact | No Impact | n/a |

Source: Data compiled by URS Corporation (2004).

3.9.4 Mitigation Measures

- N-1** Prior to issuance of building permits for the park, community center and proposed elementary school, the Project applicant(s) shall submit a noise report to the satisfaction of City Planning Department. The final noise report evaluating the effects of building placement, design, and materials used for construction, and shall include recommendations as needed to ensure compliance with local, State and federal noise standards.
- N-2** Prior to issuance of building permits, the Project applicant(s) shall develop a construction noise control plan for the City Building Department's approval, prior to commencement of construction activity.
- N-3** Prior to the issuance of each grading and building permit, the Project applicant(s) shall submit an affidavit to the satisfaction of City Building and Engineering Department(s) documenting Project construction operations shall not occur between 7:00 p.m. and 7:00 a.m. Monday through Saturday, or at any time on Sunday or federal holidays. The hours of construction including noisy maintenance activities and all spoils and material transport are restricted to the periods and days permitted by the local noise or other applicable ordinance. Noise-producing Project activity shall comply with local noise control regulations affecting construction activity or obtain exemptions therefrom.
- N-4** Prior to recordation of a subdivision map or issuance of a grading permit, whichever is first, the Project applicant(s) shall require as part of the site development plan and to the satisfaction of City Planning or City Building and Engineering Department(s), that all noise-producing Project equipment and vehicles using internal combustion engines (including haul trucks) be professionally fitted with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features. These devices shall be maintained in good operating condition so as to meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- N-5** During construction activities, Project applicant(s) and/or Project contractor(s), shall, in accordance with the City Planning Department:
- Locate material stockpiles and equipment staging, parking, and maintenance areas, as far as practicable from noise-sensitive receptors so as to minimize construction noise impacts to neighboring residences.
 - Use electrically powered equipment instead of pneumatic or internal combustion powered equipment, where feasible.
 - Not utilize a Project-related public address or music system audible at any adjacent receptor.
 - Use noise-producing signals, including horns, whistles, alarms, and bells only for safety warning purposes.

- Enforce construction site and access road speed limits, not to exceed 15 miles per hour.
- Strictly adhere to, and enforce in coordination with the City, haul route speed limits.
- Provide all Project workers exposed to noise levels above 80 dBA with personal protective equipment for hearing protection (i.e., earplugs and/or earmuffs); and, in areas where noise levels are routinely expected to exceed 80 dBA clearly post signs stating “Hearing Protection Required in this Area.”

3.9.5 Significant Effects of the Project After Mitigation

Application of the above mitigation measures N-1 through N-5 shall reduce Project noise related impacts to a less than significant level.

3.10 PUBLIC SERVICES

This section is a summary of the public services and the capabilities of service providers, including schools, fire protection, police support, libraries, and parks associated with the development of the West Haven Specific Plan. Section 3.10, *Public Services*, also includes potential Project effects on service providers due to local jurisdictional boundaries (cities and service districts) in the Project vicinity that may change prior to construction, and/or during operation of the Project.

3.10.1 Setting

3.10.1.1 Schools

The Project site is served by Mountain View School District (MVSD), Chaffey Joint Union High School District (CJUHS), and Chaffey Community College District.

Mountain View School District

The MVSD currently enrolls an approximate 3,400 students in grades kindergarten through eight. The MVSD is currently served by three elementary schools (K-5) and one middle school (6-8). Students from MVSD attend high school in the CJUHS. Students generated by the Project will attend any of the schools within MVSD depending on available space (refer to Table 3.10-1, *Mountain View School District Enrollment*).

Existing MVSD capacity for each of its elementary schools is approximately 450 students, although additional relocatable classrooms can be placed at each school site to increase student capacity (Newby, 2004). Currently, each of the schools are at, or near, capacity; however, the MVSD presently can accommodate approximately 125 to 150 additional elementary school students at this time. Grace Yockley Middle School is designed for 1,100 students with relocatable classrooms increasing the student capacity to 1,250. The Grace Yockley Middle School currently can accommodate approximately 80 additional 6th through 8th grade students (Newby, 2004).

MVSD currently collects a development impact fee of \$3.57 per square foot for single-family residential and shares a \$0.36 per square foot school impact fee with CJUHS for commercial building. School impact fees are collected prior to the issuance of building permits.

Table 3.10-1 Mountain View School District Enrollment

| School | Location | Design Capacity | 2002-2003 Enrollment | Average Class Size |
|--------------------------|-------------------------------|-----------------|----------------------|--------------------|
| Creek View Elementary | 3742 Lytle Creek North Loop | 750 | 784 | 21 |
| Grace Yockley Middle | 2947 South Turner Avenue | 1,100 | 1,210 | 30 |
| Mountain View Elementary | 2825 Walnut Street | 750 | 594 | 21 |
| Ranch View Elementary | 3300 Old Archibald Ranch Road | 750 | 851 | 22 |

Source: Mountain View School District (2004).

The Ontario GPA for NMC includes Policy 8.1.2 which requires specific plans to accommodate sufficient schools to meet School District criteria. The project will implement this Policy by providing a “Concept” elementary school site in Planning Area 6, a proposed 10-acre elementary school site. This school site **will/will not** be dedicated to the Mountain View School District (MVSD) by the Project applicant. An elementary school will be developed on this site by the MVSD at some time in the future. When the school is built it will be available to serve up to 750 elementary school age children that reside in the West Haven Specific Plan area..

The Specific Plan applicant will be required to pay school fees in accordance with state law to the extent that the school site does not fully meet school district criteria. Pursuant to state law (SB 50 and Proposition 1A), the project will be required to pay school impact fees. In general, the school impact fees are calculated for each school district and apply to residential, commercial and industrial development within a school district.

Chaffey Joint Union High School District

High-school age students from the NMC will attend Colony High School, a high school in the CJUHSD. Table 3.10-2 *Chaffey Joint Union High School District Enrollment*, presents CJUHSD’s schools, enrollment, and capacity. CJUHSD is currently in the architectural/engineering stage for a proposed high school anticipated for construction in the City of Fontana (Tiberi, 2004)

Table 3.10-2 Chaffey Joint Union High School District Enrollment

| School | Location | Design Capacity | 2002-2003 Enrollment |
|-----------------------|---|-----------------|----------------------|
| Chaffey High | 1245 North Euclid Avenue Ontario | 3,254 | 3,492 |
| Colony High | 3850 E. Riverside Drive Ontario | 2,500 | 2,173 |
| Etiwanda High | 13500 Victoria Rancho Cucamonga | 4,104 | 3,362 |
| Los Osos High | 6001 Miliken Avenue Rancho Cucamonga | 2,500 | 3,088 |
| Montclair High | 4725 Benito Street Montclair | 3,400 | 3,223 |
| Ontario High | 901 West Francis Street Ontario | 3,159 | 2,600 |
| Rancho Cucamonga High | 11801 Lark Drive Rancho Cucamonga | 3,186 | 2,630 |

Source: Data compiled by URS Corporation (2004).

The CJUHSD currently collects a development impact fee of \$1.02 per square foot for single-family residential development and \$0.11 per square foot for commercial/industrial projects. Development impact fees are collected prior to the issuance of building permits.

Chaffey Community College District

Chaffey Community College District's main college campus is located in Rancho Cucamonga; however, two satellite locations are located in the City of Ontario. The two satellite campuses are the Ontario Education Center, located at 208 West Emporia Street; and, Chaffey College Center for Economic Development, located at 223 West Emporia Street.

3.10.1.2 Fire Protection Services

The Project site would be served by the City of Ontario Fire Department (the Department). The Department currently consists of eight stations. Table 3.10-3, *City of Ontario Fire Protection Services*, presents the station number, locations, equipment, and current 24-hour staffing. The nearest station (2931 East Philadelphia Street) is approximately 1.1 miles northwesterly of the Project site. The Ontario Fire Department has a goal to achieve an average response time to all emergency calls within 8 minutes. To be consistent with the City's General Plan, fire protection services planned for the NMC planning area would be subject to the goal of an average response time of 8 minutes.

The Department serves an area of 50 square miles and provides Emergency Medical Dispatch (EMD), Basic Life Support/AED (EMT-1), and Advanced Life Support (EMT-P). The Department maintains a mutual-aid agreement with the Operation Area and State of California and receives first alarm automatic-aid from the following fire departments:

- Chino Valley Fire Protection District – Fire Stations 63 and 65
- Montclair Fire Department – Fire Station 151 and 152
- Ontario Airport Fire Department – Fire Station 150
- Rancho Cucamonga Fire Department – Fire Stations 172 and 174
- San Bernardino County Fire Department – Central Valley Battalion Fire Stations 74 and 72
- Upland Fire Department – Fire Station 161

3.10.1.3 Parks

Parks and recreational facilities currently do not exist within the NMC. However, four City of Ontario parks and recreational facilities are located adjacent to the NMC, including the Centennial Park; Creekside; Westwind Park, and the Whispering Lakes Golf Course. The City currently maintains 13 parks totalling 126.7 acres. The City's standard for parks and recreation areas is five acres for every 1,000 residents. The City of Ontario has established three park and facility standard sizes:

- Mini Park: Up to one acre, servicing a ¼-mile radius;
- Neighborhood Park: Five to 10 acres, servicing a ½-mile radius; and,
- Community Park: 20-25 acres, servicing a 2-mile radius.

Table 3.10-3 City of Ontario Fire Protection Services

| Station | Location | Equipment/Unit Type | Staffing | EMT-P | EMT-1 | 24 Hours |
|---------|--------------------------|--|----------|-------|-------|----------|
| 131 | 425 E. "B" St. | Medic Engine (ME) -131 | 4 | 2 | 2 | Yes |
| | | Truck Company (T) -131 | 4 | - | 4 | Yes |
| | | Battalion Supervisor (B)-1815 | 1 | - | - | Yes |
| | | Investigator (I)-1850 | 1 | - | - | Yes |
| | | Explosive Ordinance Device (EOD)-131 | (2)* | - | - | Yes |
| | | Utility (U)-131 | (1)* | - | - | Yes |
| 132 | 544 W. Francis St. | ME-132 | 4 | 2 | 2 | Yes |
| | | Office of Emergency Services (OES)-229 | (4)* | - | - | Yes |
| 133 | 1408 E. Francis St. | ME-133 | 4 | 2 | 2 | Yes |
| | | Water Tender (WT) – 133 | (2)* | - | - | Yes |
| | | T-133 | - | - | - | Trainer |
| | | Engine (E) Reserve Unit – 133R | (4) | - | - | Reserve |
| 134 | 1005 N. Mountain Ave. | ME-134 | 4 | 2 | 2 | Yes |
| | | 134-R | (4) | - | - | Reserve |
| 135 | 1530 E. 4th St. | ME-135 | 4 | 2 | 2 | Yes |
| | | 135-R | (4) | - | - | Reserve |
| 136 | 2931 E. Philadelphia St. | ME-136 | 4 | 2 | 2 | Yes |
| | | B-1825 | 1 | - | - | Yes |
| | | BE (Brush Engine)-136 | (4)* | - | - | Yes |
| | | E-136 | (4) | - | - | Reserve |
| 137 | 5400 E. Jurupa St. | ME-137 | 4 | 2 | 2 | Yes |
| 138 | 31429 E. Shelby Ave. | ME-138 | 4 | 2 | 2 | Yes |
| | | T-138 | 4 | - | 4 | Yes |
| | | HR-138 | (2)* | - | - | Yes |
| | | U –138 | (1)* | - | - | Yes |
| | | HM (MazMat Unit)-501 | (2)* | - | - | Yes |

Source: City of Ontario Fire Department (2004)

* = Cross-staffed with on-duty personnel () = Unit personnel capacity

3.10.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on Public Services associated with the Project. The NOP and

Appendix G suggest that a Project related significant impact on public services would occur if the Project would:

- ◆ **Schools:** would be considered significant if the Project would cause student enrollment to exceed the capacity of existing educational facilities serving the Project site, overburdening existing school facilities, or creating an overcrowded situation at school facilities.
- ◆ **Fire Protection Services:** would be considered significant if the Project would cause a demand for services exceeding the limits of existing or planned facilities, personnel, and/or equipment intended to provide such services.
- ◆ **Police Protection Services:** would be considered significant if the Project would cause a demand for services exceeding the limits of existing or planned facilities and/or personnel intended to provide such services.
- ◆ **Library Services:** would be considered significant if the Project would substantially increase the demand for library services beyond the ability of the existing library to serve the community.
- ◆ **Parks:** would be considered significant if the Project would generate an increase in residents that would exceed the local jurisdiction's park standard.

3.10.3 Impacts

3.10.3.1 Schools

The Project site is located within the Mountain View School District (MVSD) (Kindergarten-8th grade) and the Chaffey Joint Union High School District (CJUHSD) (grades 9-12). Both of these districts are currently at capacity enrollment at each school facility.

With approval of Proposition 1A on November 13, 1998, the School Fee provisions of Senate Bill 50 (SB 50) became effective. Under SB 50, statutory caps have been placed on applicant fees, and local governments cannot deny a project based on the adequacy of school facilities. SB 50 also permits additional applicant fees to be levied in amounts up to approximately 50 percent of the cost of constructing school facilities and for land acquisition and site development (Level 2 Fees). The State is responsible for contributing the other 50 percent of the cost of construction, site acquisition, and development by providing per-pupil grants based upon State construction standards. Such State per pupil grants based upon the school district's funding eligibility as determined by a one-time assessment of existing capacity and un-housed students, and thereafter on a school facilities needs analysis to be conducted by the district. If, in the future, the State ceases to make apportionments of funds to school districts, then the District may levy additional amounts representing approximately 100 percent of the cost of constructing school facilities and site acquisition (Level 3 Fee).

The Level 2 and Level 3 Fees can only be levied if the school districts have met certain conditions including, but not limited to conducting a school facilities needs analysis and being deemed eligible to participate in the State Funding Program by the State Allocation Board.

Thresholds of Significance

A project can be considered to have a significant impact on public schools if the project generates more students than school facilities can sustain, leading to conditions of overcrowding and lack of resources.

Classroom overcrowding, in and of itself, however, does not equate to a significant effect on the environment (*Goleta Union School District v. Regents of the University of California* (1995) 37 Cal.App.4th 1025, 1032). School impacts are typically mitigated by payment of applicant fees in accordance with AB 2926.

Mountain View School District

The Project would generate approximately 1,195 students based on MVSD student generation rate of 0.63 per detached residential unit. Using the MVSD fee schedule of \$3.57 per square foot of residential construction and \$0.36 for commercial building. These fees would be paid prior to the issuance of building permits.

The MVSD has met with the City, Project applicant(s), and representatives from the Department of Education on possible plans for meeting future school needs and how to finance them. However, final plans have not been approved at this time. A school site was selected by the MVSD and the concept elementary school will be developed on the Project site; although, students from future development can attend any of the schools within the MVSD depending on available space. According to Craig Newby, Director of Facilities for the MVSD (2004), the Project would create a significant short-term overcrowding impact on the MVSD. However, when the proposed ‘concept’ elementary school is developed within Planning Area 6 of the Project site, it is anticipated that this will eliminate the short-term overcrowding impact of the Project on the MVSD.

Pursuant to state law (SB 50 and Proposition 1A), the project will be required to pay school impact fees. In general, the school impact fees are calculated for each school district and apply to residential, commercial and industrial development within a school district. This is often considered adequate mitigation for school impacts caused by development.

As the Project will cause a significant short-term overcrowding impact on the MVSD, existing California State law states Project impacts on school facilities are offset by the payment of required school fees. The Project applicant(s) will pay the required fees and therefore, the Project will not create a significant impact on schools within the MVSD. In addition to the proposed new elementary school proposed within the Project site, the NMC includes the development of eight additional elementary and five middle schools. Long-term impacts of the Project at full build-out and occupancy are expected to be less than significant.

Chaffey Joint Union High School District

The Project would generate approximately 181 students based on a student generation rate of 0.24 per detached residential unit. Using the CJUHSD’s fee schedule of \$1.02 per square foot of residential construction and \$0.11 for commercial/industrial building. Development fees would be paid prior to the issuance of building permits. Impacts are not considered significant since the Project would only generate 181 students and Colony High School is currently under capacity (Tiberi, 2004). In addition, required mitigation measures (Development Fees) would reduce Project impacts to the maximum practicable extent. Long-term impacts of the Project at full build-out and occupancy are expected to be less than significant.

Currently, the school facilities within the MVSD and the CJUHSD servicing the proposed Project area are near or over capacity. However, the state mandated applicant impact fee will meet full mitigation

standards. Per the CJUHSD, two additional school sites are anticipated, thus relieving the projected impact on school facilities.

MVSD recently submitted plans for six elementary and three middle schools sites for consideration to the State. Even though none of the sites are in the vicinity of the proposed Project, construction of additional school facilities within the district would allow for greater capacity at school facilities serving the Project site.

Recent legislation and funding agreements for new schools, authorized by the State, provide that local jurisdictions are no longer responsible for the funding and construction of school facilities. School districts are authorized to levy fees as a condition of approvals, of development projects, for capital acquisitions and improvements. Such one-time fees are paid at the time building permits are issued. The fees are paid into the general fund and may or may not be used to offset the impacts of the development generating the fees. School impact fees offset the added impact new student generation has on school facilities.

The MVSD currently assesses \$3.57 for residential and \$0.36 for commercial. The CJUSD currently assesses \$1.02 for both residential and commercial.

Senate Bill (SB 50) mandates that complete mitigation of school related impacts are covered by lawful payment of required school impact fees. Necessary mitigation fees have been established and discussed through the NMC General Plan and will be based on square foot measurements for both residential and commercial uses.

Cumulative Impacts

Future growth in the vicinity of the Project area will result in an increased student population and substantially contribute to a significant cumulative impact on public school facilities. However, with the identified mitigation measure, no cumulative impacts would result. Development fees would be paid prior to the issuance of building permits. Impacts are not considered significant since the Project would only generate 181 students and Colony High School is currently under capacity (Tiberi, 2004). In addition, required mitigation measures (Development Fees) would reduce Project impacts to the maximum practicable extent. Long-term impacts of the Project at full build-out and occupancy are expected to be less than significant.

3.10.3.2 Fire Protection Services

The increase in the number of residential units and the number of individuals brought into the area by the Project buildout, in addition to its resultant increase in traffic, will likely effect the Department. At build-out, occupancy of the Project would add an estimated 2,500 residents to the Project area, increasing the risk of human-induced fires.

The Project and development within the NMC will require additional fire personnel and stations; however the exact number is unknown at this time (Clark, 2004). The Department has not yet developed the exact number of fire personnel and stations required to serve the Project and the future NMC areas (Clark, 2004). However, the Department has indicated that response ability will not change due to the Project, and the Department's current response time will be maintained and will be consistent with the Department's standard response time. Mitigation in the form of revenue generated by the Project is

expected to cover the cost of additional fire personnel and equipment, thus no significant impact on fire protection services is expected to occur with Project implementation.

3.10.3.3 Police Protection Services

Calls for services will increase, requiring additional staff and office time to manage the Project area, upon Project buildout, having the potential to adversely effect the level of police services presently provided. Additional Ontario Police Department personnel are anticipated to be provided for the proposed Project area, to ensure that future response time in addition to quality and level of service will be maintained.

At Project buildout, occupancy will add an estimated 2,500 residents² to the Project area. Based on the Ontario Police Department's planning ratio of 1.37 sworn officers per thousand residents and 1.0 non-sworn civilian support personnel per 1,000 residents, the Project would generate the need for four additional sworn police officers and 2.5 non-sworn civilian support personnel. Mitigation in the form of revenue generated by the Project is expected to cover the cost of additional police personnel and equipment, thus no significant impact on police protection services is expected to occur with Project implementation.

3.10.3.4 Libraries

Library services are provided by the Ontario City Library Main and South Branches. Currently, the Main Branch is undergoing renovation and expansion. Also, the South Branch has a joint use venture with Colony High School. The Project will generate additional demands for library services. The Ontario City Library uses a space planning standard of 0.6 square feet per resident for determining facility needs relative to resident population. The closest library to the Specific Plan is the South Branch at Colony High School.

Library services are provided by the Ontario City Library System. Because the Project involves residential development, the demand for library services will increase incrementally over time. The proposed Project would result in an increase of approximately 2,561 residents. Based upon the City's current standard of 0.32 sq ft of library facility space per resident identified, the City would require the proposed Project would contribute to the need for additional 819.5 sq ft of library facility space. However, the City stated that adequate library facilities exist within the City and that the proposed Project would not require expansion of existing or construction of additional library facilities.

The City adopted a development impact fee program for library facilities within the entire NMC, which includes the Project site. The development impact fee for NMC Library Facilities and the Collection Development Impact Fees are \$638 per dwelling unit for a single family detached residence and \$534 per dwelling unit for multiple-family residence. No other programs that involve applicant contributions are in place for library facilities.

3.10.3.5 Parks

The proposed project would convert predominantly agricultural uses to urban uses, which would result in an increased demand for parks and recreational facilities. The City currently collects 3 acres of parkland or

² This is based on an average household size of 3.32 taken from U.S. Census Tract 2000 Data for Census Tract 22.01, located immediately north of Riverside Drive and west of Haven Avenue.

in-lieu fees from new residential subdivisions for every 1,000 residents in accordance with California Government Code Section 66477 (Quimby Act). Additional sources for the City to obtain parkland include alternative funding sources for adding park acreage and/or park improvements. Such sources include general fund revenues, applicant impact fees, state and federal grants, user group contributions and school district joint use contributions. Other methods that the City pursues to supplement their current parkland include encouraging the development of private open space and recreational amenities, beyond public park requirements, to be incorporated in large residential projects.

The Project land uses will include 753 single-family detached and attached residential units, approximately 11.7 gross acres of commercial development (including 87,000 square feet of building area and a parking lot), a 10-acre “concept” elementary school, a 5-acre “concept” neighborhood park, and an approximate 8.8 acres of paseos and pocket parks throughout the Project area and the adjacent utility easements. The NMC GPA will also develop a bike route system that connects the West Haven Specific Plan to planned bike routes throughout the remainder, or future builtout NMC, as well as to the planned City bike route system.

The Project proposes a total of approximately 13.8 acres of parks/open space/recreation. This is based on 6.2 acres of proposed pocket parks; 5.0 acres of a Neighborhood Park; and 2.6 acres of 30-foot wide paseo to be developed by ‘West Haven’ within the SCE Easement, adjacent to the proposed Project boundary. Based on the City’s parks/recreation requirement for new residential development required ratio per 1,000 residents, and need for a minimum of 7.68 acres of parks/recreation created by the estimated Project population, less than significant impacts to parks and recreational facilities would result from Project implementation. In addition, the buildout of the NMC anticipates the development of a total of 163 acres of parks that would also be usable by Project residents.

3.10.4 Mitigation Measures

Schools

- PS – 1** Prior to issuance of Project building permits, the Project applicant(s) shall provide the City Planning Department with evidence of the payment of school fees in the amount required by the MVSD and CJUHSD. These fees shall be based on the fee schedule in effect at the time the building permit applications are filed.
- PS-2** Prior to issuance of Project building permits, the Project applicant(s) shall notify the MVSD and CJUHSD of the expected buildout of the Project to allow the two Districts to plan in advance for new students.

Fire Protection Services

- PS-3** Prior to recordation of the first phase of the Tentative Tract, the Project applicant(s) shall submit to both the City of Ontario Fire Department and the City Planning Department, for review and to gain approval, a detailed plan to provide a public financing mechanism for continual funding for additional personnel and equipment for the first NMC fire station.
- PS – 4** Prior to issuance of building permits, building plans shall be submitted to and approved by the City of Ontario Fire Department. The plans and specifications for structures shall

be reviewed by the City of Ontario Fire Department for compliance with the Uniform Fire Code and stipulations on minimum fire flows and duration of flows for residential and commercial development types.

- PS – 5** Prior to the issuance of grading permits, plans and specifications shall be prepared identifying the location of fire hydrants in accordance with the City of Ontario Fire Department criteria. Additionally, the design and location of the street system and gates shall be to the satisfaction of the City Building and Engineering Department.
- PS – 6** Prior to Project implementation and use, additional fire personnel and equipment shall be assigned to the local fire station serving the Project.

Police Protection Services

- PS – 7** Prior to recordation of the first phase of the Tentative Tract, the Project applicant(s) shall submit for review to both the City of Ontario Police Department and the City Planning Department, for review and to gain approval, a detailed plan to provide a public financing mechanism for continual funding for four additional sworn police officers and 2.5 non-sworn civilian support personnel. These officers and personnel shall be assigned to the City of Ontario Police Station located at 2500 South Archibald Avenue, approximately 1.7 miles northwesterly of the Project site.
- PS-8** During the preliminary stages of the Project design, and prior to issuance of building permits, the City of Ontario Police Department shall provide consultation to review safety features, evaluate adequacy, and suggest improvements to the Project design.
- PS-9** Prior to Project construction and prior to issuance of the first certificate of occupancy, Project applicant(s) shall provide Project site plans depicting access and emergency vehicle entry requirements for review and approved by the City of Ontario Police Department. Additionally, addresses shall be well marked to facilitate response by police officers.

3.10.5 Significant Effects of the Project After Mitigation

Project design features and application of mitigation measures PS-1 through PS-8 will reduce potential Project impacts on school, fire, police services, and parks to a level less than significant.

3.11 TRANSPORTATION/TRAFFIC

This section is a summary of the Traffic Analysis prepared for the West Haven Specific Plan. The analysis is included as Appendix I to this document. The following analysis scenarios were performed and form the basis of Section 3.11, *Transportation/Traffic's* analyses on the Project's impacts on traffic and circulation:

- ◆ Existing Conditions;
- ◆ Horizon Year 2015 Baseline Conditions; and,
- ◆ Horizon Year 2015 Baseline Plus Project Conditions.

The traffic analyses prepared for the Project were performed in accordance with City's requirements, the CEQA project review process, and the San Bernardino County Congestion Management Program (CMP) requirements. Detailed information on roadway segment and intersection analysis methodologies, standards, and thresholds are discussed in the following sections.

3.11.1 Setting

Roadway Segments

Segment Level of Service (LOS) standards and thresholds provide the basis for analysis of arterial roadway segment performance. The analysis of roadway segment LOS is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecasted Average Daily Traffic (ADT) volumes. The CMP roadway capacity standards were based on the San Bernardino County CMP and adopted for use in the West Haven Specific Plan. The capacities presented in Table 3.11-1, *Generalized Peak Hourly/Direction Capacity*, reflect the generalized peak hour/peak direction LOS maximum volumes that can be reasonably carried on the roadway under prevailing traffic conditions.

Table 3.11-1 Generalized Peak Hourly/Direction Capacity

| Roadway Sections | | Level of Service Thresholds | | | | |
|------------------|----------------------|-----------------------------|------|------|------|------|
| Lanes | Cross-section | A | B | C | D | E |
| 2 | Undivided | 490 | 740 | 790 | 830 | 870 |
| 4 | Divided | 1080 | 1610 | 1680 | 1760 | 1850 |
| 6 | Divided | 1680 | 2450 | 2530 | 2650 | 2770 |
| 2 | Divided + (LeftTurn) | 515 | 777 | 830 | 872 | 914 |
| 2 | Divided (NoLeft) | 417 | 629 | 672 | 706 | 740 |
| 4 | Undivided + (Left) | 1026 | 1530 | 1596 | 1672 | 1758 |
| 6 | Undivided + (Left) | 1596 | 2328 | 2404 | 2518 | 2632 |

Source: San Bernardino County CMP (2003 Update).

Signalized Intersections

Signalized intersection analysis follows the procedures outlined in the 2000 Highway Capacity Manual (HCM), Transportation Research Board Special Report 209. This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane (vphpl) as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, onstreet parking, pedestrians, traffic composition (i.e., percentage trucks), and shared lane movements (i.e., through and right-turn movements originating from the same lane). The computerized intersection analysis was performed with the *Traffix 7.6* software package (Dowling Associates, 2003).

Unsignalized Intersections

Unsignalized intersections, including two-way and all-way stop controlled intersections were analyzed using the 2000 HCM (Section 10) unsignalized intersection analysis methodology. The *Traffix 7.6* software also supports this methodology and was utilized to produce LOS results. The LOS for a two-way stop controlled (TWSC) intersection is determined by the computed or measured control delay and is defined for each minor movement. Table 3.11.4, *Level of Service Descriptions*, presents the range of volume-to-capacity (V/C) ratios and corresponding LOS standards utilized to analyze the signalized and unsignalized study intersections.

TABLE 3.11-2 LEVEL OF SERVICE DESCRIPTIONS

| Description of Operation | Signalized Intersection Delay (seconds per vehicle) | Stop-Controlled Intersection Delay (seconds per vehicle) |
|--|---|--|
| <i>LOS A</i> describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay. | <10.0 | <10.0 |
| <i>LOS B</i> describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for <i>LOS A</i> , causing higher levels of average delay. | 10.1 – 20.0 | 10.1 – 15.0 |
| <i>LOS C</i> describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping. | 20.1 – 35.0 | 15.1 – 25.0 |
| <i>LOS D</i> describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable. | 35.1 – 55.0 | 25.1 – 35.0 |
| <i>LOS E</i> is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences. | 55.1 – 80.0 | 35.1- 50.0 |
| <i>LOS F</i> describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the <i>LOS D</i> capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay. | >80.0 | >50.0 |

Source: Data compiled by URS (2005).

3.11.1.1 Existing Project Conditions

The tables in this section summarize the result of the existing conditions analysis conducted for the study roadway segments and intersections.

Roadway Segment Analysis

The study roadway segments were evaluated using the CMP Peak Hour/Peak Direction traffic analysis procedure using existing traffic counts conducted in September 2004. Table 3.11-3, *Roadway Segment Level of Service Results Existing Conditions*, shows existing roadway segment LOS results.

As presented in Table 3.11-3 the result of existing peak hour/peak direction roadway segment analysis indicate that all study roadway segments are operating at acceptable LOS C or better.

Intersection Analysis

Table 3.11-4, *Peak Hour Intersection Level of Service Results Existing Conditions*, presents the results of existing conditions peak hour intersection analysis. All intersections are signalized unless otherwise noted.

Table 3.11-3 Roadway Segment Level Of Service Results Existing Conditions

| Roadway | Segment | Cross-Section (Lanage) | AM Peak Hour Volume | PM Peak Hour Volume | LOS Threshold (LOS E) | AM Peak Hour (LOS) | PM Peak Hour (LOS) |
|------------------|--|------------------------|---------------------|---------------------|-----------------------|--------------------|--------------------|
| Archibald Avenue | Riverside Drive to SR 60 | 6 DIV | 1,361 | 1,167 | 2,770 | A | A |
| Haven Avenue | SR 60 to Creekside Drive | 4 DIV | 1,502 | 1,640 | 1,850 | B | C |
| | Creekside Drive to Riverside Drive | 4 DIV | 1,003 | 931 | 1,850 | A | A |
| | Riverside Drive to Chino Avenue (Future) | 2 UNDIV | 146 | 251 | 870 | A | A |
| | Chino Avenue (Future) to Edison Avenue | 2 UNDIV | 126 | 179 | 870 | A | A |
| Turner Avenue | Schaefer to Riverside | 4 DIV | 555 | 256 | 1,850 | A | A |
| Riverside Drive | Ontario Avenue to Archibald Avenue | 4 DIV | 522 | 798 | 1,850 | A | A |
| | Archibald Avenue to Turner Avenue | 4 DIV | 814 | 965 | 1,850 | A | A |
| | Turner Avenue to Haven Avenue | 2/1 | 1,146 | 751 | 1,850 | B | A |
| | Haven Avenue to Mill Creek | 2/1 | 526 | 593 | 1,850 | A | A |

Source: Data compiled by URS (2005).

As presented in Table 3.11-4, the result of the existing conditions analysis, indicate that all study intersections are forecast to operate at LOS C or better.

3.11.1.2 Horizon Year 2015 Baseline Conditions

The Horizon Year 2015 without the Project roadway network builds upon the existing roadway network and incorporates applicable improvements that were either approved or will be funded and constructed by the Year 2015.

Figure 3.11-1, *2015 Base Lane Configurations*, features the Year 2015 Baseline intersection geometric assumptions consistent with the prescribed roadway configurations delineated in the City's General Plan. Figure 3.11-2 and 3.11-3, *2015 Future Base Peak Hour Traffic Volumes – AM and 2015 Future Base Peak Hour Traffic Volumes – PM*, respectively, summarize the projected a.m. and p.m. intersection turning movement volume under Year 2015 Baseline conditions.

**Table 3.11-4 Peak Hour Intersection Level Of Service Results
Existing Conditions**

| Study Intersections | | AM Peak Hour | | | PM Peak Hour | | |
|---------------------|---|--------------|------------|-------|--------------|------------|-------|
| | | LOS | Avg. Delay | V/C | LOS | Avg. Delay | V/C |
| 1 | Archibald Avenue/SR-60 WB Ramps | C | 25.7 | 0.788 | C | 25.1 | 0.733 |
| 2 | Archibald Avenue/SR-60 EB Ramps | B | 19.4 | 0.441 | C | 26.1 | 0.588 |
| 3 | Archibald Avenue/Riverside Drive | C | 31.3 | 0.473 | C | 33.1 | 0.578 |
| 4 | Archibald Avenue/Chino Avenue | C | 23.6 | 0.311 | B | 20.0 | 0.311 |
| 5 | Archibald Avenue/Schaefer Avenue ¹ | C | 15.2 | 0.000 | C | 16.1 | 0.000 |
| 6 | Archibald Avenue/Edison Avenue | C | 22.4 | 0.278 | C | 25.5 | 0.373 |
| 7 | Turner Avenue/Riverside Drive | C | 30.0 | 0.777 | C | 20.6 | 0.335 |
| 8 | Turner Avenue/Chino Avenue ² | A | 8.9 | 0.234 | A | 8.2 | 0.146 |
| 11 | Haven Avenue/SR-60 WB Ramps | B | 14.5 | 0.414 | A | 8.5 | 0.576 |
| 12 | Haven Avenue/SR-60 EB Ramps | C | 27.4 | 0.759 | C | 23.7 | 0.622 |
| 13 | Haven Avenue/Creekside Drive | C | 27.1 | 0.399 | C | 25.1 | 0.561 |
| 14 | Haven Avenue/Riverside Drive | C | 23.7 | 0.276 | C | 23.2 | 0.497 |
| 17 | Haven Avenue/Old Edison Avenue ¹ | B | 12.9 | 0.000 | B | 12.0 | 0.000 |
| 18 | Millcreek/Riverside Drive | C | 23.6 | 0.329 | B | 17.1 | 0.368 |
| 19 | Milliken Avenue/Riverside Drive | C | 24.0 | 0.527 | C | 26.5 | 0.612 |

¹Unsignalized 2-way Stop Control

²Unsignalized 4-way Stop Control

Source: Data compiled by URS Corporation (2005).

3.11.2 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, a project will normally have a significant impact on transportation and traffic if it results in any of the following:

- Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e. result in substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersection);
- Exceed, either individually or cumulatively, a level of service (LOS) standard established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

The City of Ontario strives to maintain LOS D (with V/C < 1.00) or better operating conditions for study intersections. The study roadways were evaluated using the 2003 SANBAG CMP Generalized Peak Hour/Peak Direction Level of Service Standards.

In addition, the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on transportation/traffic associated with the Project. The NOP and Appendix G suggest that a project related significant impact would occur if the Project would:

- ◆ Cause an increase in traffic, which is substantial in relation to the existing system.
- ◆ Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads.
- ◆ Substantially increase hazards due to design feature or incompatible uses.

3.11.2.1 Project Impacts

The proposed Project would develop the Project site with residential and commercial uses that would generate traffic beyond the existing conditions. The Project consists of the development of a 202-acre master planned community encompassing 80 acres of Subarea 6 and 122 acres of Subarea 12, of the NMC. The Project will include the following Land Use Designations: Residential Medium Density, Residential Low Density, Neighborhood Commercial Center, Elementary School, and Neighborhood Park (L.D. King, 2004). The Project land uses will include 753 single-family detached and attached residential units, approximately 11.7 gross acres of commercial development (including 87,000 square feet of building area and a parking lot), a 10-acre “concept” elementary school, a 5-acre “concept” neighborhood park, and an approximate 8.8 acres of paseos and pocket parks throughout the Project area and the adjacent utility easements.

Following is a discussion of the Project impacts that correspond to the thresholds of significance previously identified in Section 3.11.2. This section also provides a description of the methodology used to evaluate potential impacts.

Roadway Segment Analysis

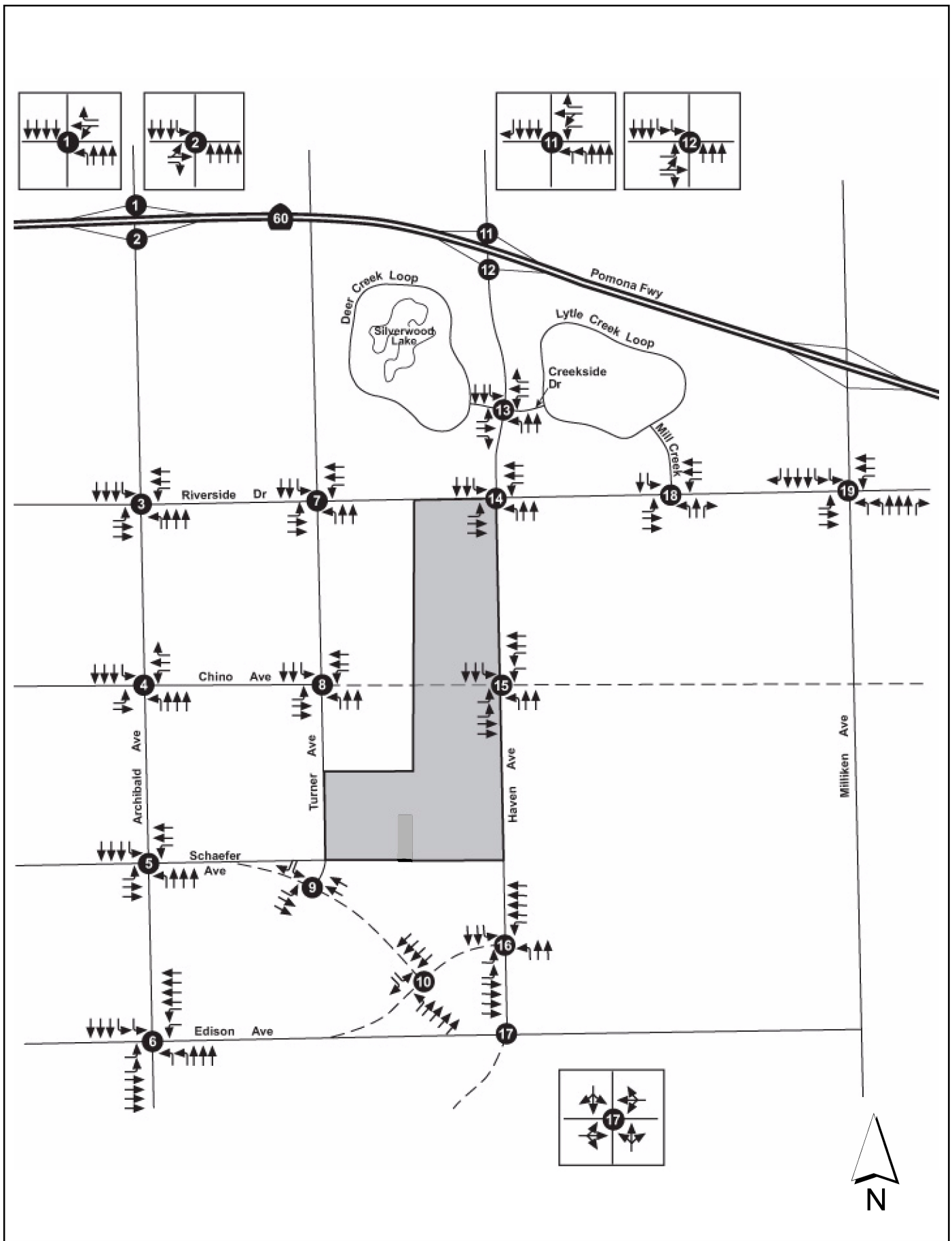
Table 3.11-5, *Roadway Segment Level of Service Results Year 2015 Baseline Conditions*, presents the results of the roadway segment analysis conducted for the study area roadway segments under Year 2015 Baseline conditions.

**Table 3.11-5 Roadway Segment Level Of Service Results
Year 2015 Baseline Conditions**

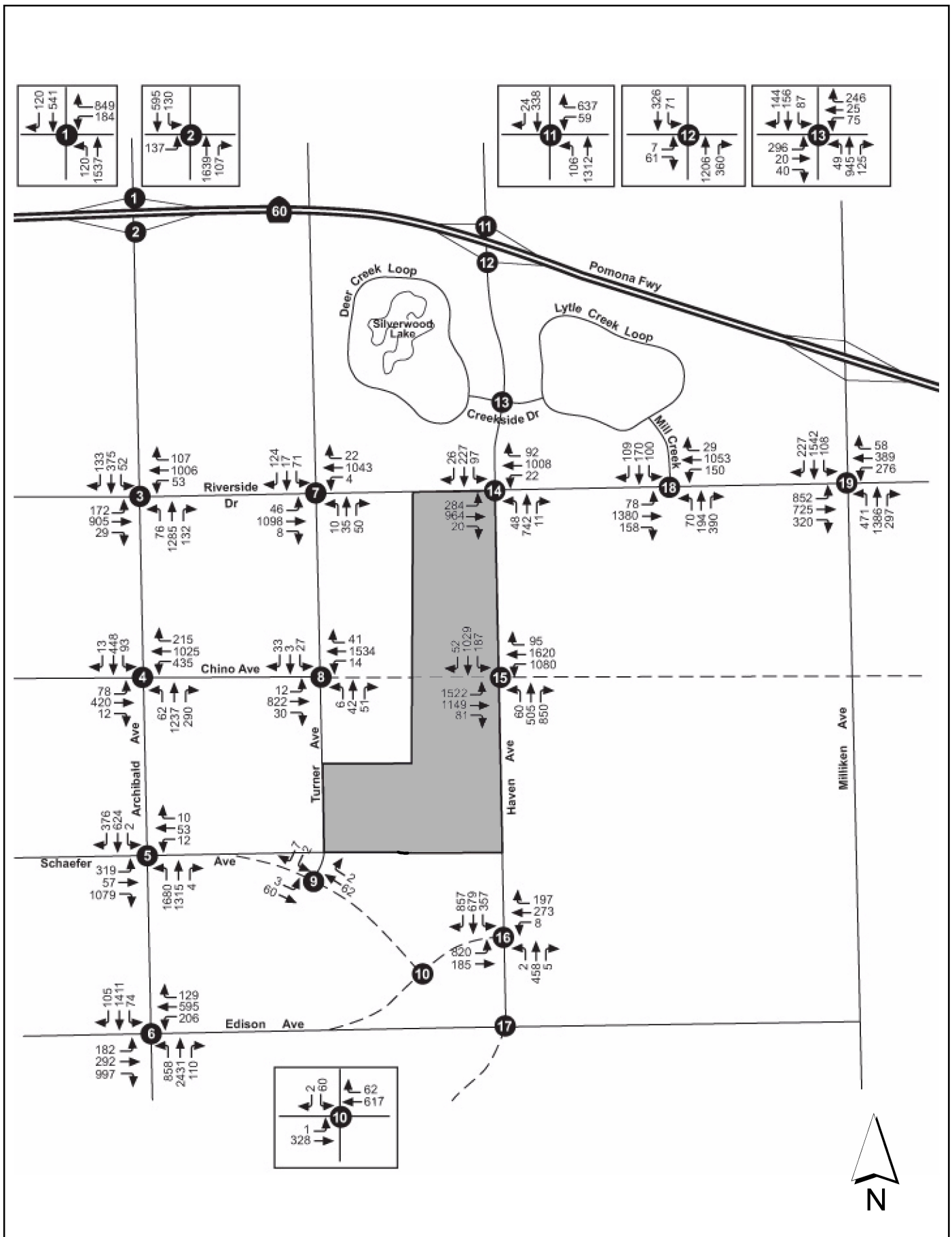
| Roadway | Segment | Cross-Section (Lanage) | AM Peak Hour Volume | PM Peak Hour Volume | LOS Threshold (LOS E) | AM Peak Hour (LOS) | PM Peak Hour (LOS) |
|------------------|--|------------------------|---------------------|---------------------|-----------------------|--------------------|--------------------|
| Archibald Avenue | Riverside Drive to SR 60 | 6 DIV | 1,645 | 2,545 | 2,770 | A | D |
| Haven Avenue | SR 60 to Creekside Drive | 4 DIV | 1,566 | 1,414 | 1,850 | B | B |
| | Creekside Drive to Riverside Drive | 4 DIV | 1,120 | 1,045 | 1,850 | B | A |
| | Riverside Drive to Chino Avenue (Future) | 4 DIV | 737 | 1,483 | 1,850 | A | B |
| | Chino Avenue (Future) to Edison Avenue | 4 DIV | 941 | 1,338 | 1,850 | A | B |
| Turner Avenue | Schaefer to Riverside | 4 UNDIV | 38 | 48 | 1,758 | A | A |
| Riverside Drive | Ontario Avenue to Archibald Avenue | 6 UNDIV | 1,215 | 1,825 | 2,632 | A | B |
| | Archibald Avenue to Turner Avenue | 6 UNDIV | 1,174 | 1,881 | 2,632 | A | B |
| | Turner Avenue to Haven Avenue | 6 UNDIV | 1,242 | 1,821 | 2,632 | A | B |
| | Haven Avenue to Mill Creek | 6 UNDIV | 1,049 | 2,872 | 2,632 | A | F |
| | Mill Creek to Milliken Avenue | 6 UNDIV | 1,719 | 3,007 | 2,632 | B | F |
| Schaefer Avenue | Archibald Avenue to Turner Avenue | 6 UNDIV | 68 | 104 | 2,362 | A | A |

Source: URS Corporation (2005).

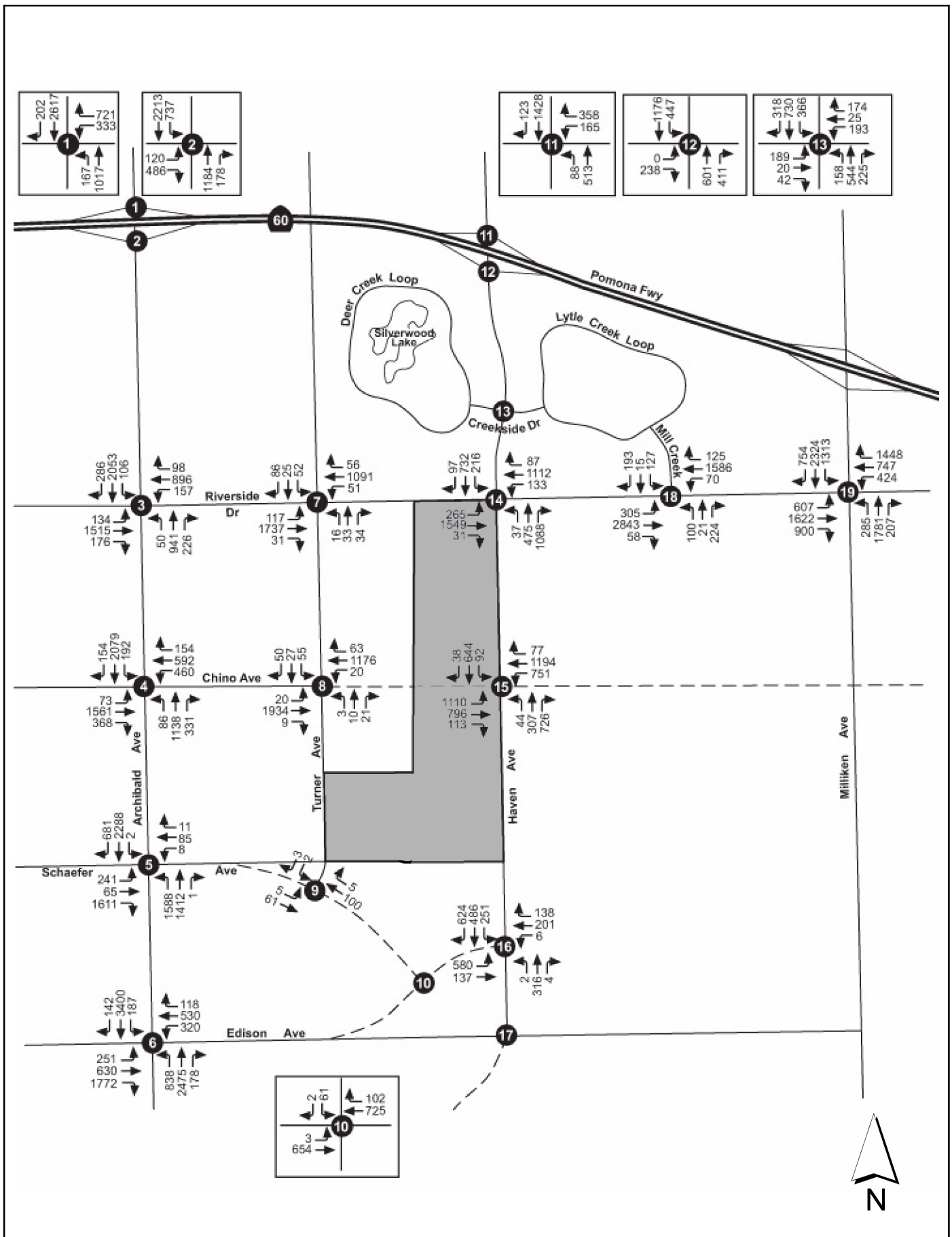
As shown in Table 3.11-5, above, the majority of the roadway segments are forecasted to have sufficient roadway capacities during Year 2015 Baseline conditions with the exception of the roadway segments along Riverside Drive between Haven Avenue and Mill Creek; and between Mill Creek and Milliken Avenue. This over capacity conditions indicates that there is a need to provide more capacity to east-west trending roadways. This could be potentially accomplished by building new roadways, improving roadways to their general plan standards, roadway links extensions and gap closure of discontinuous roadways.



2015 BASE LANE CONFIGURATIONS



2015 FUTURE BASE PEAK HOUR TRAFFIC VOLUMES - AM



2015 FUTURE BASE PEAK HOUR TRAFFIC VOLUMES - PM

Intersection Analysis

Table 3.11-6, *Intersection Level of Service Results Year 2015 Baseline Conditions*, presents the LOS analysis results for the study area intersection under Year 2015 Baseline conditions.

**Table 3.11-6 Intersection Level Of Service Results
Year 2015 Baseline Conditions**

| Study Intersections | | AM Peak Hour | | | PM Peak Hour | | |
|---------------------|--|--------------|------------|-------|--------------|------------|-------|
| | | LOS | Avg. Delay | V/C | LOS | Avg. Delay | V/C |
| 1 | Archibald Avenue/SR-60 WB Ramps | D | 43.4 | 0.892 | D | 51.4 | 1.039 |
| 2 | Archibald Avenue/SR-60 EB Ramps | B | 13.0 | 0.437 | D | 39.1 | 0.988 |
| 3 | Archibald Avenue/Riverside Drive | C | 30.3 | 0.792 | F | 84.4 | 1.165 |
| 4 | Archibald Avenue/Chino Avenue | D | 49.2 | 1.050 | F | 498.3 | 2.660 |
| 5 | Archibald Avenue/Schaefer Avenue | F | 376.1 | 2.226 | F | 719.1 | 2.966 |
| 6 | Archibald Avenue/Edison Avenue | F | 175.1 | 1.388 | F | 491.5 | 2.466 |
| 7 | Turner Avenue/Riverside Drive | B | 10.3 | 0.437 | B | 10.3 | 0.625 |
| 8 | Turner Avenue/Chino Avenue | A | 5.1 | 0.508 | A | 5.4 | 0.625 |
| 9 | Turner Avenue/Schaefer Avenue ¹ | A | 8.6 | - | A | 8.9 | - |
| 10 | Schaefer Avenue/Edison Avenue ¹ | C | 16.9 | - | C | 22.7 | - |
| 11 | Haven Avenue/SR-60 WB Ramps | A | 9.4 | 0.292 | A | 8.0 | 0.376 |
| 12 | Haven Avenue/SR-60 EB Ramps | A | 5.8 | 0.402 | B | 17.6 | 0.602 |
| 13 | Haven Avenue/Creekside Drive | C | 29.5 | 0.585 | C | 30.6 | 0.603 |
| 14 | Haven Avenue/Riverside Drive | C | 31.2 | 0.808 | F | 197.4 | 1.488 |
| 15 | Haven Avenue/Chino Avenue | F | 247.7 | 1.743 | F | 124.2 | 1.327 |
| 16 | Haven Avenue/New Edison Avenue | D | 48.0 | 1.029 | C | 28.2 | 0.740 |
| 18 | Millcreek/Riverside Drive | C | 24.3 | 0.734 | C | 31.6 | 0.967 |
| 19 | Milliken Avenue/Riverside Drive | E | 76.6 | 1.142 | F | 319.2 | 1.876 |

Source: Data compiled by URS Corporation (2005)

¹Unsignalized 2-way Stop Control

As presented in Table 3.11-6, above, the following intersections are forecasted at either LOS E/F or LOS D (with V/C > 1.00) while the remainder of the intersections are forecast at LOS D (with V/C 1.00) or better.

- ◆ Archibald Avenue / SR-60 WB Ramps ((LOS D PM, V/C > 1.00)
- ◆ Archibald Avenue / Riverside Drive (LOS F PM)
- ◆ Archibald Avenue / Chino Avenue (LOS D AM, V/C > 1.00, LOS F PM)
- ◆ Archibald Avenue / Schaefer Avenue (LOS F AM, PM)
- ◆ Archibald Avenue / Edison Avenue (LOS F AM, PM)
- ◆ Haven Avenue / Riverside Drive (LOS F PM)
- ◆ Haven Avenue / Chino Avenue (LOS F AM, PM)
- ◆ Haven Avenue / New Edison Avenue (LOS D AM, V/C > 1.00)
- ◆ Milliken Avenue / Riverside Drive (LOS E AM, LOS F PM)

Horizon Year 2015 Baseline plus Project Conditions

Similar to Year 2015 Baseline conditions, the Horizon Year 2015 with Project roadway network builds upon the existing roadway network and incorporates applicable improvements that were either approved or funded and would be constructed by 2015.

Project Trip Generation

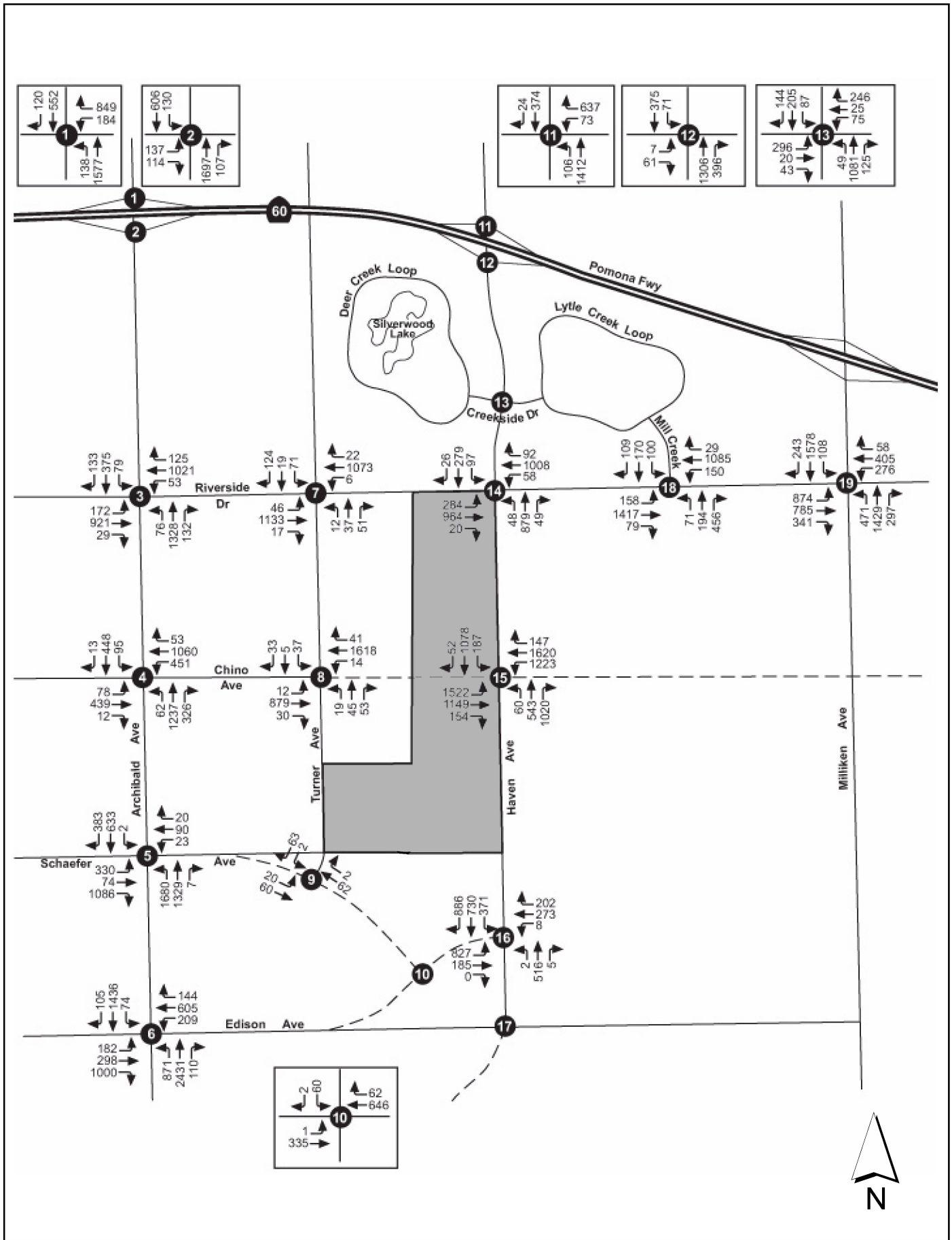
The Project trip generation data presented in Table 3.11-7, *West Haven Specific Planning Area Trip Generation*, was derived from the *Updated Year 2015 Ontario NMC Traffic Model (October 2004)*. Traffic Analysis Zones (TAZ's) 759, 770 and 781 were assigned to represent the West Haven Specific Planning Area. The estimation of Project trip generation for the West Haven Specific Planning Area was based on City approved, "Year 2015 Land Use Data," and standard trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 5th Edition.

**Table 3.11-7 West Haven Specific Planning Area
Trip Generation**

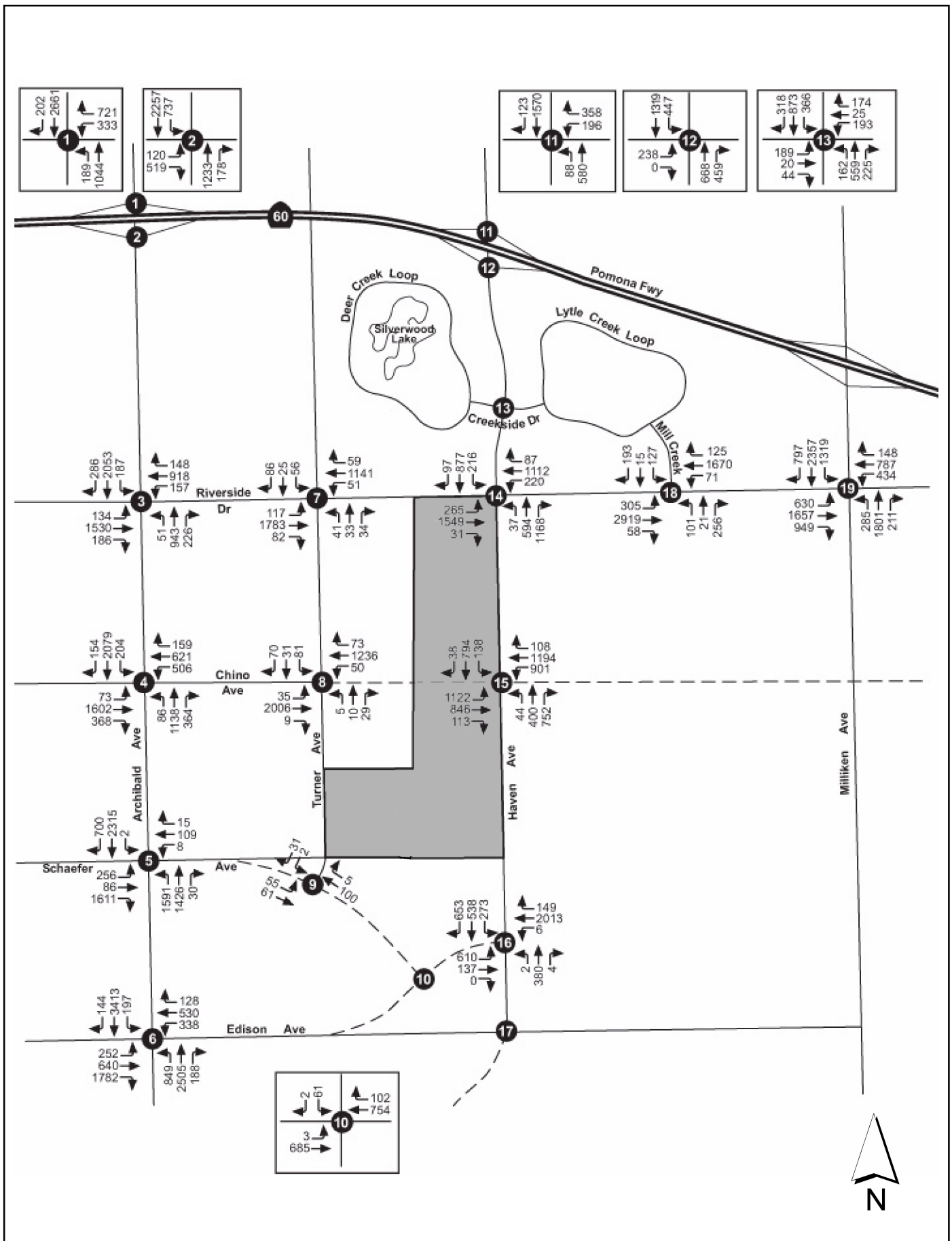
| TAZ # | AM TRIPS | | | PM TRIPS | | |
|-------|----------|----------|-------|----------|----------|-------|
| | Inbound | Outbound | TOTAL | Inbound | Outbound | TOTAL |
| 759 | 228 | 162 | 390 | 260 | 303 | 563 |
| 770 | 140 | 277 | 417 | 299 | 211 | 510 |
| 781 | 61 | 195 | 256 | 206 | 111 | 317 |
| Total | 429 | 634 | 1063 | 765 | 625 | 1390 |

Source: Updated Year 2015 Ontario NMC Traffic Model (October 2004).

Figures 3.11-4 and 3.11-5, *Future with Project Peak Hour Traffic Volumes – AM* and *2015 Future with Project Peak Hour Traffic Volumes – PM*, respectively, feature the a.m. and p.m. Peak Hour Year 2015 with Project traffic volume, within the Project study area.



2015 FUTURE WITH PROJECT PEAK HOUR TRAFFIC VOLUMES - AM



2015 FUTURE WITH PROJECT PEAK HOUR TRAFFIC VOLUMES - PM

Roadway Segment Analysis

Table 3.11-8, *Roadway Segment Level of Service Results Year 2015 Baseline Plus Project Conditions*, presents the LOS analysis results for the study area roadway segments under Horizon Year 2015 Baseline plus Project (or Build) conditions.

**Table 3.11-8 Roadway Segment Level Of Service Results
Year 2015 Baseline Plus Project Conditions**

| Roadway | Segment | Cross-Section (Lanage) | AM Peak Hour Volume | PM Peak Hour Volume | LOS Threshold (LOS E) | AM Peak Hour (LOS) | PM Peak Hour (LOS) |
|------------------|--|------------------------|---------------------|---------------------|-----------------------|--------------------|--------------------|
| Archibald Avenue | Riverside Drive to SR 60 | 6 DIV | 1,706 | 2,626 | 2,770 | B | D |
| Haven Avenue | SR 60 to Creekside Drive | 4 DIV | 1,702 | 1,557 | 1,850 | D | B |
| | Creekside Drive to Riverside Drive | 4 DIV | 1,256 | 1,190 | 1,850 | B | B |
| | Riverside Drive to Chino Avenue (Future) | 4 DIV | 919 | 1,715 | 1,850 | A | D |
| | Chino Avenue (Future) to Edison Avenue | 4 DIV | 1,149 | 1,638 | 1,850 | B | C |
| Turner Avenue | Schaefer to Riverside | 4 UNDIV | 55 | 99 | 1,758 | A | A |
| Riverside Drive | Ontario Avenue to Archibald Avenue | 6 UNDIV | 1,230 | 1,850 | 2,632 | A | B |
| | Archibald Avenue to Turner Avenue | 6 UNDIV | 1,207 | 1,978 | 2,632 | A | B |
| | Turner Avenue to Haven Avenue | 6 UNDIV | 1,277 | 1,871 | 2,632 | A | B |
| | Haven Avenue to Mill Creek | 6 UNDIV | 1,152 | 2,952 | 2,632 | A | F |
| | Mill Creek to Milliken Avenue | 6 UNDIV | 1,822 | 3,115 | 2,632 | B | F |
| Schaefer Avenue | Archibald Avenue to Turner Avenue | 6 UNDIV | 124 | 132 | 2,362 | A | A |

Source: Data compiled by URS Corporation (2005).

Similar to Year 2015 Baseline conditions, the majority of the roadway segments presented in Table 3.11-8, above, under Year 2105 Baseline Plus Project conditions are forecast to have sufficient roadway capacities during Year 2015 Baseline conditions with the exception of the roadway segments along Riverside Drive between Haven Avenue and Mill Creek; and between Mill Creek and Milliken Avenue where the projected demands exceed LOS E peak directional capacities during the p.m. peak hour.

The over capacity conditions again indicate that there is a need to provide more capacity to east-west trending roadways. This could be potentially accomplished by building new roadways, improving roadways to their general plan standards, roadway links extensions and gap closure of discontinuous roadways.

Intersection Analysis

Table 3.11-9, *Intersection Level of Service Results Year 2015 Baseline Plus Project Conditions*, presents the LOS analysis results for the study area intersection in 2015 with Project (or Build) conditions.

**Table 3.11-9 Intersection Level Of Service Results
Year 2015 Baseline Plus Project Conditions**

| Study Intersections | | AM Peak Hour | | | PM Peak Hour | | |
|---------------------|-----------------------------------|--------------|------------|-------|--------------|------------|-------|
| | | LOS | Avg. Delay | V/C | LOS | Avg. Delay | V/C |
| 1 | Archibald Avenue/SR-60 WB Ramps | D | 44.4 | 0.901 | D | 54.9 | 1.053 |
| 2 | Archibald Avenue/SR-60 EB Ramps | B | 12.9 | 0.446 | D | 43.9 | 1.018 |
| 3 | Archibald Avenue/Riverside Drive | C | 32.1 | 0.828 | F | 87.3 | 1.173 |
| 4 | Archibald Avenue/Chino Avenue | D | 53.5 | 1.050 | F | 580.9 | 2.953 |
| 5 | Archibald Avenue/Schaefer Avenue | F | 376.8 | 2.244 | F | 716.0 | 2.979 |
| 6 | Archibald Avenue/Edison Avenue | F | 185.9 | 1.430 | F | 499.6 | 2.486 |
| 7 | Turner Avenue/Riverside Drive | B | 10.3 | 0.446 | B | 10.6 | 0.656 |
| 8 | Turner Avenue/Chino Avenue | A | 5.5 | 0.535 | A | 8.1 | 0.684 |
| 9 | Turner Avenue/Schaefer Avenue [1] | A | 8.7 | - | A | 8.8 | - |
| 10 | Schaefer Avenue/Edison Avenue [1] | C | 17.6 | - | C | 24.0 | - |
| 11 | Haven Avenue/SR-60 WB Ramps | A | 9.8 | 0.317 | A | 8.3 | 0.415 |
| 12 | Haven Avenue/SR-60 EB Ramps | A | 5.5 | 0.432 | B | 17.0 | 0.638 |
| 13 | Haven Avenue/Creekside Drive | C | 29.7 | 0.626 | C | 30.8 | 0.611 |
| 14 | Haven Avenue/Riverside Drive | D | 35.4 | 0.864 | F | 214.8 | 1.599 |
| 15 | Haven Avenue/Chino Avenue | F | 304.5 | 1.884 | F | 144.2 | 1.389 |
| 16 | Haven Avenue/New Edison Avenue | D | 51.8 | 1.056 | C | 29.1 | 0.779 |
| 18 | Millcreek/Riverside Drive | C | 29.3 | 0.850 | E | 60.9 | 1.123 |
| 19 | Milliken Avenue/Riverside Drive | F | 82.5 | 1.169 | F | 336.6 | 1.917 |

Source: Data compiled by URS Corporation (2005).

As presented in Table 3.11-9, above, the following intersections are forecast at either LOS E/F or LOS D (with V/C > 1.00) while the remainder of the intersections are forecast at LOS D (with V/C 1.00) or better.

- ◆ Archibald Avenue / SR-60 WB Ramps ((LOS D PM, V/C > 1.00)
- ◆ Archibald Avenue / SR-60 EB Ramps ((LOS D PM, V/C > 1.00)
- ◆ Archibald Avenue / Riverside Drive (LOS F PM)
- ◆ Archibald Avenue / Chino Avenue (LOS D AM, V/C > 1.00, LOS F PM)
- ◆ Archibald Avenue / Schaefer Avenue (LOS F AM, PM)
- ◆ Archibald Avenue / Edison Avenue (LOS F AM, PM)
- ◆ Haven Avenue / Riverside Drive (LOS F PM)
- ◆ Haven Avenue / Chino Avenue (LOS F AM, PM)
- ◆ Haven Avenue / New Edison Avenue (LOS D AM, V/C > 1.00)
- ◆ Milliken Avenue / Riverside Drive (LOS F AM, LOS F PM)

3.11.3 Mitigation Measures

3.11.3.1 On-Site Project Mitigation

In coordination with City staff, the Project proponent will be responsible for the completion of on-site improvements fronting the Project site. The following proposed on-site improvements and approval

conditions addresses basic roadway and circulation needs to facilitate vehicular ingress and egress to and from the Project site.

- T-1** Prior to Project construction, in coordination with City staff, the Project applicant(s) shall submit for approval to the City Building and Engineering Department(s) site plan(s) and tentative map(s) presenting the adequate right-of-way and easements on the west side from centerline of Haven Avenue to its ultimate General Plan standard width.
- T-2** Prior to Project construction, in coordination with City staff, the Project applicant(s) shall submit for approval to the City Building and Engineering Department(s) site plan(s) and tentative maps(s) presenting proof of adequate parkways, curbs and gutters on the western half of Haven Avenue fronting the Project site and half of the cost of median improvements along Haven Avenue fronting the Project site.
- T-3** Prior to Project construction, in coordination with City staff, the Project applicant(s) shall submit for approval to the City Building and Engineering Department(s) site plan(s) and tentative maps(s) to construct West Haven Proposed Interim Street Cross Sections consistent with New Model Colony and City standards.
- T-4** Prior to Project construction, in coordination with City staff, the Project applicant(s) shall submit for approval to the City Building and Engineering Department(s) site plan(s) and tentative maps(s) for the improvement of the southern half of Riverside Drive along the Project site's frontage.
- T-5** Prior to Project construction, in coordination with City staff, the Project applicant(s) shall submit for approval to the City Building and Engineering Department(s) site plan(s) and tentative maps(s) for the improvement of the eastern half of Turner Avenue along the Project site's boundary.
- T-6** Prior to Project construction, in coordination with City staff, the Project applicant(s) shall submit for approval to the City Building and Engineering Department(s) site plan(s) and tentative maps(s) for the full improvement of Chino Avenue within the Project site consistent with New Model Colony and City standard.

3.11.3.2 Off-Site Project Mitigation

The mitigated Year 2015 Baseline with Project conditions builds upon the Year 2015 Baseline roadway network and incorporate applicable improvements to bring projected deficient intersections to acceptable LOS. The following proposed off-site mitigations collectively address traffic impacts associated with the proposed Project, as well the other areas within the NMC.

The following subsections describe the proposed mitigation measures that were developed in consultation with City staff and consultants conducting concurrent traffic studies in the study area. The list includes only the proposed mitigation measures that are relevant and applicable for the operationally deficient traffic study intersections identified in this Project Traffic Analysis. In Project meetings, the City has been made aware, and has discussed that some of these intersections will still sustain deficiencies even after mitigation measures are applied. Regardless, improvement costs associated with these mitigation measures shall be determined using a fair-share cost sharing method acceptable to the City and other

concerned parties. The applicant shall pay their proportionate share (prior to building permit issuance) for or install (prior to occupancy of any structure) the following transportation improvements needed to serve the project. The determination of whether the payment of proportionate share or installation of the improvements is required shall be made by the City Engineer at the time of Tentative Tract Map approval. The Project Traffic Analysis had identified impacted study intersections and the following mitigations measures were developed:

T-7 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Archibald Avenue/SR60 WB ramps to bring the projected deficiency to an acceptable LOS to the satisfaction of the City Engineering Department and Caltrans District 8. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide exclusive westbound left turn lane
- ◆ Restripe shared westbound left/thru lane to a shared left/thru/right turn lane.

The above improvements will bring p.m. LOS D and 1.053 V/C to LOS C and 0.845 V/C.

T-8 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Archibald Avenue/SR60 EB ramps to bring the projected deficiency to an acceptable LOS to the satisfaction of the City Engineering Department. The Caltrans applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide exclusive eastbound left turn lane
- ◆ Restripe shared eastbound left/thru lane to a shared left/thru/right turn lane.

The above improvements will bring p.m. LOS D and 1.018 V/C to LOS C and 0.860 V/C

T-9 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Archibald Avenue and Riverside Drive intersection to bring the projected deficient intersection to an acceptable LOS to the satisfaction of the City Engineering. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide a fourth southbound thru lane
- ◆ Provide an exclusive eastbound right turn lane

The above improvements will bring p.m. LOS F and 1.173 V/C to LOS D and 0.980 V/C.

T-10 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Archibald Avenue and Chino Avenue intersection to bring the projected deficient intersection

to an acceptable LOS to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide an exclusive northbound right turn lane
- ◆ Provide a fourth southbound thru lane
- ◆ Provide a second and third eastbound thru lane
- ◆ Provide an exclusive eastbound right turn lane
- ◆ Provide a second westbound left turn lane
- ◆ Provide a second westbound thru lane

The above improvements will bring p.m. LOS F and 2.953 V/C to LOS C and 0.923 V/C.

T-11 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Archibald Avenue and Schaefer Avenue intersection to bring the projected deficient intersection to an acceptable LOS to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide northbound second left turn lane
- ◆ Provide fourth northbound thru lane
- ◆ Provide fourth southbound thru lane
- ◆ Provide southbound exclusive free right turn lane
- ◆ Provide eastbound exclusive free right turn lane

The above improvements will bring p.m. LOS F and 2.979 V/C to LOS E and 1.134 V/C. These mitigation measures does not bring improvement to LOS D; and represents a significant impact.

T-12 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Archibald Avenue and Edison Avenue intersection to bring the projected deficient intersection to an acceptable LOS to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide fourth northbound thru lane
- ◆ Provide northbound exclusive right turn lane
- ◆ Provide fourth southbound thru lane
- ◆ Provide southbound exclusive right turn lane
- ◆ Provide eastbound exclusive free right turn lane

- ◆ Provide westbound exclusive right turn lane

The above improvements will bring p.m. LOS F and 2.486 V/C to LOS D and 1.026 V/C.

T-13 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with traffic signal warrant and Project funding from fair share mitigation fees, Project applicant(s) shall develop the Turner Avenue and Chino Avenue intersection to bring the projected deficient intersection to an acceptable LOS to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Signalize intersection

T-14 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Haven Avenue and Riverside Drive intersection to bring the projected deficient intersection to an acceptable LOS to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide an exclusive northbound free right turn lane

The above improvements to T-7 and T-8, will bring p.m. LOS F and 1.599 V/C to LOS D and 0.949 V/C.

T-15 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the of development the Haven Avenue and Chino Avenue intersection to bring the projected deficient intersection to an acceptable LOS to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide northbound exclusive free right turn lane
- ◆ Provide eastbound third left turn lanes
- ◆ Provide westbound third left turn lanes

The above improvements will lower a.m. LOS F and 1.884 V/C to LOS F and 1.257 V/C. These mitigation measures does not bring improvement to LOS D; and represents a significant impact.

T-16 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Millcreek and Riverside Drive intersection to bring the projected deficient intersection to an acceptable LOS to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide eastbound third thru lane

The above improvements will bring p.m. LOS E and 1.123 V/C to LOS C and 0.905 V/C.

T-17 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall pay their fair share towards the development of the Milliken Avenue and Riverside Drive intersection to bring the projected deficient intersection to an acceptable LOS to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis, shall include:

- ◆ Provide eastbound second left turn lane
- ◆ Provide eastbound exclusive free right turn lane
- ◆ Provide westbound second left turn lane

The above improvements will bring p.m. LOS F and 1.917 V/C to LOS F and 1.449 V/C. These mitigation measures does not bring improvement to LOS D; and represents a significant impact.

T-18 Prior to approval of the first subdivision map and recordation of the Project Master Tentative Tract Map for development of the Project site, and contingent with Project funding from fair share mitigation fees, Project applicant(s) shall contribute and provide the necessary support for the needed infrastructure and applicable Transit/Bus System Improvements within the immediate vicinity of the Project site to the satisfaction of the City Engineering Department. The applicable improvements identified by others and in the Project Traffic Analysis shall include:

- ◆ Provide needed right-of-way for bus pads and turnouts along roadway segments adjacent to the Project site.
- ◆ Coordinate with City and transit providers to determine the most effective location for transit/bus stops with adequate accessibility for the handicapped.
- ◆ Incorporate in the design elements of the communities the flexibility to accommodate necessary amenities for transit/bus system access.

3.11.3.3 Fair Share Contribution of Mitigation Cost

The City of Ontario is the responsible agency tasked with the exaction of fees to fund the construction and implementation of the proposed mitigation measures. The fair share mechanism is based on the ratio of the individual project's contribution to future project added traffic. This mechanism ensures that the burden of the roadway and intersection mitigation costs, are distributed fairly to responsible projects.

A fair share cost analysis was conducted for the eleven study intersection that were identified to be deficient at project buildout of the West Haven Specific Plan Project. The construction cost schedule shows that approximately \$2.4M is needed to improve these facilities to acceptable operating conditions. Based on the fair share cost distribution, the Project's proportionate share is approximately \$90,000 or about 4 percent of the total costs.

For a summary of the West Haven Specific Plan Project's fair share contribution towards the improvements deficient study intersection, refer to Appendix I, *West Haven Specific Traffic Technical Report*.

3.11.3.4 Post Mitigation Conditions

With the implementation of mitigation measures T-3 through T-13, it is anticipated that the majority of the study intersections and roadway segments would experience improved operating conditions and acceptable levels of service. Although some intersection and roadway segments would still continue to carry a significant amount of traffic volume due in part by deficiencies of the roadway circulation system which include missing roadway links and interchange access to the regional freeway system. However, it is anticipated that upon completion of planned freeway interchanges and gap closures of discontinuous roadways, traffic volume would be evenly distributed to the roadway circulation system resulting in improved operating conditions of the overloaded intersection and roadway segments.

To accommodate the projected traffic demand, some proposed traffic improvements (i.e., triple left turn lanes or roadway widening beyond General Plan standards) were evaluated for analysis purposes only and may require additional right-of-way and accommodation beyond the prescribed roadway width of the NMC roadway standards. It is anticipated that future improvements and added roadway links from the surrounding roadway circulation system would result in a more even distribution of roadway traffic and potentially improve the operating conditions of the identified deficient intersections. Figure 3.11-6, *2015 Mitigated Lane Configurations*, features the mitigation measures proposed by others and in this Project's EIR Traffic Analysis.

The City is aware that as off-site improvements remains undeveloped and there remains a discontinuous east-west roadway system, the deficient circulation system for the Project will remain at an unacceptable LOS level. The City is also aware that through a applicant's Joint Venture group, the Specific Planning areas' roadway/circulation system will be improved. Until such time when these physical improvements are completed (or confirmed to be built) and an updated traffic modeling of the roadway network is completed, those necessary improvements will continue to be potential mitigation measures.

Mitigated Intersection Analysis

Table 3.11-10, *Intersection Level of Service Results Mitigated – Year 2015 Baseline Plus Project Conditions*, presents the LOS analysis results for the study area intersection in 2015 with Project conditions with proposed mitigations.

As presented in Table 3.11-10, above, the following five study intersections are forecast at either LOS E/F or LOS D (with V/C > 1.00) while the remainder of the intersections are forecasted at LOS D (with V/C 1.00) or better.

- ◆ Archibald Avenue/Schaefer Avenue (LOS E PM)
- ◆ Archibald Avenue/Edison Avenue (LOS D PM, V/C > 1.00)
- ◆ Haven Avenue/Chino Avenue (LOS F AM)
- ◆ Haven Avenue/New Edison Avenue (LOS D AM, V/C > 1.00)
- ◆ Milliken Avenue/Riverside Drive (LOS F PM)

**Table 3.11-10 Intersection Level Of Service Results
Mitigated - Year 2015 Baseline Plus Project Conditions**

| Study Intersections | | AM Peak Hour | | | PM Peak Hour | | |
|---------------------|----------------------------------|--------------|------------|-------|--------------|------------|-------|
| | | LOS | Avg. Delay | V/C | LOS | Avg. Delay | V/C |
| 1 | Archibald Avenue/SR-60 WB Ramps | C | 24.7 | 0.641 | C | 24.4 | 0.845 |
| 2 | Archibald Avenue/SR-60 EB Ramps | B | 11.6 | 0.420 | C | 24.8 | 0.860 |
| 3 | Archibald Avenue/Riverside Drive | C | 32.0 | 0.828 | D | 44.6 | 0.980 |
| 4 | Archibald Avenue/Chino Avenue | C | 27.6 | 0.849 | C | 31.6 | 0.923 |
| 5 | Archibald Avenue/Schaefer Avenue | C | 32.0 | 0.922 | E | 78.5 | 1.134 |
| 6 | Archibald Avenue/Edison Avenue | C | 24.6 | 0.661 | D | 44.7 | 1.026 |
| 7 | Turner Avenue/Riverside Drive | B | 10.3 | 0.446 | B | 10.6 | 0.656 |
| 8 | Turner Avenue/Chino Avenue | A | 5.5 | 0.535 | A | 8.1 | 0.684 |
| 9 | Turner Avenue/Schaefer Avenue | A | 8.7 | 0.000 | A | 8.8 | 0.000 |
| 10 | Schaefer Avenue/Edison Avenue | C | 17.6 | 0.000 | C | 24.0 | 0.000 |
| 11 | Haven Avenue/SR-60 WB Ramps | A | 9.8 | 0.317 | A | 8.3 | 0.415 |
| 12 | Haven Avenue/SR-60 EB Ramps | A | 5.5 | 0.432 | B | 17.0 | 0.638 |
| 13 | Haven Avenue/Creekside Drive | C | 29.7 | 0.626 | C | 30.8 | 0.611 |
| 14 | Haven Avenue/Riverside Drive | C | 34.2 | 0.847 | D | 46.4 | 0.949 |
| 15 | Haven Avenue/Chino Avenue | F | 114.6 | 1.257 | D | 41.9 | 0.926 |
| 16 | Haven Avenue/New Edison Avenue | D | 51.8 | 1.056 | C | 29.1 | 0.779 |
| 17 | Haven Avenue/Old Edison Avenue | - | - | - | - | - | - |
| 18 | Millcreek/Riverside Drive | C | 27.3 | 0.738 | C | 25.6 | 0.905 |
| 19 | Milliken Avenue/Riverside Drive | D | 38.1 | 0.908 | F | 166.8 | 1.449 |

Source: URS Corporation (2005).

Project Added Trips Compared to Future Traffic Volume

Table 3.11-11 and 3.11-12, *Year 2015 Percent Project Trip Contribution AM Peak Hour* and *Year 2015 Percent Project Trip Contribution PM Peak Hour*, respectively, present the Year 2015 a.m. and p.m. peak hour Project contribution as compared to the change of projected Year 2015 and existing traffic.

Table 3.11-11 Year 2015 Percent Project Trip Contribution AM Peak Hour

| Intersection | Project Trips | 2015 Total Volume | 2004 Existing Volume | Change 2015-2004 | Percent Project Trips | |
|--------------|----------------------------------|-------------------|----------------------|------------------|-----------------------|--------|
| 1 | Archibald Avenue/SR-60 WB Ramps | 69 | 3419 | 2469 | 7.26% | |
| 2 | Archibald Avenue/SR-60 EB Ramps | 82 | 2791 | 2281 | 16.07% | |
| 3 | Archibald Avenue/Riverside Drive | 119 | 4445 | 2338 | 5.65% | |
| 4 | Archibald Avenue/Chino Avenue | 152 | 4479 | 1473 | 5.06% | |
| 5 | Archibald Avenue/Schaefer Avenue | 127 | 5645 | 998 | 2.73% | |
| 6 | Archibald Avenue/Edison Avenue | 75 | 7464 | 1475 | 1.25% | |
| 7 | Turner Avenue/Riverside Drive | 83 | 2602 | 3100 | [1] | 3.19 |
| 8 | Turner Avenue/Chino Avenue | 171 | 2714 | 476 | 2238 | 7.64% |
| 9 | Turner Avenue/Schaefer Avenue | 73 | 209 | 0 | 209 | 34.93% |
| 10 | Schaefer Avenue/Edison Avenue | 36 | 1106 | 0 | 1106 | 3.25% |
| 11 | Haven Avenue/SR-60 WB Ramps | 150 | 2625 | 3976 | [1] | 5.71% |
| 12 | Haven Avenue/SR-60 EB Ramps | 185 | 2216 | 3517 | [1] | 8.35% |
| 13 | Haven Avenue/Creekside Drive | 188 | 2396 | 1861 | 535 | 35.14% |
| 14 | Haven Avenue/Riverside Drive | 263 | 3804 | 806 | 2998 | 8.77% |
| 15 | Haven Avenue/Chino Avenue | 525 | 8754 | 0 | 8754 | 6.00% |
| 16 | Haven Avenue/New Edison Avenue | 164 | 4004 | 0 | 4004 | 4.10% |
| 17 | Haven Avenue/Old Edison Avenue | - | - | 458 | -458 | 0.00% |
| 18 | Millcreek/Riverside Drive | 137 | 4018 | 1126 | 2892 | 4.74% |
| 19 | Milliken Avenue/Riverside Drive | 214 | 6865 | 1893 | 4972 | 4.30% |

[1] – Model data show lowered Year 2015 volume, percent Project trips calculated based on Year 2015 volume.

Source: Data compiled by URS Corporation (2005).

Table 3.11-12 Year 2015 Percent Project Trip Contribution PM Peak Hour

| | Intersection | Project Trips | 2015 Total Volume | 2004 Existing Volume | Change 2015-2004 | Percent Project Trips |
|----|----------------------------------|---------------|-------------------|----------------------|------------------|-----------------------|
| 1 | Archibald Avenue/SR-60 WB Ramps | 93 | 5150 | 2187 | 2963 | 3.14% |
| 2 | Archibald Avenue/SR-60 EB Ramps | 126 | 5044 | 2352 | 2692 | 4.68% |
| 3 | Archibald Avenue/Riverside Drive | 183 | 6820 | 2821 | 3999 | 4.58% |
| 4 | Archibald Avenue/Chino Avenue | 166 | 7353 | 1588 | 5765 | 2.88% |
| 5 | Archibald Avenue/Schaefer Avenue | 156 | 8146 | 1178 | 6968 | 2.24% |
| 6 | Archibald Avenue/Edison Avenue | 125 | 10965 | 1823 | 9142 | 1.37% |
| 7 | Turner Avenue/Riverside Drive | 179 | 3507 | 1588 | 1919 | 9.33% |
| 8 | Turner Avenue/Chino Avenue | 247 | 3585 | 361 | 3224 | 7.66% |
| 9 | Turner Avenue/Schaefer Avenue | 78 | 254 | 0 | 254 | 30.71% |
| 10 | Schaefer Avenue/Edison Avenue | 60 | 1607 | 0 | 1607 | 3.73% |
| 11 | Haven Avenue/SR-60 WB Ramps | 240 | 2915 | 4242 | [1] | 8.23% |
| 12 | Haven Avenue/SR-60 EB Ramps | 258 | 3131 | 3885 | [1] | 8.24% |
| 13 | Haven Avenue/Creekside Drive | 164 | 3148 | 2711 | 437 | 37.53% |
| 14 | Haven Avenue/Riverside Drive | 431 | 6252 | 1770 | 4482 | 9.62% |
| 15 | Haven Avenue/Chino Avenue | 558 | 6450 | 0 | 6450 | 8.65% |
| 16 | Haven Avenue/New Edison Avenue | 208 | 2951 | 0 | 2951 | 7.05% |
| 18 | Millcreek/Riverside Drive | 194 | 5861 | 1253 | 4608 | 4.21% |
| 19 | Milliken Avenue/Riverside Drive | 267 | 11375 | 2066 | 9309 | 2.87% |

[1] – Model data show lowered Year 2015 volume, percent Project trips calculated based on Year 2015 volume.

Source: Data compiled by URS Corporation (2005).

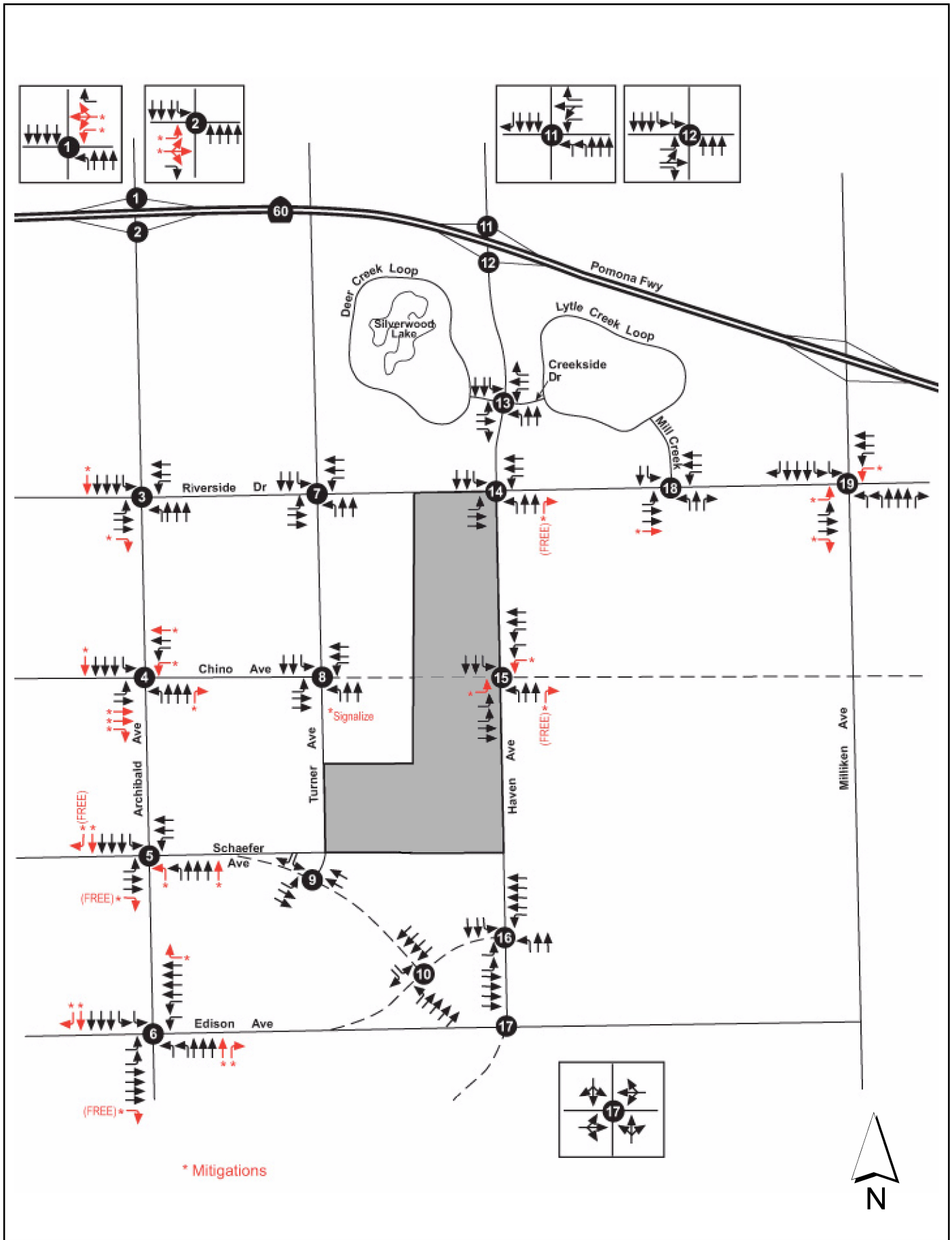
3.11.3.5 Fair Share Cost Analysis

Table 3.11-13, *Intersection Lane Needs and Mitigation Costs*, presents a preliminary order of magnitude cost estimate to implement the proposed mitigation measures. The cost presented in the table were based on construction costs only for funding and programming purposes and does not include the costs for right-of-way acquisition and other related mitigation implementation expenses. As presented in Table 3.11-13, each of the mitigated study intersections has total mitigation cost column that sums up the applicable proposed improvements. The percent Project share as presented in the *Project Added Trips Compared to Future Traffic Volume* section, was then used in the calculation of the Project's fair and equitable share in the proposed mitigation costs.

Based on the above methodology, the preliminary order of magnitude estimate for the eleven (11) deficient study intersections is approximately \$2.5 million as compared with the Project's fair share amount of \$90,000 or about four percent share to the proposed mitigation costs.

3.11.4 Significant Effects of the Project After Mitigation

Mitigation measures require the Project applicant(s) to pay a fair share contribution toward the improvement of each future deficient intersection identified in the TIA for the Project. Funds contributed by the applicant(s) would not cover the full cost of any individual improvement, thus a funding shortfall is projected which may not be offset by other funding sources (federal, state, county, and city). Accordingly, Project-related traffic impacts are expected to be significant and unavoidable. Although the Project would have no significant effect on the transportation network in the Project vicinity if sufficient funding were to become available from other private and public sources, and construction of the identified intersection improvements were to occur.



MITIGATED LANE CONFIGURATIONS

Figure 3.11-1 Intersection Lane Needs and Mitigation Goals

| | Additional Lane Needs | | | | | | | | | | | | LUMP SUM | LEFT LANE | THRU LANE | RIGHT LANE | TOTAL | PROJECT PERCENT | PROJECT SHARE | |
|--------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|------------------|------------------|--------------------|------------------|--------------------|---------------|-----------------|
| | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | | | | | | | | |
| 1 ARCHIBALD AVE/SR-60 WB RAMPS | | | | | | | | | | | | | | \$500 | \$53,400 | \$0 | \$0 | \$53,900 | 3.14% | \$1,692 |
| 2 ARCHIBALD AVE/SR-60 EB RAMPS | | | | | | | | 1 | | | | | | \$500 | \$53,400 | \$0 | \$0 | \$53,900 | 4.68% | \$2,523 |
| 3 ARCHIBALD AVE/RIVERSIDE DR | | | | | 1 | | | | 1 | | | | | | \$0 | \$106,800 | \$53,400 | \$160,200 | 4.58% | \$7,332 |
| 4 ARCHIBALD AVE/CHINO AVE | | | 1 | | 1 | | | | 2 | 1 | 1 | 1 | | | \$53,400 | \$427,200 | \$106,800 | \$587,400 | 2.88% | \$16,914 |
| 5 ARCHIBALD AVE/SCHAEFER AVE | 1 | 1 | | | 1 | 1 | | | | 1 | | | | | \$53,400 | \$213,600 | \$106,800 | \$373,800 | 2.24% | \$8,369 |
| 6 ARCHIBALD AVE/EDISON AVE | | 1 | 1 | | 1 | 1 | | | | 1 | | | 1 | | \$0 | \$213,600 | \$213,600 | \$427,200 | 1.37% | \$5,841 |
| 7 TURNER AVE/RIVERSIDE DR | | | | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | 9.33% | \$0 |
| 8 TURNER AVE/CHINO AVE | | | | | | | | | | | | | | \$250,000 | \$0 | \$0 | \$0 | \$250,000 | 7.66% | \$19,154 |
| 9 TURNER AVE/SCHAEFER AVE | | | | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | 30.71% | \$0 |
| 10 SCHAEFER AVE/EDISON AVE | | | | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | 3.73% | \$0 |
| 11 HAVEN AVE/SR-60 WB RAMPS | | | | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | 8.23% | \$0 |
| 12 HAVEN AVE/SR-60 EB RAMPS | | | | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | 8.24% | \$0 |
| 13 HAVEN AVE/CREEKSIDE DR | | | | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | 0.00% | \$0 |
| 14 HAVEN AVE/RIVERSIDE DR | | | 1 | | | | | | | | | | | | \$0 | \$0 | \$53,400 | \$53,400 | 9.62% | \$5,135 |
| 15 HAVEN AVE/CHINO AVE | | | 1 | | | | 1 | | | | 1 | | | | \$106,800 | \$0 | \$53,400 | \$160,200 | 8.65% | \$13,859 |
| 16 HAVEN AVE/NEW EDISON AVE | | | | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | 7.05% | \$0 |
| 17 HAVEN AVE/OLD EDISON AVE | | | | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | 0.00% | \$0 |
| 18 MILL CREEK/RIVERSIDE DR | | | | | | | | | 1 | | | | | | \$0 | \$106,800 | \$0 | \$106,800 | 4.21% | \$4,496 |
| 19 MILLIKEN AVE/RIVERSIDE DR | | | | | | | 1 | | | 1 | 1 | | | | \$106,800 | \$0 | \$53,400 | \$160,200 | 2.87% | \$4,595 |
| TOTAL | | | | | | | | | | | | | | \$251,000 | \$427,200 | \$1,068,000 | \$640,800 | \$2,387,000 | | \$89,909 |

3.12 UTILITIES/SERVICE SYSTEMS

3.12.1 Setting

Water Services

Water service to the Project site will be provided by the City's Public Works Agency's Utilities Department (Water Master Plan, 2000). Section 3.7, of this document, incorporates the findings and conclusions of the Master Plan of Drainage (MPD) for the NMC prepared by L.D. King, 2000. The City obtains water principally by pumping from the Chino Groundwater Basin and from water purchased from the Metropolitan Water District of Southern California (MWD). Another potential source of water is reclaimed water from the regional wastewater treatment facilities. However, this highly treated sewage effluent is limited to uses such as irrigation, certain industrial applications, and other non-potable uses. The use of reclaimed water is regulated by State water quality agencies, and requires a separate distribution system.

Domestic Water

The City's water delivery system is currently divided into four pressure zones, based upon elevation. All zones are interconnected with pressure reducing stations or booster pump stations, so no zone is isolated for the purpose of meeting water demand. The Project area north of Chino Avenue is within the Phillips Street zone. A new zone, Francis Street zone, will serve the Project area south of Chino Avenue.

The Phillips Street zone currently has one storage tank of 5.5 million gallons capacity. A second reservoir, called K-2, is scheduled to be completed in the near future and will have a capacity of 9.0 million gallons. Facilities within the Phillips Street zone are adequate to meet the current demand. The existing Phillips Street zone is supplied by two wells to the northwest of the Project (wells 34 and 35). Four pressure reducing valves (PRV 2 through PRV 5) are online to supply fire flow from the Fourth Street zone and three pressure reducing valve (PRVs 7, 8, and 13) are online to supply fire flow from the Eighth Street zone.

The 2000 Water Master Plan recommends five future improvement Projects in the Phillips Street zone. These improvements, which have not been completed, are primarily the construction of larger transmission lines to the zone. These recommended improvements are in addition to building the 9.0 million gallon K-2 reservoir at Milliken Avenue and the I-10 Freeway.

Existing infrastructure in the Phillips Street zone that will be part of the backbone pipe delivery system for the Project area and the NMC include 10-inch and 12-inch water mains in Riverside Drive between Euclid Avenue and Milliken Avenue, and a 12-inch main on each side of the Archibald Ranch development in Archibald Avenue and Turner Avenue. The existing Phillips Street pressure zone water lines include the existing 8-inch water line and the 12-inch water line in Riverside Drive; the existing 12-inch water line in Turner Avenue; and, the existing 8-inch water line in Chino Avenue that terminates at the westerly boundary line of the SCE easement lying on the west side of the Project boundary.

Water Wells

The Project site contains three agricultural water wells used for irrigation. To eliminate the potential for groundwater contamination and eliminate physical hazards these wells should be destroyed in accordance with the California Department of Water Resources, Water Well Standards and San Bernardino County Department of Public Health, Environmental Services Division.

Wastewater

There are two existing sewer lines in Riverside Drive. Both sewer lines are at capacity and discharge to the Whispering Lakes Pump Station, which is also at capacity. There is an existing sewer system within the Archibald Ranch development, located west of the Project. The existing sewer system connects to a lift station on the east side of Archibald Avenue. A force main from the lift station extends northerly along Archibald Avenue to the Whispering Lakes Pump Station. The Archibald Ranch Lift Station is at capacity and cannot accept any additional sewer flows. Upon completion of the Eastern Trunk Sewer (*Archibald Avenue*), the lift station will be eliminated and the sewer system will discharge into the Eastern Trunk Sewer.

Storm Drain

There is an existing storm drain system adjacent to the Project site that currently serves the Archibald Ranch development. This storm drain system outlets into Chris Basin which outlets into the Cucamonga Creek Channel. Approximately 15 acres of the Project area, adjacent to Turner Avenue, was tabled to drain to the existing Archibald Ranch storm drain. Upon further study of the capacity of the Archibald Ranch storm drain, it was determined that the storm drain is at capacity and cannot accept additional flows. When the Archibald Ranch storm drain was designed, the Rational Method from the old San Bernardino County Hydrology Manual was in use. The Rational Method has since been revised, which when used, results in a higher calculated runoff, (Q). There are no other permanent storm drainage facilities near the Project, which may be used for on-site storm flows.

However, additional storm drain capacity will be added to the area as a result of the construction of the County Line Channel (CLC). This is a collaborative effort between the City of Ontario and County of Riverside Flood Control District and was scheduled to begin construction in May 2004. Recent communication with the City (February 2006) has revealed that the construction phase of the CLC is very near completion. The channel originates near the intersection of I-15 and Bellegrave Avenue, constructed within Bellegrave and will follow the Riverside/San Bernardino County line terminating in the Cucamonga Creek Channel. The West Haven Specific Plan Project site is protected from off-site flows from the north by a combination drainage swale and storm drain line constructed on the north side of Haven Avenue.

Reclaimed Water

Use of reclaimed water has long been recognized as a potential new source of water. Many water customers who are currently being served with potable water do not require water of potable quality and could be served with reclaimed water that is now flowing to the Santa Ana River and out of the basin. Previously identified uses of reclaimed water include irrigation for landscape, recreation, industrial uses, and groundwater recharge.

Existing Reclaimed Water Facilities

Presently, the West Haven Specific Plan area does not have a reclaimed water system. The Inland Empire Utility Agency (IEUA), originally named the Chino Basin Municipal Water District (CBMWD), operates the regional sewerage system that collects, treats, and disposes of wastewater delivered by contracting local agencies, including the City. Currently, the IEUA wastewater system consists of three treatment plants:

- ◆ Regional Plant No. 1 (RP1) to the northwest of the Project site;
- ◆ Regional Plant No. 2. (RP2) southwest of the Project site and adjacent to State Route (SR) 71; and,
- ◆ The Carbon Canyon Water Reclamation Plant (CCWRP), which is also southwest of the Project site and adjacent to SR 71.

The outfall pipe from RP1 appears to be an ideal water transmission line for reclaimed water for the Project and the NMC Plan area, however, it now serves as a chlorine contact facility and more study is needed to assess the issue of the ability of the pipeline to withstand the higher pressures associated with a pressurized reclaimed water system.

Supply and Demand

Reclaimed water contains salts in amounts slightly above the standards set in the 1995 Water Quality Control Plan. According to the plan, the maximum allowable amount of reclaimed water use within the Chino Basin for irrigation is about 7,600 acre-feet/year. Current use is approximately 2,000 acre-feet/year, leaving about 5,600 acre-feet/year remaining for possible use in the basin before amendments to the plan will be necessary. It is anticipated that approvals for further irrigation or recharge might involve desalting plants that would treat poor quality groundwater in exchange for permitting additional surface salt loading caused by the use of reclaimed water, if the resulting salt balance is an improvement to the basin.

Currently, the three treatment plants produce an average amount of 59,300 acre-feet/year of treated water. The current demand of approximately 2,000 acre-feet/year plus a minimum base flow to Prado Dam in compliance with the Santa Ana River Judgment leaves an available supply far greater than future projected demands. The supply will continue to increase as planned construction of new plants and expansions to existing plants are completed.

Electricity

SCE has overhead facilities in the Project area and currently provides electricity to the existing dairy farms and residences. Project development will increase electrical power requirements and SCE has indicated interest in developing the required distribution system (refer to Appendix J, *Will Serve Letters*). All new lines in the NMC are encouraged to be underground and existing lines within the West Haven Specific Plan will be located underground where practical.

Natural Gas

Southern California Gas Company (SCG) currently provides natural gas service to the Project area. Facilities in the area include existing 3-inch and 6-inch mains on Haven Avenue, and a 6-inch line on

Riverside Drive. Additionally, a 30-foot gas line/easement runs diagonally across the Project site at approximately 500 feet south of the intersection of Riverside Drive and Haven Avenue and exits the Project site's westerly boundary at approximately 1,290 feet south of Riverside Drive.

Telephone

Verizon currently provides telephone service within the Project area to the existing dairy farms and residences.

Solid Waste

Currently "urban type" solid waste collection and disposal in the NMC is arranged privately by homeowners and businesses. Solid waste generated within the City is collected by the City's Public Works Agency using City crews and equipment. In the past, all waste materials were taken to Milliken Landfill, a disposal site administered by the San Bernardino County Department of Solid Waste Management. The Milliken Landfill is approaching maximum capacity and soon will be closed.

The City entered into an agreement with a private solid waste disposal company. This agreement provides that after the closing of the Milliken Landfill, the City collected solid waste will be taken to a transfer station operated by the private company. The private company will then haul the solid waste to final disposal locations, as appropriate. The current plans are for the solid waste to be hauled by the private contractor to the El Sobrante Landfill, operated by Riverside County Solid Waste Management, after the closing of the Milliken Landfill.

Solid waste collection and disposal within the Project area will continue to be accomplished by City crews through the City's Public Works Agency. The West Haven Specific Plan is anticipated to utilize a 3-bin system to accommodate recyclables and green waste, and, support City-sponsored recycle programs, and diversion of special wastes such as tires and construction material.

3.12.2 Thresholds of Significance

The City has not established significance thresholds for use in this analysis, therefore the NOP for the Project and CEQA Environmental Checklist Form, Appendix G, State CEQA Guidelines, are used to identify and describe the level of impacts on utilities/service systems associated with the Project. The NOP and Appendix G suggest that a Project related significant impact would occur if the Project would:

- ◆ Exceed wastewater treatment requirements of the applicable RWQCB.
- ◆ 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.
- ◆ 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.
- ◆ Have sufficient water supplies to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed.
- ◆ Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

- ◆ Be served by a landfill(s) without sufficient permitted capacity to accommodate the Project's solid waste disposal needs.
- ◆ Not comply with federal, state, and local statutes and regulations related to solid waste.

3.12.3 Impacts

Water Services

Domestic Water

Water service will be provided by the City of Ontario as discussed in the Water Master Plan prepared for the NMC. Use of Wells 34 and 35, which currently supply water to the Phillips Street Zone, will be requested from the City of Ontario's Public Works Department. The Project is located in two pressure zones. The Project area north of Chino Avenue lies within the Phillips Street Zone and the Project area south of Chino Avenue lies within the Francis Street Zone. Proposed improvements for the Phillips Street Zone properties include 18-inch distribution mains in Riverside Drive, Mill Creek and Chino Avenue. These distribution mains will be interconnected to water mains in Milliken Avenue and Turner Avenue. Proposed improvements for the Francis Street Zone properties include 24-inch distribution mains in Riverside Drive and Mill Creek Avenue, an 18-inch distribution main in Chino Avenue and a 12-inch distribution main in Schaefer Avenue. The distribution mains will be interconnected to water mains in Milliken Avenue and Archibald Avenue. The Project applicant(s) will be responsible for new distribution mains in the roadways (*Haven Avenue, Chino Avenue and Riverside Drive*) adjacent to the property. The completion of the Phillips Street Zone improvements and Francis Street Zone are necessary for the Project to be viable (stand alone). If the Phillips Zone improvements and Francis Street are not completed prior to issuance of the grading permits for the Project, then Project construction will be delayed. The Phillips Street Zone improvements are scheduled to be completed by May 2007. The Francis Street Zone is scheduled to be completed by March 2007. In an effort for the Project to proceed, the Project applicant(s) may be responsible for the installation of the distribution mains. All water mains, internal to the Project, will be provided by the Project applicant(s). Within the Project site, 8-inch water mains are proposed to serve the residential and commercial developments. The proposed water system improvements are illustrated in *Figure 3.12-1, Water System Improvements*.

The calculated total water demands for the Project is 625,082 gpd (Boyle Engineering Corp., 2000). According to the City's "Water Supply Assessment" per Senate Bill (SB) 610 and "Written Verification of Sufficient Water Supply" per SB 221 for the NMC, the City of Ontario's existing and future water supply (129.2 mgd in 2025) is sufficient to meet the anticipated demand from its service area including the NMC of 100.9 mgd. Given that the NMC land use and water demand were included in the Urban Water Management Plan, which is included in the Water Supply Assessment, the City of Ontario finds that "sufficient water supply" is available to support the projected developments (based on the City's General Plan and NMC GPA) within the NMC (Webb, 2004).

Water Wells

A well that is no longer useful must be destroyed in order to assure the groundwater supply is protected and preserved for future use. Water service for the Project site will be provided by the City of Ontario thus the three agricultural wells on site should be properly destroyed in accordance with the California

Department of Water Resources, Water Well Standards (*Bulletin 74-81*) and the County of San Bernardino Department of Public Health, Environmental Services Division.

Wastewater

The NMC Sewer Master Plan shows sewer service to the Project site by the Eastern Trunk Sewer (*Archibald Avenue*). The construction of the Eastern Trunk Sewer is a joint sewer project located between the City of Ontario and IEUA. The construction of the Eastern Trunk Sewer is necessary for the Project to be viable (stand alone). The Eastern Trunk Sewer must be completed prior to the start of construction of the Project. If the Eastern Trunk Sewer is not completed prior to the start of Project construction, then Project construction will be delayed. The Eastern Trunk Sewer is estimated to be complete by January 2007. The wastewater generated by the Project site will be collected by an 8-inch main and routed southerly to Edison Avenue, then westerly to Archibald Avenue where it will be discharged into the Eastern Trunk Sewer and ultimately treated at Regional Plant No. 5. All sewer mains required to serve the Project will be provided by the Project applicant(s). Within the Project, 8-inch sewer mains are proposed to serve the residential and commercial developments. Sewer system improvements are featured in *Figure 3.12-2, "Sewer System Improvements"*.

For purposes of sewer design, it is estimated that the total sewer generation rate will be 257,636 gpd for the Project (Boyle Engineering Corp., 2000). The NMC Sewer Master Plan (2001) indicates that Regional Plant No. 5 (RP-5) is scheduled to replace RP-2 and will be capable of accepting and treating flows from the entire NMC and wastewater currently pumped to RP-1 by the Archibald Ranch, Archibald/Riverside, Haven, Turner, and Whispering Lakes Pump Stations. RP-5 is currently treating 8 to 12 mgd and has a current capacity of 15 mgd. RP-5, which will be phased in as needed, will ultimately treat 48 mgd of wastewater and process 68 mgd of solids (IEUA, 2005). The City of Ontario and IEUA have indicated that it has the capacity in its sewage system to handle the flows discharging from the Project.

Storm Drain

The Project site applicant will be responsible for all required in-tract storm drain system improvements to serve the proposed Project site. In-tract facilities will be designed and compatible with the requirements of the Storm Drain Master Plan. The Project site storm drains will be connected to the proposed Turner Avenue Master Plan Storm Drain in Turner Avenue. The Turner Avenue storm drain will discharge into the County Line Channel once the construction of the County Line Channel has been completed. Construction of the Turner Avenue Master Plan Storm Drain is necessary for the Project to be viable (stand alone). The construction of the proposed Turner Avenue Master Plan Storm Drain must be completed prior to the start of construction for the Project. If it has not been completed, then Project construction will be delayed. Construction of the Turner Avenue Master Plan Storm Drain is scheduled to be completed by December 2006.

Storm Drain facilities will be required to include water quality Best Management Practices (BMPs) as required by the National Pollution Discharge Elimination System (NPDES). Drainage outlets and other drainage facilities will be designed to control urban runoff pollutants caused by the development of the Project. Individual projects, within the Specific Plan, will construct on-site BMPs to control pollutants prior to outletting into the Master Planned Storm Drain System. BMPs, which may be incorporated into the storm drain systems, include water quality basins, catch basin filtration devices, grass lined drainage

ditches or a combination thereof. The proposed BMPs will be maintained by the City of Ontario. The storm drain improvements are illustrated in Figure 3.12-3, “Storm Drain System Improvements.”

Reclaimed Water

Reclaimed water will ultimately be provided by IEUA as presented in the Water Master Plan prepared for the NMC. The proposed NMC Recycled Water 1050’ Zone will supply reclaimed water to the Project site. As currently proposed, a 16-inch reclaimed water line will be installed in Riverside Drive, west of Haven Avenue. There will be an 8-inch reclaimed water line in Chino Avenue and an 8-inch reclaimed water line in the section of Haven Avenue north of Chino Avenue. The Project site applicant(s) will be responsible for the installation of these new distribution lines in an effort for the Project to proceed. All reclaimed water lines, required to serve the Project, will be provided by the Project applicant(s). The reclaimed water system improvements are featured in *Figure 3.12-4, “Reclaimed Water System Improvements.”*

The Project will require reclaimed water to irrigate all public landscaping (i.e. neighborhood edges, parkways, and parks). At this time, IEUA anticipates having an adequate supply of recycled water to provide for Project needs. If IEUA does not have the reclaimed water system ready to go and is unable to serve the site reclaimed water, a temporary connection to the potable water system will be provided.

Electricity

SCE does not anticipate any significant problems in providing the Project site with electrical power and stands ready to install distribution facilities for the Project site. SCE will provide power to the Project site during construction (SCE, *Will Serve Letter*, 2004). Impacts to electrical power resources are considered to be below a level of significance. SCE has provided the Project applicant with a “Will Serve” Letter (refer to see Appendix J, *Will Serve Letters*).

Natural Gas

Southern California Gas indicates that the approximate average monthly natural gas use (during winter months) for a residence is 75 therms, 500 to 800 therms for a small elementary school (without an on-site kitchen/cafeteria), 50 therms for a small retail store, 100 to 300 therms for a bank, 1500 to 2000 therms for a large grocery store, 300 to 800 therms for a fast food restaurant, and 1800 to 2500 therms for a sit-down restaurant (SCG, 2005). SCG indicates that gas service could be provided to the Project area, based upon conditions of gas supply, regulatory agencies and in accordance with SCG’s policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made. Therefore, impacts to natural gas resources are considered to be below a level of significance. SCG has provided the Project applicant with a “Will Serve” Letter (refer to see Appendix J, *Will Serve Letters*).

Telephone

A fiber optic system will provide phone, cable, and internet access to all homes within the NMC. Verizon may or may not choose to be part of the fiber optic system. Verizon currently provides telephone service within the Project site area. There are existing telephone facilities adjacent to the Project site that can be extended in accordance with extension rules. Impacts to telephone services are considered to be below a level of significance. Verizon has provided the Project applicant with a “Will Serve” Letter (refer to see Appendix J, *Will Serve Letters*).

Solid Waste

The Project would impact solid waste disposal services by generating approximately 989 tons of solid waste per year (2 pounds of waste per resident per day). The El Sobrante Landfill received approval for a 405-acre expansion of the landfill in August 2001 (CIWMB, 2005). The expansion of the landfill will add approximately 99 million tons of refuse capacity to its current 9 million tons capacity, increasing the life of the landfill to approximately thirty years (CRWQCB, 2003). The El Sobrante Landfill currently has the capacity to serve the needs of the Project. Although the solid waste from the Project would decrease the capacity of this landfill, the quantity of waste to be generated by the Project itself would cause impacts below a level of significance.

The conceptual earthwork cut and fill quantities for the West Haven Specific Plan will consist of 258,100 cubic yards (cy) of cut material and approximately 84,000 cy of fill material. Export material is estimated to be delivered to a Riverside County landfill. The applicant will be responsible for identifying the landfill location prior to the City issuing a grading permit.

Standard Conditions and Uniform Codes

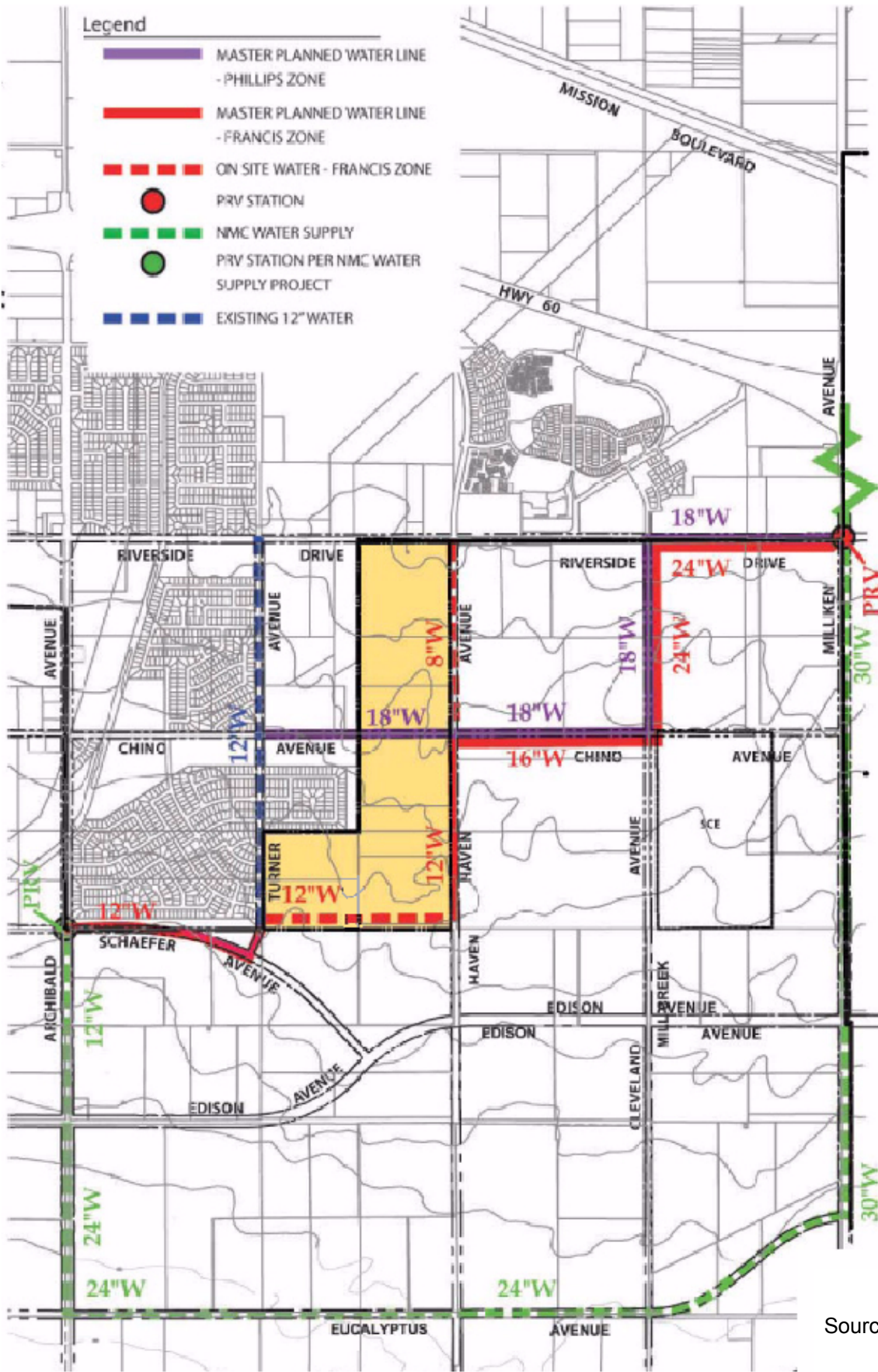
City requirements for development proposals such as the Project include the use of Registered Civil Engineers in preparation of subdivision, and construction plans, and adherence to County standard plans for certain infrastructure features such as domestic, wastewater, and recycled water services and other utilities. Coordination of utilities (services and connections) would occur during the development review process for each phase of the Project.

3.12.4 Mitigation Measures**Water and Wastewater Services**

- WS-1** The Project applicant(s) shall submit to the County of San Bernardino Department of Public Health, Environmental Services applications for destruction of all agricultural wells on the Project site. The destruction method shall be in accordance with all state, county and local agencies requirements.
- WS-2** Prior to the approval of the first final subdivision map, the Project applicant(s) shall submit a detailed water study for the purpose of accurately quantifying the precise domestic and recycled water supply and storage requirements of the Project to the satisfaction of the City Building and Engineering Department.
- WS-3** Prior to recordation of the Master Tentative Tract Map, the Project applicant(s) shall submit a letter from the water purveyor(s) from whom domestic and/or recycled water would be supplied demonstrating, to the satisfaction of City Building and Engineering Department, that sufficient water resources would be provided consistent with the demand for those resources.

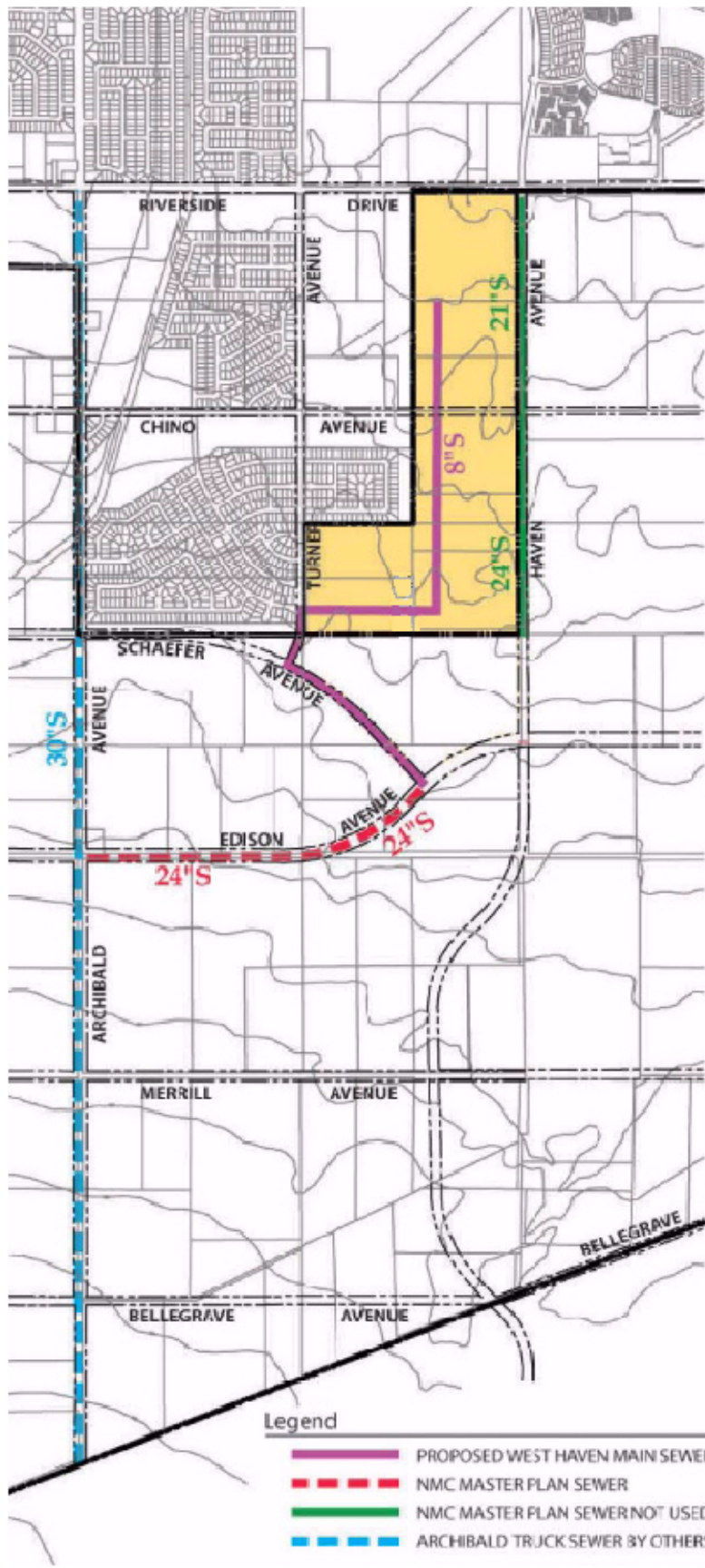
Legend

-  MASTER PLANNED WATER LINE - PHILLIPS ZONE
-  MASTER PLANNED WATER LINE - FRANCIS ZONE
-  ON-SITE WATER - FRANCIS ZONE
-  PRV STATION
-  NMC WATER SUPPLY
-  PRV STATION PER NMC WATER SUPPLY PROJECT
-  EXISTING 12" WATER



Source: L.D. King, 2004
West Haven
Specific Plan

WATER SYSTEM IMPROVEMENTS



- Legend**
- PROPOSED WEST HAVEN MAIN SEWER LINE
 - - - NMC MASTER PLAN SEWER
 - NMC MASTER PLAN SEWER NOT USED BY PROJECT
 - - - ARCHIBALD TRUCK SEWER BY OTHERS

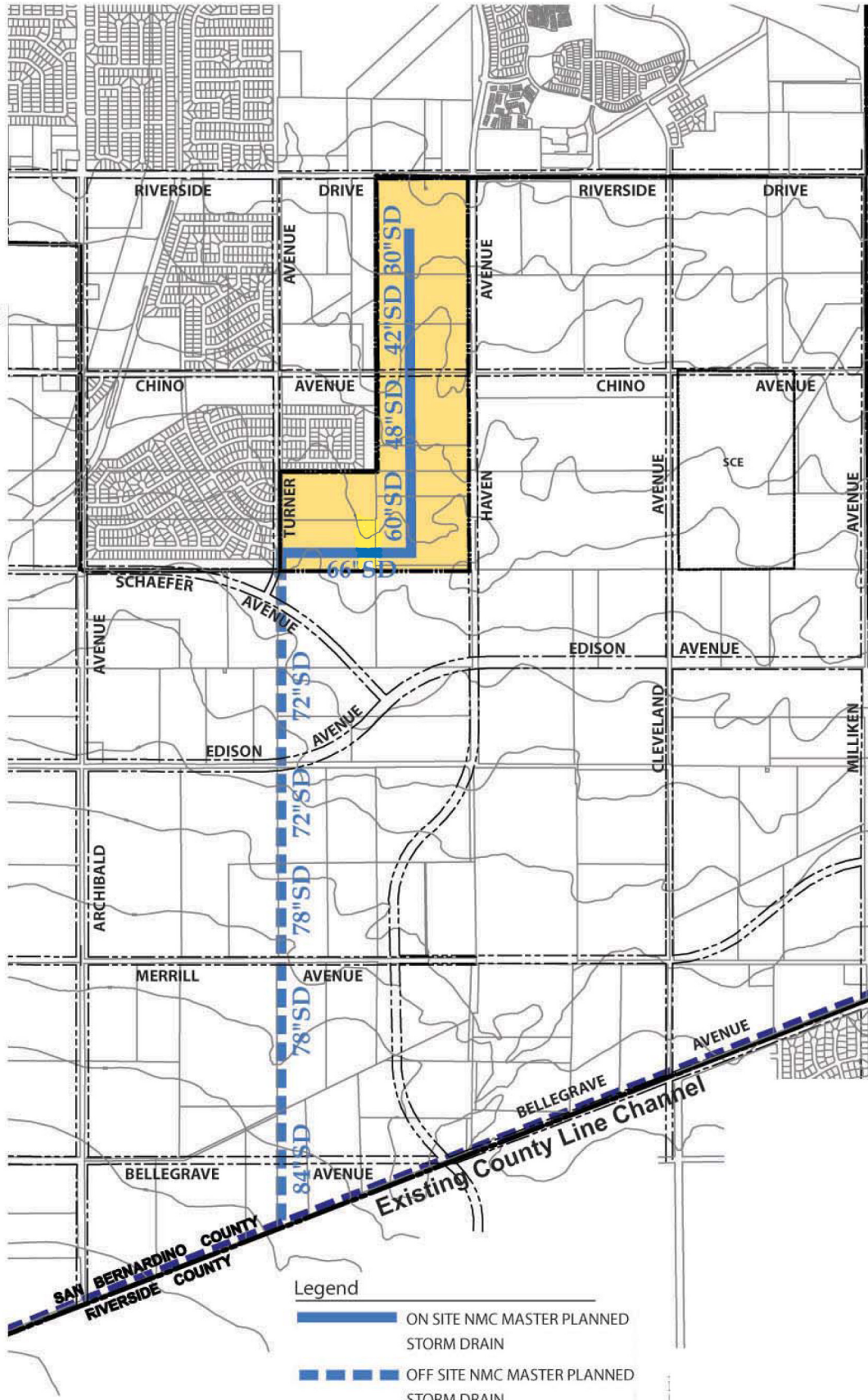


N. T. S.

Source: L.D. King, 2004
West Haven Specific Plan

SEWER SYSTEM IMPROVEMENTS

L:\west haven specific plan/masterplan drainage.fh10 3/05



Source: L.D. King, 2004. West Haven Draft Specific Plan

STORM DRAIN SYSTEM IMPROVEMENTS

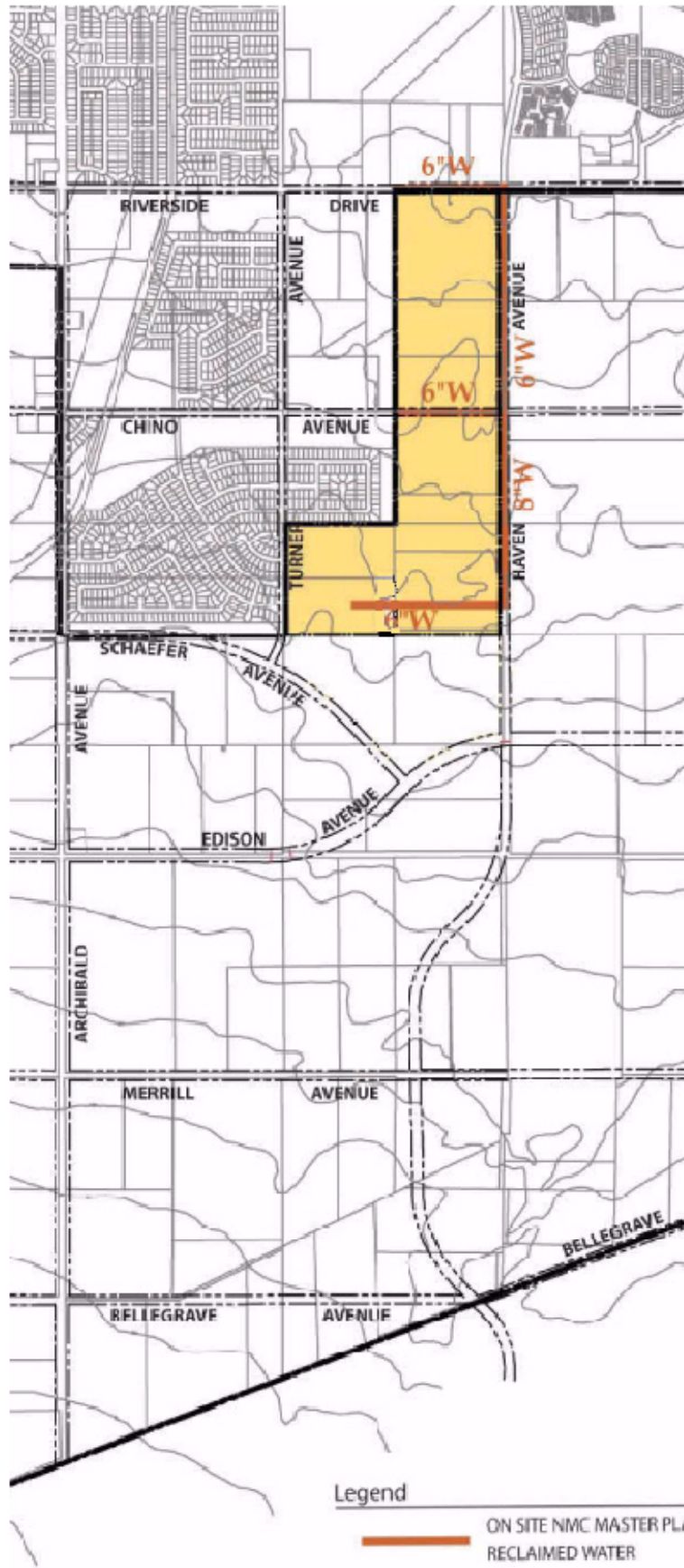
Project No.: 38000774

Date: MARCH 2005

Project: WEST HAVEN SPECIFIC PLAN EIR

Figure 3.12-3





Legend
 ON SITE NMC MASTER PLANNED RECLAIMED WATER

Source: L.D. King, 2004
 West Haven Specific Plan

RECLAIMED WATER SYSTEM IMPROVEMENTS

- WS-4** Prior to recordation of the Master Tentative Tract Map, the Project applicant(s) shall submit a detailed water study to the satisfaction of City Building and Engineering Department(s) for the purpose of accurately quantifying the precise wastewater services required for the Project.
- WS-5** Prior to recordation of Master Tentative Tract Map, the Project applicant(s) shall submit a letter from the wastewater services provider to the satisfaction of City Building and Engineering Department(s) demonstrating that sufficient wastewater services would be available to all phases of the Project in a manner and within a time period consistent with the demand for those services.
- WS-6** The Project applicant(s) shall not start Project construction until the completion of the domestic water system necessary to make the Project viable (stand alone) is complete.
- WS-7** The Project applicant(s) shall not start Project construction until the completion of the trunk line sewer system necessary to make the Project viable (stand alone) is complete.
- WS-8** The Project applicant(s) shall not start Project construction until the completion of the main line storm drain system necessary to make the Project viable (stand alone) is complete.

Electricity

No mitigation will be necessary for electrical power supply.

Natural Gas

No mitigation will be necessary for natural gas services.

Solid Waste

- SW – 1** Prior to approval of a building permit for the concept elementary school, the concept neighborhood park, and commercial neighborhood center components; site plans identifying space for recycling containers, paper, plastics, glass, and landscaping materials, within the areas designated for waste receptacles shall be submitted to the satisfaction of the City .
- SW – 2** Prior to approval of the first building permit for each development phase, the Project applicant(s) shall submit to the satisfaction of City a plan for recycling waste materials from construction operations.

3.12.5 Significant Effects of the Project After Mitigation

Application of the above mitigation measures shall result in less than significant impacts on water, wastewater, and recycled water resources and infrastructure, and solid waste collection and disposal.