WATERMAN GARDENS MASTER PLAN

PUBLIC REVIEW DRAFT VOL. 1: ENVIRONMENTAL ASSESSMENT

PREPARED FOR: CITY OF SAN BERNARDINO

THE PLANNING CENTER
DC&E

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Environmental Assessment
for HUD-funded Proposals

Project Identification:	City of San Bernardino Community Development Department Waterman Gardens Master Plan San Bernardino, California
Preparer:	Aron Liang, Senior Planner City of San Bernardino Community Development Department
Responsible Entity:	CITY OF SAN BERNARDINO Community Development Department 300 North “D” Street San Bernardino, CA 92418
Month/Year:	March 19, 2013

Environmental Assessment

Responsible Entity:	City of San Bernardino Community Development Department
Certifying Officer:	Aron Liang, Senior Planner
Project Name:	Waterman Gardens Master Plan
Project Location:	The project site is located at the southeastern corner of Baseline Street and N. Waterman Avenue and stretches from north-south from Baseline Street to Olive Street, and east-west from La Junita Street to N. Waterman Avenue.
Estimated Total Project Cost:	To be determined prior to project approval.
Grant Recipient:	Housing Authority of the County of San Bernardino
Recipient Address:	Housing Authority of the County of San Bernardino 715 East Brier Drive San Bernardino, CA 92408
Project Representative:	Aron Liang, Senior Planner
Telephone Number:	(909) 384-5057

Conditions for Approval: (List all mitigation measures adopted by the responsible entity to eliminate or minimize adverse environmental impacts. These conditions must be included in project contracts and other relevant documents as requirements). [24 CFR 58.40(d), 40 CFR 1505.2(c)]

See attached Mitigation Measures on page 78.

FINDING:

_X_ **Finding of No Significant Impact**
(The project will not result in a significant impact on the quality of the human environment)

___ **Finding of Significant Impact**
(The project may significantly affect the quality of the human environment)

Preparer Signature: _____

Date: _____

Name/Title/Agency: Aron Liang, Senior Planner
City of San Bernardino Community Development Department

RE Approving Official Signature: _____
Date: _____

Name/Title/Agency: _____

Statement of Purpose and Need for the Proposal:
Built in 1943, the project site includes 252 public housing units, childcare facilities, a community building, and maintenance facilities. The buildings on the project site show signs of deterioration, and high maintenance costs have become a burden for the Housing Authority. In addition, the neighborhood experiences concentrated levels of poverty, with a lack of recreational and supportive services for residents. The Housing Authority seeks to redevelop Waterman Gardens in order to revitalize the community, improve the physical conditions of Waterman Gardens, and provide enhanced educational, health, and recreational opportunities for residents as well as the surrounding community.

Description of the Proposal:
The proposed project would demolish the existing 252-residential unit Waterman Gardens Public Housing project at the southeast corner of the intersection of N. Waterman Avenue and Baseline Street in the City of San Bernardino and construct new residential units, a community center, and other community service-oriented uses at the same location. The new structures would include 411 new dwelling units including a mix of one-to-four bedroom apartments and townhouses. Specifically, the project would include 57 one-bedroom units, 137 two-bedroom units, 133 three-bedroom units, 11 four-bedroom units, and 73 senior units. The overall residential density of the site would be 10.8 dwelling units per acre. In addition to the new

dwelling units, the project would include a 45,800 square-foot Recreational Facility, 58,200 square-foot Community Center, 7,400 square-foot Administration and Community Room, and 18,400 square-foot Existing Central Shop, Maintenance Building, Recycling yard and Community Garden Building. A Conditional Use Permit would be required for the Density Bonus Agreement, Day Care Center, Social Service Uses/Recreation Center, and Development Plan. The project also requires approval of Development Agreement No. 12-02.

The project will be subdivided into nine separate parcels as follows:

- Parcel 1: Residential buildings (38 dwelling units, 2.54 acres, 14.96 du/ac)
- Parcel 2: Community and Recreational Centers (0 dwelling units, 5.12 acres)
- Parcel 3: Senior Housing Buildings (73 dwelling units, 4.12 acres, 17.96 du/ac)
- Parcel 4: Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building (0 dwelling units, 1.67 acres)
- Parcel 5: Administration Building (0 dwelling units, 0.54 acres)
- Parcel 6: Residential buildings (75 units, 5.64 acres, 13.30 du/ac)
- Parcel 7: Residential Buildings (76 dwelling units, 5.15 acres, 14.76 du/ac)
- Parcel 8: Residential Buildings (79 dwelling units, 5.76 acres, 13.72 du/ac)
- Parcel 9: Residential Buildings (69 units, 6.40 acres, 10.78 du/ac)

The structures would have variable setbacks from N. Waterman Avenue, Baseline Street, La Junita Street, and Olive Street. There would be six vehicular access points to and from the project site: two along Olive Street located towards the west and east end respectively; one located mid-block on La Junita Street, two along Baseline Street located mid-block and towards the east end respectively; and one located mid-block at Orange Street along N. Waterman Avenue. Additional pedestrian and bicycle access would be located throughout the project. The proposed project would include many on-site recreation amenities, including the 45,800-square-foot recreational facility and natatorium, pedestrian-only greenways, walking paths, and three neighborhood parks with playing fields and picnic areas. A total of 1,070 spaces would be provided on site, including 898 off-street parking spaces and 172 on-street parking spaces.

Based on the 2010 U.S. Census 2010 data, the project site currently houses 844 people, which is equivalent to 3.35 persons per dwelling unit. Using this same population density, the proposed project would have a population of 1,377 or an increase of 533 persons. Since the proposed project will result in the demolition of existing residential structures, these residents will need to be relocated. As described in the Relocation Plan, provided in Appendix L, sufficient replacement housing is available in the area surrounding the project site to house all displaced residents of Waterman Gardens. The Housing Authority of the County of San Bernardino (HACSB) will provide relocation assistance and other services as described in the Relocation Plan.

There are three phasing alternatives proposed for the project. The land owner shall submit the final proposed phasing plan prior to issuance of first building permit.

Under **Phasing-Option A**, the project would be phased as follows:

- **Phase-1A** would include demolition of existing structures in the southwest corner of the property and construction of the Recreation Center and Community Center. A total of 50 dwelling units would be removed during this phase.
- **Phase-1B** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along the western portion of Olive Street.
- **Phase-1C** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including center medians and traffic signals along Waterman Avenue.
- **Phase-2A** would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 75 units and the Administration Building would be created during this phase.
- **Phase-2B** would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 76 units would be created during this phase.
- **Phase-3A** would include demolition of existing structures and construction of new structures in the northwest corner of the site. A total of 18 units would be removed and 73 units would be created during this phase.
- **Phase-3B** would include demolition of existing structures and construction of new structures in the northeast portion of the site. A total of 48 units would be removed and 79 units would be created during this phase.
- **Phase-3C** would include the improvements to the public roadway adjacent the project site including the traffic calming measures including center medians and traffic signals along Baseline Street.
- **Phase-4A** would include rehabilitation of the Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building during this phase.
- **Phase-4B** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along La Junita Street.
- **Phase-5A** would include demolition of existing structures and construction of new structures along the south edge of the site along Olive Street. A total of 14 units would be removed and 38 units would be created during this phase.
- **Phase-5B** would include demolition of existing structures and construction of new structures in the southeast corner of the site. A total of 40 units would be removed and 69 units would be created during this phase.
- **Phase-5C** would include the improvements to the public roadway adjacent the project site including traffic calming measures including traffic signals along the eastern portion of Olive Street.

Under **Phasing-Option B**, the project would be phased as follows:

- **Phase-1A** would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 75 units and the Administration Building would be created during this phase.
- **Phase-1B** would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 76 units would be created during this phase.

- **Phase-2A** would include demolition of existing structures and construction of new structures in the northwest corner of the site. A total of 18 units would be removed and 73 units would be created during this phase.
- **Phase-2B** would include demolition of existing structures and construction of new structures in the northeast portion of the site. A total of 48 units would be removed and 79 units would be created during this phase.
- **Phase-2C** would include the improvements to the public roadway adjacent the project site including the traffic calming measures including center medians and traffic signals along Baseline Street.
- **Phase-3A** would include rehabilitation of the Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building during this phase.
- **Phase-3B** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along La Junita Street.
- **Phase-4A** would include demolition of existing structures and construction of new structures along the south edge of the site along Olive Street. A total of 14 units would be removed and 38 units would be created during this phase.
- **Phase-4B** would include demolition of existing structures and construction of new structures in the southeast corner of the site. A total of 40 units would be removed and 69 units would be created during this phase.
- **Phase-4C** would include the improvements to the public roadway adjacent the project site including traffic calming measures including traffic signals along the eastern portion of Olive Street.
- **Phase-5A** would include demolition of existing structures in the southwest corner of the property and construction of the Recreation Center and Community Center. A total of 50 dwelling units would be removed during this phase.
- **Phase-5B** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along the western portion of Olive Street.
- **Phase-5C** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including center medians and traffic signals along Waterman Avenue.

Under **Phasing-Option C**, the project would be phased as follows:

- **Phase-1A** would include demolition of existing structures and construction of new structures in the northwest corner of the site. A total of 18 units would be removed and 73 units would be created during this phase.
- **Phase-1B** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including center medians and traffic signals along Waterman Avenue.
- **Phase-2A** would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 75 units and the Administration Building would be created during this phase.
- **Phase-2B** would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 76 units would be created during this phase.

- **Phase-3A** would include demolition of existing structures and construction of new structures in the northeast portion of the site. A total of 48 units would be removed and 79 units would be created during this phase.
- **Phase-3B** would include rehabilitation of the Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building during this phase.
- **Phase-3C** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along La Junita Street.
- **Phase-3D** would include the improvements to the public roadway adjacent the project site including the traffic calming measures including center medians and traffic signals along Baseline Street.
- **Phase-4A** would include demolition of existing structures and construction of new structures in the southeast corner of the site. A total of 40 units would be removed and 69 units would be created during this phase.
- **Phase-4B** would include demolition of existing structures and construction of new structures along the south edge of the site along Olive Street. A total of 14 units would be removed and 38 units would be created during this phase.
- **Phase-4C** would include the improvements to the public roadway adjacent the project site including traffic calming measures including traffic signals along the eastern portion of Olive Street.
- **Phase-5A** would include demolition of existing structures in the southwest corner of the property and construction of the Recreation Center and Community Center. A total of 50 dwelling units would be removed during this phase.
- **Phase-5B** would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along the western portion of Olive Street.

Based on available funding, Phase 1 of the final phasing plan would begin in 2013 and last approximately two years. Phase 2 would begin in 2015 and last approximately three to four years. Phase 3 would begin in 2018 and last approximately two to three years. Phase 4 would begin in 2020 and last just over two years. Phase 5 would begin in 2022 and last just over two years. The existing project site is currently developed; therefore, demolition activity would occur during the start of each construction phase. The phases would overlap to some extent such that demolition for the upcoming phase would occur during the final months of construction from the preceding phase.

Existing Conditions and Trends: Describe the existing conditions of the project area and its surroundings, and trends likely to continue in the absence of the project. [24 CFR 58.40(a)]

The proposed project site is approximately 38 acres and comprises the San Bernardino Waterman Gardens Public Housing, built in 1943, which includes 252 family units in 114 buildings which include 87 single-story duplexes, 24 multi-family townhouses, a management office building, Head Start facility, and maintenance facility.

Surrounding land uses include a mix of commercial and light industrial uses including retail, fast food restaurants, a full scale grocer, and medical facilities. Primarily small commercial and light industrial businesses border N. Waterman Avenue on its western side north and south of the project and on its eastern side north of the project. A larger under-utilized regional commercial center is located along N. Waterman Avenue one block south of the project site. Similar business also border Baseline Street on its northern side north of the project. A large grocer is located on the north side of Baseline Street immediately north of the project. Single-family residences are located further beyond the commercial areas along collector streets.

NEPA Environmental Assessment Checklist

[Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. **Impact Codes**: **(1)** - No impact anticipated; **(2)** - Potentially beneficial; **(3)** - Potentially adverse; **(4)** - Requires mitigation; **(5)** - Requires project modification. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Land Development	Code	Source or Documentation
Conformance with Comprehensive Plans and Zoning	1	The City's General Plan designates the project site as a Residential Medium (RM) land use with 14 dwelling units per acre (du/ac). The site is surrounded by land designated as Residential Suburban (4.5 du/ac) and Residential Urban (9 du/ac) to the southeast, and commercial uses and public facilities to the north, south and west. The Development Code permits 12 du/ac in the RM zone; however there is a 25 percent density bonus for affordable housing that would apply to the proposed project, bringing the allowable density up to 15 du/ac. The proposed project will be subdivided into nine separate parcels. These parcels will include the following dwelling units: ♦ Parcel 1: Residential buildings (38 dwelling units, 2.54 acres, 14.96 du/ac) ♦ Parcel 2: Community and Recreational Centers (0 dwelling units, 5.12 acres) ♦ Parcel 3: Senior Housing Buildings (73 dwelling units, 4.12 acres, 17.96 du/ac) ♦ Parcel 4: Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building (0 dwelling units, 1.67 acres) ♦ Parcel 5: Administration Building (0 dwelling units, 0.54 acres) ♦ Parcel 6: Residential buildings (75 units, 5.64 acres, 13.30 du/ac) ♦ Parcel 7: Residential Buildings (76 dwelling units, 5.15 acres, 14.76 du/ac) ♦ Parcel 8: Residential Buildings (79 dwelling units, 5.76 acres, 13.72 du/ac) ♦ Parcel 9: Residential Buildings (69 units, 6.40 acres, 10.78 du/ac)

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		Based on the information listed above, Parcels 2, 4, and 5 would include the community center and other community facilities, which are allowed with a Conditional Use Permit (required for the pool). The proposed project could include up to 411 dwelling units. Although the density on Parcel 3 is above the permitted density at 17.96 du/ac, this housing will be Senior Housing and is therefore consistent with General Plan Policy 3.1.3, which encourages development of senior housing in all areas of the City, especially the downtown, where the permissible density may be increased by 96 units per acre (178%) to a maximum of 150 units per acre. As shown above, Parcels 1 and 7 are above the permitted density at 14.96 and 14.76 respectively, but within the 15 du/ac density allowed with a 25 percent affordable housing bonus. Parcels 6, 8, and 9 are within the permitted density limits as specified in the General Plan, with densities below 14 du/ac. The overall residential density on the site would be 10.8 du/ac. The proposed project responds to the affordable and senior housing needs identified in the General Plan with new residential units for a mix of income levels, as well as a 73-unit building dedicated to seniors. The proposed project responds to the affordable and senior housing needs identified in the General Plan with new residential units for a mix of income levels, as well as a 73-unit building dedicated to seniors. A Conditional Use Permit would be required for the Density Bonus Agreement, Day Care Center, Social Service Uses/Recreation Center, and Development Plan. Therefore, the proposed project is consistent with the residential land use designation and permitted densities and would not conflict with the General Plan. Chapter 19.04 of the City's Development Code establishes regulations and development standards to define and implement appropriate scale and development characteristics for each parcel and to manage conflicts between land uses and reduce nuisances. The project includes a request for a 25 percent density bonus and three concessions: reduced private open space area, reduced off-street parking, and reduced setbacks. The entire project is designed to provide an open and park-like environment for residents and will include community open space areas, as well as community gardens and Community and Social Services Uses/Recreation Centers. Further, the reduction in off-street parking and setbacks are intended to accommodate a more pedestrian-scale design and to promote a walkable and attractive community. There are no specific plans or local coastal programs pertaining to

Land Development	Code	Source or Documentation
		the project site.
Compatibility and Urban Impact	2	The project site is currently developed with non-descript one and two-story Federally-Subsidized Public Housing constructed in 1943 and related structures. The project would replace the existing development with new townhomes and apartments, senior housing, related structures, community and recreational facilities, and open space, parks and landscaping. The selective removal of some of the existing trees would modify the character of the site; however the proposed landscaping would enhance the site with significant amounts of additional vegetation and would include climate-appropriate plantings. The site is surrounded by urbanized development on all sides, with the exception of an orange grove immediately east of the project site. Given the location of the site and existing surrounding development, the proposed project would be compatible with its surroundings and is not expected to have a negative impact on the surrounding urban environment.
Slope	1	The following discussion of existing conditions is based on the Engineering Geology Investigation prepared by C.H.J. Inc. in December 2010 (Appendix A). The terrain of the project site is generally flat and underlain by mid Holocene age alluvial fan deposits and Pleistocene age alluvial deposits consisting primarily of clayey sand and cemented gravel.[1] Based on the nature of the underlying geologic materials and the gentle site topography, hazards associated with slope are not anticipated.
Seismic Hazards	4	The following discussion of existing conditions is based on the Engineering Geology Investigation prepared by C.H.J. Inc. in December 2010 (Appendix A). **Impact GEO-1:** Earthquakes, due to their ground acceleration and shifting, can cause major damage to buildings and create dangerous hazards to people through injury or death. As concluded in the geotechnical investigation prepared for the project,[2] severe seismic shaking of the project site can be expected during the lifetime of the proposed structures, due to the proximity of the San Jacinto, San Andreas, San Bernardino, and Cucamonga faults. The San Jacinto and San Andreas faults pose the greatest risk for seismic shaking of the project site. Development on the project site must mitigate these potential hazards through strict adherence to the California Building Code (CBC) and recommendations by geotechnical engineers.

[1] C.H.J., Inc., 2010, *Engineering Geology Investigation for Proposed Redevelopment of Waterman Gardens Project*, page 4.

[2] C.H.J., Inc., 2010, *Engineering Geology Investigation for Proposed Redevelopment of Waterman Gardens Project*.

Land Development	Code	Source or Documentation
		The project site is also potentially subject to liquefaction and has the potential to cause adverse impacts including risk of loss, injury, or death. As concluded in the geotechnical investigation, conditions conducive to landsliding are not present at the site. Mitigation Measures GEO-1 through GEO-8 are recommended to minimize structural damage on the project site due to strong seismic ground shaking and associated liquefaction. **GEO-1a:** Prior to issuance of Grading Permits, a licensed geotechnical consultant shall review the final grading and foundation plans to finalize the geotechnical recommendations for the project. Said recommendations shall be incorporated into the plans for the project as notes and specifications, which shall be verified during plan check by the City of San Bernardino Engineering and Building Department. **GEO-1b:** Ongoing during rough grading, areas of active grading shall be tested and field monitored by a qualified geotechnical consultant pursuant to the final geotechnical recommendations. Said monitoring and testing shall be documented in a log and shall remain on-site during each construction phase for review by the City Inspector. **GEO-1c:** To minimize post-construction soil movement and to maintain the seismic-induced settlement within tolerable limits, it is recommended that at least 5 feet below the base of the footings and the slab system be excavated, moisture-conditioned as necessary, and recompacted to a minimum of 90 percent of maximum density based on ASTM D1557 Test Method. **GEO-1d:** A representative of the geotechnical engineering firm shall be present during all site clearing and grading operations to test and observe earthwork construction. The geotechnical engineer shall reject any material that does not meet compaction and stability requirements. **GEO-1e:** Prior to issuance of permits project plans shall include the geotechnical engineer's recommended treatment of fill material as a note. The potential for structural damage at the site can be minimized by constructing the proposed building on compacted fill. For preliminary planning purposes, a remedial removal depth of 36 inches could be utilized in building pad areas. Remedial removals should include all existing fill and any native materials deemed geotechnically unsuitable for support of structures and fill. **GEO-1f:** To minimize the potential soil movement, the upper 18 inches of soil within building or exterior flatwork areas should be non-expansive fill. The fill material should be a well-graded silty

Land Development	Code	Source or Documentation
		sand or sandy silt soil. A clean sand or very sandy soil is not acceptable for this purpose. **GEO-1g:** The replacement soils should extend 5 feet beyond the perimeter of the building. The nonexpansive replacement soil should be compacted to at least 90 percent relative compaction based on ASTM D1557 Test Method. The exposed native soils in the excavation should not be allowed to dry out and should be continuously moist prior to backfilling. Also slab-on-grade continuous footings shall be nominally reinforced to minimize cracking and vertical off-set. **GEO-1h:** Prior to the placement of non-expansive Engineered Fill, the exposed Sub-grade in building pad, exterior flatwork, and pavement areas shall be scarified to a depth of 12 inches, worked until uniform and free from large clods, moisture-conditioned to at least 2 percent above optimum moisture, and re-compacted to a minimum of 90 percent of maximum density based on ASTM D1557 Test Method. Over-saturated soils shall be allowed to dry to approximately 2 percent above optimum moisture before re-compaction.
Erosion	4	The following discussion of existing conditions is based on the Engineering Geology Investigation prepared by C.H.J. Inc. in December 2010 (Appendix A). **Impact GEO-2:** As described in the geotechnical study, the surficial native materials at the site are mapped as mid Holocene age alluvial fan deposits of sand and cobbly alluvium and Pleistocene age alluvial deposits consisting primarily of clayey sand and cemented gravel. Implementation of mitigation measures GEO-2a and 2b would ensure no unstable soil conditions would occur due to excavation, grading, or fill activities. However, during each construction phase, project dust may be generated due to the operation of machinery on-site or due to high winds. Additionally, erosion of soils could occur due to a storm event. The City's administrative review process for issuance of Grading Permits requires a Storm Water Pollution Prevention Program (SWPPP) approved by the City as well as a Fugitive Dust Emissions Control Plan approved by the South Coast Air Quality Management District prior to issuance of Grading Permits. These plans include Best Management Practices such as regular sweeping of track-out areas, covering haul loads, use of sand bags and silt fences, and regular watering of surface soils during active grading. These practices would be implemented during each construction phase and field verified by the City Inspector. Implementation of Mitigation Measures GEO-2a and 2b and the City's administrative review process for Grading Permits will reduce soil erosion during

Land Development	Code	Source or Documentation
		construction to less than significant levels. **GEO-2a:** Dewatering waterproofing shall be required should structures or excavations extend below the groundwater table. If groundwater is encountered, geotechnical engineering firm shall be consulted prior to dewatering the site. **GEO-2b:** Project site winterization consisting of placement of aggregate base and protecting exposed soils during construction shall be performed.
Soil Suitability	4	Based on the nature of the underlying geologic materials, the gentle site topography, and the lack of visible evidence, landsliding is not anticipated to be a hazard to the project.[3] The project site is located within an area identified in the General Plan as having potential for subsidence. However, the risk of subsidence is not anticipated to be significant given the aquifer extraction and recharge strategies implemented by the water district, which have stabilized subsidence in the area and will continue to maintain aquifer capacity in this way. The project site is located within an area with high liquefaction potential, as shown in General Plan Figure S-5. Liquefaction could result in structural damage and other hazards on the project site. The project would require minimal grading, excavation, backfill, and site preparation, which is tailored to the specific subsurface conditions of the site and safety criteria of the CBC and the City's Engineering Design Manual. Adherence to these standards will reduce potential impacts from liquefaction to less than significant levels. Seismic shaking accompanying any earthquake may result in settlement of loose unconsolidated soils. Based on the subsurface conditions, and moderate to high seismicity of the region, any loose fill materials at the site could be vulnerable to this potential hazard. However, this hazard can be mitigated by following design and construction mitigation measures. Grading and site preparation activities would be tailored to the soils and subsurface conditions of the project site, pursuant to Mitigation Measures GEO-1a and GEO-1h for the project. Mitigation Measure GEO-2a would be required should structures or excavations extend below the groundwater table. Proposed development would be subject to compliance with the approved Grading Plan for the project as well as the City of San Bernardino's Municipal Code and related ordinances and policies.

[3] C.H.J., Inc., 2010, *Engineering Geology Investigation for Proposed Redevelopment of Waterman Gardens Project*, page 10.

Land Development	Code	Source or Documentation
Hazards and Nuisances including Site Safety	4	The following discussion is based on the Phase I Environmental Assessment prepared by LSA Associates, Inc., dated December 2010 (Appendix B). **Impact HAZ-1:** The proposed project does not include land improvements for treatment, routine transfer, storage, resource recovery, disposal, or recycling of hazardous waste and is not a Hazardous Waste Facility pursuant to Chapter 17.04 of the City's Municipal Code. However, due to the age of the existing structures on the project site, there is a potential of encountering asbestos-containing materials (ACMs), lead-based paint (LBP), and polychlorinated-biphenyl- (PCB) containing equipment during demolition and transport of demolition materials. The presence of these materials would be evaluated and local, State and federal requirements for proper abatement and removal of these materials would be assessed prior to structure disturbance pursuant to Mitigation Measures HAZ-1a and HAZ-1b. During construction and long-term operation, the proposed project would include activities involving use, handling, and storage of small quantities of hazardous materials such as paints, solvents, adhesives, fuels, fertilizers, and cleaning products used for building construction and for maintenance. These activities are regulated by the City Fire Department, County Fire Department, the California EPA, California Department of Toxic Substances Control, and the Regional Water Quality Control Board. Project compliance is achieved through implementation of the County of San Bernardino Hazardous Waste Management Plan and would be enforced through the County of San Bernardino's administrative review, permit, and inspection procedures. Project compliance with these procedures would ensure that the proposed project would not create a significant hazard to the public or the environment from transport, use, or disposal of hazardous materials. **Impact HAZ-2:** Refer to Response VII a. Hazardous materials are regulated through the enforcement of federal and State standards established for maintenance of public safety. During grading and subsurface excavations for utilities and foundations, contaminated soils may be encountered. Implementation of Mitigation Measure HAZ-2 would require testing for contamination in excavated materials and proper disposal based on test results and would reduce potential impacts to less than significance. Furthermore, project construction would involve handling, use, and storage of small quantities of hazardous materials. Handling, use, and storage of such materials is regulated through the

Land Development	Code	Source or Documentation
		enforcement of the County's Waste Management Plan and through implementation of OSHA standards by the contractor. Special permits are required for large quantities of hazardous materials used on the project site and would be issued by the City Planning Division and City Fire Department. Long-term operations associated with equipment and property maintenance may require small quantities of hazardous materials. Therefore small quantities of hazardous materials may be stored and handled on-site during the life of the project. Project plans, including use and storage of hazardous materials, are subject to review and approval by the City of San Bernardino Fire Department and the City Planning Division prior to issuance of Building Permits. At the time of building permit issuance, the City will verify that the project design incorporates a contingency plan for on-site storage of both non-hazardous and hazardous materials pursuant to Materials Safety Data Sheets. Furthermore, a Water Quality Management Plan (WQMP) has been prepared for the project that includes stipulations for proper handling, storage, and disposal of hazardous substances (Appendix J). The standard application of the City's Municipal Code ensures that the WQMP includes Best Management Practices, structural and non-structural measures, to prevent off-site transport of materials and substances, for both hazardous and non-hazardous materials. Likewise, the standard application of the City's Municipal Code requires that the WQMP include structural BMPs and an operation and maintenance program for proper handling and storage of chemicals, reducing pollutants from the project over the long term. Therefore, materials storage and use on site would be implemented pursuant to City, State, and federal standards for hazardous materials. Policies within the City's General Plan and updates to the City's Emergency Plan, as required by State law, would ensure the proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan. Entryway construction would involve equipment and construction vehicles and work within the public right-of-way, involving temporary lane closure. Therefore, the construction of the project may temporarily impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project would require Encroachment Permits for work done within the public right-of-way in Waterman Avenue, Olive Street, Baseline Street, and La Junita Street, and a Traffic Detour Plan would be prepared for the project pursuant to Title 12 of the City of San Bernardino's Municipal

Land Development	Code	Source or Documentation
		Code. The Traffic Detour Plan would be designed and implemented pursuant to City standards for safe access and would provide adequate circulation for emergency response and emergency evacuation on a short-term basis. Once the project is complete it would include circulation and access meeting the City's standards and no long term impacts are anticipated. The proposed street pattern would improve emergency vehicle access by providing additional access points from the surrounding streets. As shown on Figure S-9 in the City's General Plan, the project site does not occur in a fire hazard area and the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. While there are a number of schools located within a quarter mile of the project site, including Bradley Elementary, the Adult School/E. Neil Roberts Elementary, and Sierra High School, the proposed project is not anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of the existing schools. Implementation of Mitigation Measures HAZ-1a, 1b, and 2 will reduce the significance of potential impacts of the proposed project on nearby schools to less than significant. The project site does not occur on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and therefore would not create a significant hazard to the public or the environment. **Mitigation Measure HAZ-1a:** Prior to structure disturbance, a State-certified asbestos professional and State-certified lead professional should survey the site structures and determine whether sampling of building materials for ACMs and LBP is warranted. Any abatement or removal of ACMs and LBP shall be performed in accordance with applicable federal, State, and local regulations. **Mitigation Measure HAZ-1b:** Prior to structure disturbance, a qualified professional should survey the site structures and determine whether suspect PCB-containing equipment is present. PCB-containing equipment must be handled and disposed of in accordance with applicable federal, State, and local regulations. **Mitigation Measure HAZ-2:** Prior to issuance of Grading Permits, the City Engineer shall require soils samples and testing for contamination in areas shown on the Grading Plan were soils will be excavated. The Grading Plan for the project shall include a

Land Development	Code	Source or Documentation
		note requiring testing for contamination as well as proper disposal based on test results.
Energy Consumption	1	The Master Plan calls for several energy-efficient project features, including exceeding the Title 24 Energy Efficiency Standards by 15 percent. In order to accomplish this, buildings would be sited to utilize natural energy-efficient opportunities and would be designed to implement energy-saving features where needed. Where possible, the buildings would be designed using forms that would allow for large areas of glass to capture the northern exposure and gain as much natural light as possible within the spaces. Buildings will be constructed using energy-efficient systems such heat exchangers, photovoltaic panels, and solar thermal water heating for the swimming pool. The Master Plan prioritizes the use of recycled and regional materials. Lights would use LED sources, which offer significant long-term advantages in energy savings and reduced maintenance costs.
Noise - Contribution to Community Noise Levels	4	The following discussion is based on the Noise Assessment prepared by Impact Sciences, Inc., October 2012 (Appendix D) Noise can be measured in the form of a decibel (dB), which is a unit for describing the amplitude of sound. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called "A-weighting," written "dB(A)." The A-weighted sound level is measured on a logarithmic scale such that a doubling of sound energy results in a 3.0 dB(A) increase in noise level.[4] In general, changes in a community noise level of less than 3.0 dB(A) are not typically noticed by the human ear.[5] Changes from 3.0 to 5.0 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise.[6] A greater than 5.0 dB(A) increase is readily noticeable, while the human ear perceives a 10.0 dB(A) change in sound level to be a doubling or halving sound.[7] The predominant rating scales for noise in the State of California are the Maximum Noise Level (Lmax), the Equivalent-Continuous Sound Level (Leq), and the Community Noise Equivalent Level (CNEL). The Lmax is the maximum noise level measured during a specified time period. The Leq is the average A-weighted sound

[4] U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, (2006) 2-3.

[5] U.S. Department of Transportation, Federal Highway Administration, Highway Noise Fundamentals, (1980) 81.

[6] U.S. Department of Transportation, Federal Highway Administration, Highway Noise Fundamentals, (1980) 81.

[7] U.S. Department of Transportation, Federal Highway Administration, Highway Noise Fundamentals, (1980) 81.

Land Development	Code	Source or Documentation
		level measured over a given time interval. Leq can be measured over any period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is an average A-weighted sound level measured over a 24-hour period. However, this noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained by adding 5 dB to sound levels occurring during the evening from 7:00 PM to 10:00 PM, and 10 dB to sound levels occurring during the nighttime from 10:00 PM to 7:00 AM. The 5 dB and 10 dB "penalties" are applied to account for increased noise sensitivity during the evening and nighttime hours. The logarithmic effect of adding these penalties to the 1-hour Leq measurements typically results in a CNEL measurement that is within approximately 3 dB(A) of the peak-hour Leq.[8] Additional terminology used for assessing noise include the Minimum Noise level (Lmin), which is the minimum sound level measured during the measurement period, and the Day-Night Level (Ldn), which is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 PM to 7:00 AM. The Ldn and CNEL values differ by less than 1 dB. As discussed above, a 1 dB difference in noise level is not noticed by the human ear. Therefore, as a matter of practice, Ldn and CNEL values are considered to be equivalent. The project area contains a variety of uses including residential, commercial, light-industrial and schools. Noise generated by vehicular traffic traveling on the local roadway network represents the predominant and most consistent noise source in the project area. Vehicles traveling in the project area generally include automobiles, trucks, buses, and motorcycles. Noise levels were modeled with SoundPlan, a three-dimensional noise propagation model that is used to visualize the effects of noise in the environment. The results of the SoundPlan modeling analysis are provided in Table 1 and presented graphically in Figure 1. *Construction Noise* The construction noise impacts were estimated using data from the Federal Transit Administration (FTA). The FTA has compiled data on the noise-generating characteristics of specific types of construction equipment.[9] This analysis modeled the maximum

[8] California Department of Transportation, Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol, (Sacramento, California: October 1998), pp. N51-N54.

[9] U.S. Department of Transportation, Federal Highway Administration, Roadway Noise Construction Model (RCNM), Software Version 1.1 (12/08/2008).

Land Development	Code	Source or Documentation
		construction noise impacts under several worst-case scenarios, each scenario representing a combination of equipment types and locations. Noise levels generated by heavy equipment can range from approximately 75 dB(A) to noise levels in excess of 100 dB(A) when measured at a distance of 50 feet from the noise source. The noise levels diminish rapidly with distance at a rate of approximately 6.0 to 7.5 dB(A) per doubling of distance for acoustically hard and soft sites, respectively. The types of construction equipment used would vary depending on the construction activity taking place. Demolition would use equipment such as saws, dozers, excavators, and backhoes. Grading would use equipment such as dozers, excavators, graders, and backhoes. Building construction would use equipment such as forklifts, cranes, generators, air compressors, and welders. Surface paving would use rollers and paving equipment. The noise levels associated with construction of the proposed project are provided in Table 2. The Lmax noise level represents the highest instantaneous noise levels that would be expected and the Leq noise level takes into account estimate usage factors, or load factors, for the equipment. The load factors are an estimated percentage of time that the equipment would actually be in use. In order to provide a conservative analysis, the noise levels were estimated at the closest point to noise sensitive receptors. The closest point at which heavy-duty construction equipment would operate from noise sensitive receptors would be approximately 100 feet while hand equipment, such as saws and welders, would be approximately 150 feet. **Impact NOISE-1**: The estimated construction noise levels associated with the project would result in a potentially significant impact. However, mitigation of construction noise impacts to a level that is less than significant would be conducted through the enforcement of the San Bernardino Municipal Code and in a broader sense through the policies of the General Plan Noise Element. In addition, implementation of mitigation measure NOISE-1 would ensure that impacts associated with construction noise would be less than significant. **Mitigation Measure NOISE-1**: The project shall comply with the following construction best management practices: ♦ Two weeks prior to the commencement of construction for any phase, notification must be provided to surrounding land uses within 1,000 feet of the project site disclosing the construction schedule, including various types of activities that would be occurring throughout the duration of each

Land Development	Code	Source or Documentation
		construction phase. ♦ Provide designated truck routes that minimize impacts on local traffic and neighborhoods. ♦ Schedule high noise-producing activities between the hours of 8:00 AM and 4:00 PM Monday through Saturday to minimize disruption to neighboring residential homes. ♦ Ensure that construction equipment is properly muffled according to industry standards and in good working condition. ♦ Place noise-generating construction equipment and locate construction staging areas away from residential homes. ♦ Use electric air compressors and similar power tools rather than diesel equipment to the extent that the necessary equipment are commercial available. ♦ Construction-related equipment, including heavy-duty equipment, motor vehicles, generators, air compressors, and other portable equipment, shall be turned off when not in use for more than 30 minutes. ♦ Construction vehicles and equipment outfitted with back-up alarms shall utilize "smart back-up alarms" that will generate sound at least five decibels louder than the surrounding noise instead of fixed-decibel back-up alarms. ♦ Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding residents to contact the job superintendent. If the superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action to the reporting party. *Operational Noise* The proposed project would result in an incremental increase in area traffic volumes above those that would occur without the project. Noise generated by vehicular traffic traveling on the local roadway network represents the predominant and most consistent noise source for the project. Vehicles traveling in the project area generally include automobiles, trucks, buses, and motorcycles. The project would require the use of heavy trucks for refuse and municipal solid waste collection. The project would also include rooftop condensers for residential heating ventilation and cooling systems (HVAC); however, the noise from these would be drowned out by traffic and truck noise. The operational noise impacts were analyzed under four scenarios: ♦ Future Opening Year (2013) Traffic Volumes without the

Land Development	Code	Source or Documentation
		Project ♦ Future Opening Year (2013) Traffic Volumes plus the Project ♦ Future Buildout Year (2030) Traffic Volumes without the Project ♦ Future Buildout Year (2030) Traffic Volumes plus the Project The results of the SoundPlan modeling analysis for the opening year scenarios are provided in Table 3, and Figures 2 and 3. The figures show the area near to the project site, the noise sensitive receptors, and the noise contours. The shaded areas indicate the modeled noise levels in dB(A) Ldn, which is equivalent to dB(A) CNEL. As shown in Table 3, the increase in noise levels is much less than 3 dB(A). As a result, the increase in noise levels from future 2013 traffic volume growth and the incremental increase in project related noise would not be perceptible and would result in a less than significant impact. The results of the SoundPlan modeling analysis for the future buildout year scenarios are provided in Table 4 and are presented graphically in Figure 4, Cumulative Future (2030) Roadway Noise Contours – Without Project and in Figure 5, Cumulative Future (2030) Roadway Noise Contours – With Project. As shown in Table 4, the increase in noise levels is less than 3 dB(A), except for noise levels along Olive Street under Future Buildout Year (2030) Plus Project conditions. Noise sensitive receptors along Olive Street may experience perceptible increases in noise of 3 dB(A) or more. However, the Ldn noise levels at these receptors are all under 65 dB(A), which is the threshold for noise sensitive uses in the City of San Bernardino. As a result, this would be considered a less than significant impact. The increase in noise levels from future buildout 2030 traffic volume growth and the incremental increase in project related noise would result in a less than significant impact. **Impact NOISE-2:** Since the project includes residential uses, the project itself could expose future residents to noise levels that exceed the City of San Bernardino noise threshold of 65 dB(A) for noise sensitive uses. Noise modeling was also performed for selected on-site noise receptors that would be adjacent to the surrounding roadways, and thus be subjected to the highest levels of noise. As shown in Table 5, select on-site residents could be exposed to noise levels above 65 dB(A) along Waterman Avenue and Baseline Street. This is considered a potentially significant impact and would require implementation of mitigation measures NOISE-2a and 2b, below, to reduce the impact to a less than significant level.

Land Development	Code	Source or Documentation
		Mitigation Measure NOISE-2a: The project shall be required to implement the following noise reduction features on Base Line Street and Waterman Avenue. ♦ The travel lane widths adjacent to the project site will be reduced from 12 feet down to 10 feet. ♦ On-street parking shall be provided in areas adjacent to the project site. ♦ Bicycle lanes shall be provided on Baseline Street. ♦ A raised center median with dense ground vegetation or ground cover shall be provided. ♦ Trees and ground vegetation or ground cover shall be provided between the proposed residential buildings and travel lanes. ♦ Sidewalks shall be setback approximately 8 feet in areas adjacent to the project site. ♦ One additional signalized intersection and one relocated intersection, compared to existing conditions, shall be added adjacent to the project site. ♦ The signalized intersection along Baseline Street adjacent to the project site, including the two additional proposed intersections, shall be set in progression such that vehicle speeds are reduced to approximately 30-35 miles per hour. **Mitigation Measure NOISE-2b:** The pavement along Baseline Street and Waterman Avenue in the area adjacent to the project site shall be upgraded with features and materials that reduce vehicle noise according to the following parameters. ♦ The pavement shall be upgraded with "quiet pavement" materials, such as rubberized pavement. ♦ The project site shall include planter strips along Baseline Street with dense vegetation or ground cover. ♦ The project site shall include "sitting walls" with landscaping materials along Baseline Street approximately 2 to 2.5 feet in height, that will act as noise barriers, with landscaping material placed toward the proposed residential buildings. Mitigation measures 2a and 2b would reduce impacts to the senior housing units with balconies facing Waterman Avenue to a less than significant level. While the modeled mitigated noise levels would still be above the allowable sound level of 65 dB(A), the model is not able to include all the mitigation measures listed. If the effects of all mitigation measures are included, the noise levels for on-site receptors along Waterman Avenue would be reduced to

Land Development	Code	Source or Documentation
		a level compliant with applicable noise ordinances. Mitigation measures Noise 2a and 2b would reduce impacts to the residential units along Baseline Street. The mitigation measure cannot be fully modeled using the SoundPlan noise model because no option exists to account for "quiet pavement," such as rubberized pavement, which is reasonably estimated to achieve noise reductions of 4 to 6 dB(A) or more. Based on this information, mitigated noise levels to future on-site project residents are summarized in Table 6, Summary of Future (2030) Mitigated Noise Levels for On-Site Project Residents along Baseline Street. As shown, the noise levels would be mitigated to less than significant. The proposed project will not significantly impact air quality based upon the Air Quality Assessment prepared by Impact Sciences, Inc., July 2011 (Appendix E). The methodology of the Analysis follows the Handbook prepared by the South Coast Air Quality Management District (SCAQMD) for quantification of emissions and evaluation of potential impacts to air resources. The project is located in the South Coast Air Basin (Basin), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties. The South Coast Air Quality Management District (SCAQMD) is the air pollution control agency for the Basin. The United States Environmental Protection Agency (U.S. EPA) and the State of California have adopted health-based air quality standards, known as the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for the following seven criteria air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (PM10), fine particulate matter (PM2.5), and lead (Pb). The California standards are generally more stringent than the federal standards and in the case of PM10 and SO_2, much more stringent. California has also established standards for sulfates, visibility reducing particles, hydrogen sulfide and vinyl chloride, none of which have corresponding federal standards. The U.S. EPA requires each state with areas that do not meet the NAAQS to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The U.S. EPA formally classifies air basins as attainment or nonattainment based on whether the region meets or exceeds the NAAQS. The status of the Basin with respect to attainment with the NAAQS is summarized in Table 7.

Air Quality	Code	Source or Documentation
Air Quality Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels	1	The project site is located in the Central San Bernardino Valley Source Receptor Area (SRA 34). The monitoring station located closest to the project site is at 24302 East 4th Street, San Bernardino (Station No. 5203) and is approximately 0.84 miles south of the project site. This station monitors emission levels of O_3, NO_2, CO, PM10, and PM2.5. The station located at 14360 Arrow Highway, Fontana (Station No. 5197), approximately 12 miles west of the project site, was used to establish background levels for SO_2. Table 8, Ambient Pollutant Concentrations, lists the ambient pollutant concentrations registered and the exceedances of State and federal standards that have occurred at the abovementioned monitoring station from 2007 through 2009, the most recent years in which data is available from the SCAQMD. As shown, the monitoring station has registered values above State and federal standards for O_3, the State standard for PM10, and the federal standard for PM2.5. A project is consistent with the AQMP if it meets the following indicators: 1. The project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. 2. The project will not exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out. As discussed later in this section, the proposed project would not exceed the significance thresholds for construction or operational emissions. In addition, the project would not exceed the screening criteria for the localized significance thresholds. Therefore, since the project would not exceed the thresholds, it would not increase the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. Consistency with the assumptions in the AQMP is established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast. The 2007 Air Quality Management Plan based its assumptions on growth

Air Quality	Code	Source or Documentation
		forecasts contained in the SCAG 2004 Regional Transportation Plan (RTP).[10] The 2004 RTP is based on growth assumptions through 2030 developed by each of the cities and counties in the SCAG region. The project would result in the demolition of the existing structures and construction of new buildings with similar uses. The proposed project will not change the land use designation on the site, and is therefore within the growth anticipated in the City's General Plan. A General Plan amendment would not be required. Therefore, the proposed project is considered to be consistent with growth assumptions included in the AQMP. Accordingly, the proposed project complies with Consistency Criterion No. 2. Construction activities have the potential to cause temporary significant impacts with respect to air quality standards. Construction would occur during five main phases. As shown in Table 9, construction emissions would not exceed the SCAQMD threshold of significance. *Operational Emissions* Operational emissions would be generated by both area and mobile sources as a result of normal day-to-day activities on the project site after occupation. Table 10 shows the operational emissions associated with the project. Because the project site is currently developed with existing uses, the existing site emissions were estimated in order to determine the project's resulting net change in emissions. As shown in Table 10, the net change in operational emissions associated with implementation of the proposed project would not exceed the SCAQMD thresholds for significance for any pollutant. Projects that generate emissions below the thresholds of significance would not be considered to contribute a substantial amount of air pollutant to regional air quality. According to the SCAQMD CEQA Air Quality Handbook, projects that are within the emission thresholds above should be considered less than significant on a cumulative basis unless there is other pertinent information to the contrary.[11] As shown in Tables 9 and 10, the project would not exceed the construction or operational project-level thresholds. The only viable SCAQMD method for determining cumulative impacts is based on whether the rate of growth in vehicle miles traveled (VMT) exceeds the rate of growth in population. The

[10] South Coast Air Quality Management District, *Final 2007 Air Quality Management Plan,* (2007) 3-1.
[11] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993) 9–12.

Air Quality	Code	Source or Documentation
		VMT factors are obtained from CalEEMod and EMFAC2007. The project site currently houses 844 people, which is equivalent to 3.35 persons per dwelling unit. Using this same population density, the project would have a population of 1,675. As shown in Table 11, this criterion has been met, and therefore the project would not have a significant cumulative impact on air quality under this criterion. *Localized Significance Thresholds Analysis* The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the project site as a result of construction and operational activities. The localized significance thresholds are compared to construction and operational emissions that occur on the project site. As shown in Table 12, construction and operation of the project would generate on-site emissions that are less than the site-specific localized significance thresholds. The U.S. EPA promulgated a new 1-hour NAAQS for nitrogen dioxide (NO_2). The new 1-hour standard is 100 parts per billion (ppb) (188 micrograms per cubic meter [μg/m3]) and went into effect on April 12, 2010. Compliance with the standard is determined on a statistical basis (i.e., the 3-year average of the 98th-percentile of the annual distribution of daily maximum 1-hour concentrations). The U.S. EPA also retained the existing annual average standard of 53 ppb (100 μg/m3). The LST analysis should be based on the most stringent ambient air quality standards in effect. Prior to the new U.S. EPA standard, the 1-hour CAAQS for NO_2 was the most stringent standard at 180 ppb. The SCAQMD screening tables for NO_2 are based on the 1-hour CAAQS. The SCAQMD has not revised the LST screening tables to correspond to the new U.S. EPA 1-hour NO_2 standard. However, as shown in Tables 9 and 10, the NO_X emissions are much less than the NO_X screening criteria shown in Table 12. Given that the project's NO_X emissions are well under the screening criteria, the project would not cause or contribute to an exceedance of the new U.S. EPA 1-hour NO_2 standard at nearby sensitive receptors. *CO Hotspots Analysis* As shown in Table 8, carbon monoxide (CO) levels in the project area are substantially below the federal and State standards. No exceedances of CO have been recorded at monitoring stations in the Basin for some time and the Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS.

Air Quality	Code	Source or Documentation
		Nonetheless, localized CO concentrations have the potential to exceed the CAAQS or NAAQS at heavily congested roadway intersections. Localized areas where ambient concentrations exceed State and/or federal standards are termed CO hotspots. Maximum future (2030) cumulative plus project CO concentrations were calculated for peak hour morning and evening traffic volumes using the highest traffic volumes in the traffic report associated with the proposed project. Background CO concentrations were included in the analysis. As shown in Table 13, the future CO concentrations would not exceed the State 1-hour and 8-hour standards at impacted intersections. *Toxic Air Contaminants* Emissions of toxic air contaminants (TACs) would be significant if sensitive receptors would be exposed to a carcinogenic risk that exceeds 10 in 1 million or a noncancer Hazard Index greater than 1.0. However, the land uses associated with the proposed project are not anticipated to emit TACs in measureable quantities. Residential land uses do not typically generate TAC emissions in quantities that would exceed the SCAQMD thresholds. Additionally, the project would not attract a substantial number of diesel trucks and would not regularly use other types of diesel-fueled equipment. However, the project may locate sensitive receptors on-site that could be exposed to off-site sources of TAC emissions. Based on a survey of data obtained from the SCAQMD's Facility Information Detail (FIND)[12] system, several facilities that contain permitted equipment as required by Rule 1401 (New Source Review of Toxic Air Contaminants) are located within a 0.25 mile of the project site. These facilities include one automobile body shop, one juice packing company, and one general government facility. All permitted facilities near the project site are in compliance. The CARB Air Quality and Land Use Handbook, recommends that lead agencies, where possible, avoid citing new sensitive land uses within 500 feet of a freeway,[13] urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.

[12] South Coast Air Quality Management District, 2011, "Facility Information Detail (FIND)," http://www.aqmd.gov/ webappl/fim/default.htm.

[13] California Air Resources Board, *Air Quality and Land Use Handbook*, (2005) p. 8-9. The 2002 study of impacts along the San Diego (I-405) Freeway and the Long Beach (I-710) Freeway cited by CARB in its Air Quality and Land Use Handbook found a substantial reduction in pollutant concentrations, relative exposure, and health risk beyond 300 feet.

Air Quality	Code	Source or Documentation
		Regional access to the project site is provided by Interstate 210 and Interstate 215. However, both of these freeways are located well over 1 mile from the project site. Thus, the project would not locate sensitive land uses within 500 feet of a freeway. In addition, the average daily trips on nearby roadways are well under the 100,000 limit for urban roads.[14] Between April 2004 and March 2006, the SCAQMD conducted the Multiple Air Toxics Exposure Study III (MATES III). The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Basin equates to a cancer risk of approximately 1,200 in 1,000,000 primarily due to diesel exhaust. Based on the MATES III study, the proposed project is located in an area with an approximate carcinogenic risk of 803 in 1,000,000.[15] The carcinogenic risk for nearby surrounding grids ranges from 695 to 1,058 in 1,000,000. As stated above, the proposed project is not in close proximity to any freeways or urban roadways with over 100,000 average daily trips. Accordingly, based on the MATES III data and the substantial reduction of health effects from freeways beyond 300 feet, the impacts from TACs at the project site would not be any higher than those experienced by the general population in the project area. Therefore, the proposed project would not expose sensitive receptors to substantial increases in health risks and pollutant concentrations relative to the general population. *Odors* During project construction, certain pieces of construction equipment and construction activities could emit odors associated with exhaust emissions and evaporative VOCs. Diesel odors emitted from construction equipment would be short term and dissipate quickly. Odors from spray-coating applications of paint and related materials during construction would be regulated by SCAQMD Rule 481 (Spray Coating Operations). This rule imposes equipment and application restrictions during spray painting and spray coating operations. Compliance with SCAQMD rules and permit requirements would ensure no objectionable odors would be created during construction. The SCAQMD lists land uses primarily associated with odor complaints as waste transfer and recycling stations, wastewater

[14] Fehr & Peers, 2011, *Draft Waterman Gardens Master Plan Traffic Impact Analysis*.

[15] The SCAQMD provides an online MATES III carcinogenic risk interactive map, which is at http://www2.aqmd.gov/webappl/matesiii/. The interactive map displays the modeled grids and associated risk within each grid.

Air Quality	Code	Source or Documentation
		treatment plants, landfills, composting operations, petroleum operations, food and byproduct processes, factories, and agricultural activities, such as livestock operations. The proposed project does not include the development and operation of any of these land uses, with the exception of the recycling facility proposed in the northeast corner of the project site. This will be a collection facility only and it is not anticipated to generate significant odors since the waste will be transported to an off-site location for recycling. In addition, the project is not located downwind and in close proximity to these sources of odors. Therefore, it is not anticipated that the project residents would be adversely affected by off-site odorous emissions. Any unforeseen odors generated by the proposed project would be controlled in accordance with SCAQMD Rule 402 (Nuisance). Rule 402 prohibits the discharge of air contaminants that cause "injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property." Failure to comply with Rule 402 could subject the offending facility to possible fines and/or operational limitations in an approved odor control or odor abatement plan, as deemed necessary by the SCAQMD. Although no significant impacts were found as a result of the proposed project, the following dust control measures will be required in order to control fugitive dust emissions during construction: ♦ Limit traffic speeds on unpaved roads to 15 mph. ♦ Install sandbags or other erosion control measures to prevent silt runoff to public roadways. ♦ Replant vegetation in disturbed areas as quickly as possible. ♦ Limit access to the construction sites, so tracking of mud or dirt on to public roadways can be prevented. If necessary, use wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site. ♦ Suspend excavation and grading activity when winds (instantaneous gusts) exceed 20 mph or dust clouds cannot be prevented from extending beyond the site.
Greenhouse Gas Emissions	4	The following discussion is based on the Greenhouse Gas (GHG) Assessment prepared by Impact Sciences, Inc. in July 2011 (Appendix H).

Air Quality	Code	Source or Documentation
		The proposed project would result in short-term emissions of GHGs during construction. These emissions, primarily CO_2, CH_4, and N_2O, are the result of fuel combustion by construction equipment and motor vehicles. The other primary GHGs (hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) are typically associated with specific industrial sources and are not expected to be emitted by the project. The emissions of CO_2, CH_4, and N_2O were estimated using CalEEMod. Table 14 lists the estimated GHG emissions associated with construction of the proposed project. At full buildout, the project would result in direct annual emissions of GHGs during operation. Operational emissions would be generated by both area and mobile sources as a result of normal day-to-day activities on the project site after occupation. The annual GHG emissions associated with the operation of the proposed project are provided in Table 15. Direct and indirect emissions operational associated with the proposed project were compared with the SCAQMD's threshold of significance for mixed-use and all land use projects, which is 3,000 $MTCO_2e$ per year. **Impact GHG-1:** As shown in Table 15, the proposed project would result in net emissions over 3,000 $MTCO_2e$ per year, resulting in a significant impact with respect to GHG emissions. Implementation of Mitigation Measure GHG-1 would reduce the impact to a less than significant level, as shown in Table 16. **Mitigation Measure GHG-1:** The project shall comply with and incorporate the following measures: ♦ Exceed the Title 24 energy use standards for green buildings by 15 percent; ♦ Use energy-efficient LED lights for outdoor lighting; ♦ Install low-flow faucets and toilets; ♦ Provide active stormwater management for reuse in landscape irrigation; ♦ Install water-efficient landscaping; ♦ Include a recycling center on-site; ♦ Enhance street and walkway design for improved pedestrian use and connection to public transit;

Air Quality	Code	Source or Documentation
		♦ Install light-colored roofs and walkways as well as shade trees to reduce heat island effects.

Environmental Design	Code	Source of Documentation
Visual Quality - Coherence, Diversity, Compatible Use and Scale	2	The project includes residential uses and community services consistent with the urban environment in which the project site is located. The Master Plan was developed in coordination with adjacent property owners, including the San Bernardino Unified School District, Diocese of San Bernardino, and Harold Willis to successfully transform Olive Street into a proper residential street. The Master Plan locates the community center along Waterman Avenue, a wide busy street that can support a building of this scale and prominence. The educational wing of the community center would be located at the intersection of Waterman Avenue and Olive Street, which would address existing circulation issues at the intersection with new traffic signals and enhanced pedestrian crosswalks. Olive Street, in its current condition, is a street that has become inactive since development on both sides of the street face away from street. The Master Plan attempts to improve the coherence of this street by proposing housing to be developed on both sides of the street. The project includes Crime Prevention Through Environmental Design (CPTED) practices, including safe and accessible areas for gathering and recreating spread throughout the site. These areas are located to provide clear site lines and activate the public realm, thereby encouraging residents to use improved community environments to increase their activity levels. The project includes a range of dwelling types, including two-story stacked flats, two- and three-story townhouse, and a two-story senior building. The project also includes units with flexible ground floor space to provide home business opportunities. The proposed 411-unit residential development would create new light in the area. However, given existing street lighting along Waterman Avenue and Baseline Street, the proposed development would not significantly increase the amount of light/glare currently generated in the area. In addition, all proposed lighting would direct light downward to avoid unwanted "sky glow" light pollution. Where light poles are located near residences, lights would be shielded to reduce unwanted light spill into the units.

Environmental Design	Code	Source of Documentation
		The proposed lighting will use LED lights on medium-height poles to produce even illumination that is not blocked by trees. Along streets and parking areas, the poles will be approximately 20-feet tall; along pedestrian greenways and in alleys, the poles will be approximately 14-feet tall. Where poles are located near residences, the lights will be shielded to reduce unwanted light spill into the units. Ceiling lights at porches and wall lights at other unit entries will provide a welcoming glow and make it possible to see potential intruders from the street. The mix of pole lights, building-mounted lights, and security lights will provide soft, even illumination that promotes a sense of safety and encourages residents to use their outdoor spaces at night, while reducing energy costs, maintenance costs, and light pollution. In addition, the design and placement of light fixtures would be reviewed for consistency with City standards (Municipal Code Section 19.20.030.14). Standards require shielding, diffusing, or indirect lighting to avoid glare.

Source: Impact Sciences, Inc., 2011.

FIGURE 1

EXISTING ROADWAY NOISE LEVELS

TABLE 1 ***SUMMARY OF EXISTING NOISE LEVELS NEAR THE PROJECT SITE***

Model ID	Receptor Type	Roadway	Road Segment	Maximum Estimated Noise Level Ldn (dB(A))
28	Residential	Baseline	At La Junita	69.7
29	Residential	Baseline	East of La Junita	70.3
30	Residential	Baseline	East of La Junita	69.5
31	Residential	Baseline	East of La Junita	69.2
32	Residential	Baseline	East of La Junita	71.4
33	Residential	Baseline	East of La Junita	69.1
34	Residential	Baseline	East of La Junita	69.4
35	Residential	Baseline	East of La Junita	67.9
36	Residential	Baseline	East of La Junita	67.0
7	Residential	Baseline	West of Crestview	70.0
1	Residential	Baseline	West of Waterman	70.1
2	Residential	Baseline	West of Waterman	69.9
68	Residential	Baseline	West of Waterman	72.4
8	Residential	Crestview	North of Baseline	63.3
9	Residential	Crestview	North of Baseline	62.3
10	Residential	Crestview	North of Baseline	61.6
11	Residential	Crestview	North of Baseline	58.2
12	Residential	Crestview	North of Baseline	61.7
13	Residential	Crestview	North of Baseline	61.7
14	Residential	Crestview	North of Baseline	61.5
15	Residential	Crestview	North of Baseline	61.4
16	Residential	Crestview	North of Baseline	61.1
17	Residential	Crestview	North of Baseline	61.4
18	Residential	Crestview	North of Baseline	61.4
19	Residential	Crestview	North of Baseline	60.5
20	Residential	Crestview	North of Baseline	61.1
21	Residential	Crestview	North of Baseline	60.8
22	School	Crestview	North of Baseline	58.6
23	School	Crestview	North of Baseline	59.0
24	School	Crestview	North of Baseline	59.3
25	School	Crestview	North of Baseline	59.5
26	School	Crestview	North of Baseline	59.9
27	School	Crestview	North of Baseline	60.7
43	Church	Olive	At La Junita	56.5
37	Residential	Olive	East of La Junita	52.7
38	Residential	Olive	East of La Junita	57.0
39	Residential	Olive	East of La Junita	57.3
40	Residential	Olive	East of La Junita	55.2

TABLE 1 ***SUMMARY OF EXISTING NOISE LEVELS NEAR THE PROJECT SITE*** (CONTINUED)

Model ID	Receptor Type	Roadway	Road Segment	Maximum Estimated Noise Level Ldn (dB(A))
41	Residential	Olive	East of La Junita	55.2
42	Residential	Olive	East of La Junita	55.7
48	Residential	Olive	West of Waterman	61.5
49	Residential	Olive	West of Waterman	65.5
50	Residential	Olive	West of Waterman	60.9
51	Residential	Olive	West of Waterman	62.9
52	Residential	Olive	West of Waterman	59.5
53	Residential	Olive	West of Waterman	60.0
54	Residential	Olive	West of Waterman	58.0
55	Residential	Olive	West of Waterman	58.8
56	Residential	Olive	West of Waterman	56.7
57	Residential	Olive	West of Waterman	57.9
58	Residential	Olive	West of Waterman	56.1
59	Residential	Olive	West of Waterman	56.8
60	Residential	Olive	West of Waterman	55.6
61	Residential	Olive	West of Waterman	55.1
62	Residential	Olive	West of Waterman	58.1
64	Residential	Waterman	Between Baseline and Olive	65.8
3	Residential	Waterman	North of Baseline	61.8
5	Residential	Waterman	North of Baseline	56.1
6	Residential	Waterman	North of Baseline	53.7
63	Residential	Waterman	North of Olive	65.1
65	Residential	Waterman	South of Baseline	63.1
66	Church	Waterman	South of Baseline	73.6
67	Residential	Waterman	South of Baseline	65.0
44	Residential	Waterman	South of Olive	64.9
45	Residential	Waterman	South of Olive	73.9
46	Residential	Waterman	South of Olive	65.0
47	Residential	Waterman	South of Olive	56.5

Note: The effect of any existing noise barriers were not taken into account in the modeling analysis.
Source: Impact Sciences, Inc.

TABLE 2 ***ESTIMATED UNMITIGATED CONSTRUCTION NOISE LEVELS***

Construction Activity	Noise Levels Lmax (dB(A))	Noise Levels Leq (dB(A))
Demolition	80.5	75.0
Grading	79.0	75.0
Building Construction	79.0	76.0

Source: Impact Sciences, Inc.

TABLE 3 ***SUMMARY OF FUTURE OPENING YEAR (2013) NOISE LEVELS NEAR THE PROJECT SITE***

				Maximum Estimated Noise Level Ldn (dB(A))				
					Future Without Project		Future Plus Project	
Model ID	Receptor Type	Roadway	Road Segment	Existing	Estimated Noise Level	Change from Existing	Estimated Noise Level	Change from Existing
28	Residential	Baseline	At La Junita	69.7	69.9	0.2	70.1	0.4
29	Residential	Baseline	East of La Junita	70.3	70.5	0.2	70.6	0.3
30	Residential	Baseline	East of La Junita	69.5	69.7	0.2	69.8	0.3
31	Residential	Baseline	East of La Junita	69.2	69.5	0.3	69.6	0.4
32	Residential	Baseline	East of La Junita	71.4	71.7	0.3	71.8	0.4
33	Residential	Baseline	East of La Junita	69.1	69.4	0.3	69.5	0.4
34	Residential	Baseline	East of La Junita	69.4	69.6	0.2	69.7	0.3
35	Residential	Baseline	East of La Junita	67.9	68.1	0.2	68.2	0.3
36	Residential	Baseline	East of La Junita	67.0	67.2	0.2	67.3	0.3
7	Residential	Baseline	West of Crestview	70.0	70.3	0.3	70.7	0.7
1	Residential	Baseline	West of Waterman	70.1	70.4	0.3	70.7	0.6
2	Residential	Baseline	West of Waterman	69.9	70.2	0.3	70.5	0.6
68	Residential	Baseline	West of Waterman	72.4	72.7	0.3	73.0	0.6
8	Residential	Crestview	North of Baseline	63.3	63.5	0.2	63.8	0.5
9	Residential	Crestview	North of Baseline	62.3	62.5	0.2	62.8	0.5
10	Residential	Crestview	North of Baseline	61.6	61.8	0.2	62.0	0.4
11	Residential	Crestview	North of Baseline	58.2	58.4	0.2	58.4	0.2
12	Residential	Crestview	North of Baseline	61.7	61.9	0.2	62.0	0.3
13	Residential	Crestview	North of Baseline	61.7	61.8	0.1	61.9	0.2
14	Residential	Crestview	North of Baseline	61.5	61.6	0.1	61.7	0.2

TABLE 3 ***SUMMARY OF FUTURE OPENING YEAR (2013) NOISE LEVELS NEAR THE PROJECT SITE*** (CONTINUED)

				Maximum Estimated Noise Level Ldn (dB(A))				
					Future Without Project		Future Plus Project	
Model ID	Receptor Type	Roadway	Road Segment	Existing	Estimated Noise Level	Change from Existing	Estimated Noise Level	Change from Existing
15	Residential	Crestview	North of Baseline	61.4	61.5	0.1	61.6	0.2
16	Residential	Crestview	North of Baseline	61.1	61.2	0.1	61.3	0.2
17	Residential	Crestview	North of Baseline	61.4	61.5	0.1	61.6	0.2
18	Residential	Crestview	North of Baseline	61.4	61.5	0.1	61.6	0.2
19	Residential	Crestview	North of Baseline	60.5	60.7	0.2	60.7	0.2
20	Residential	Crestview	North of Baseline	61.1	61.2	0.1	61.3	0.2
21	Residential	Crestview	North of Baseline	60.8	61.0	0.2	61.0	0.2
22	School	Crestview	North of Baseline	58.6	58.7	0.1	58.7	0.1
23	School	Crestview	North of Baseline	59.0	59.1	0.1	59.1	0.1
24	School	Crestview	North of Baseline	59.3	59.4	0.1	59.4	0.1
25	School	Crestview	North of Baseline	59.5	59.6	0.1	59.6	0.1
26	School	Crestview	North of Baseline	59.9	60.0	0.1	60.1	0.2
27	School	Crestview	North of Baseline	60.7	60.8	0.1	61.0	0.3
43	Church	Olive	At La Junita	56.5	57.2	0.7	57.9	1.4
37	Residential	Olive	East of La Junita	52.7	53.4	0.7	53.6	0.9
38	Residential	Olive	East of La Junita	57.0	57.7	0.7	58.4	1.4
39	Residential	Olive	East of La Junita	57.3	58.2	0.9	58.7	1.4
40	Residential	Olive	East of La Junita	55.2	56.0	0.8	56.5	1.3
41	Residential	Olive	East of La Junita	55.2	56.0	0.8	56.5	1.3
42	Residential	Olive	East of La Junita	55.7	56.6	0.9	57.1	1.4
48	Residential	Olive	West of Waterman	61.5	61.7	0.2	61.8	0.3
49	Residential	Olive	West of Waterman	65.5	65.7	0.2	65.8	0.3
50	Residential	Olive	West of Waterman	60.9	61.1	0.2	61.1	0.2
51	Residential	Olive	West of Waterman	62.9	63.2	0.3	63.2	0.3
52	Residential	Olive	West of Waterman	59.5	59.7	0.2	59.8	0.3
53	Residential	Olive	West of Waterman	60.0	60.2	0.2	60.2	0.2
54	Residential	Olive	West of Waterman	58.0	58.3	0.3	58.3	0.3
55	Residential	Olive	West of Waterman	58.8	59.0	0.2	58.9	0.1
56	Residential	Olive	West of Waterman	56.7	57.0	0.3	56.9	0.2
57	Residential	Olive	West of Waterman	57.9	58.1	0.2	58.1	0.2

TABLE 3 ***SUMMARY OF FUTURE OPENING YEAR (2013) NOISE LEVELS NEAR THE PROJECT SITE*** (CONTINUED)

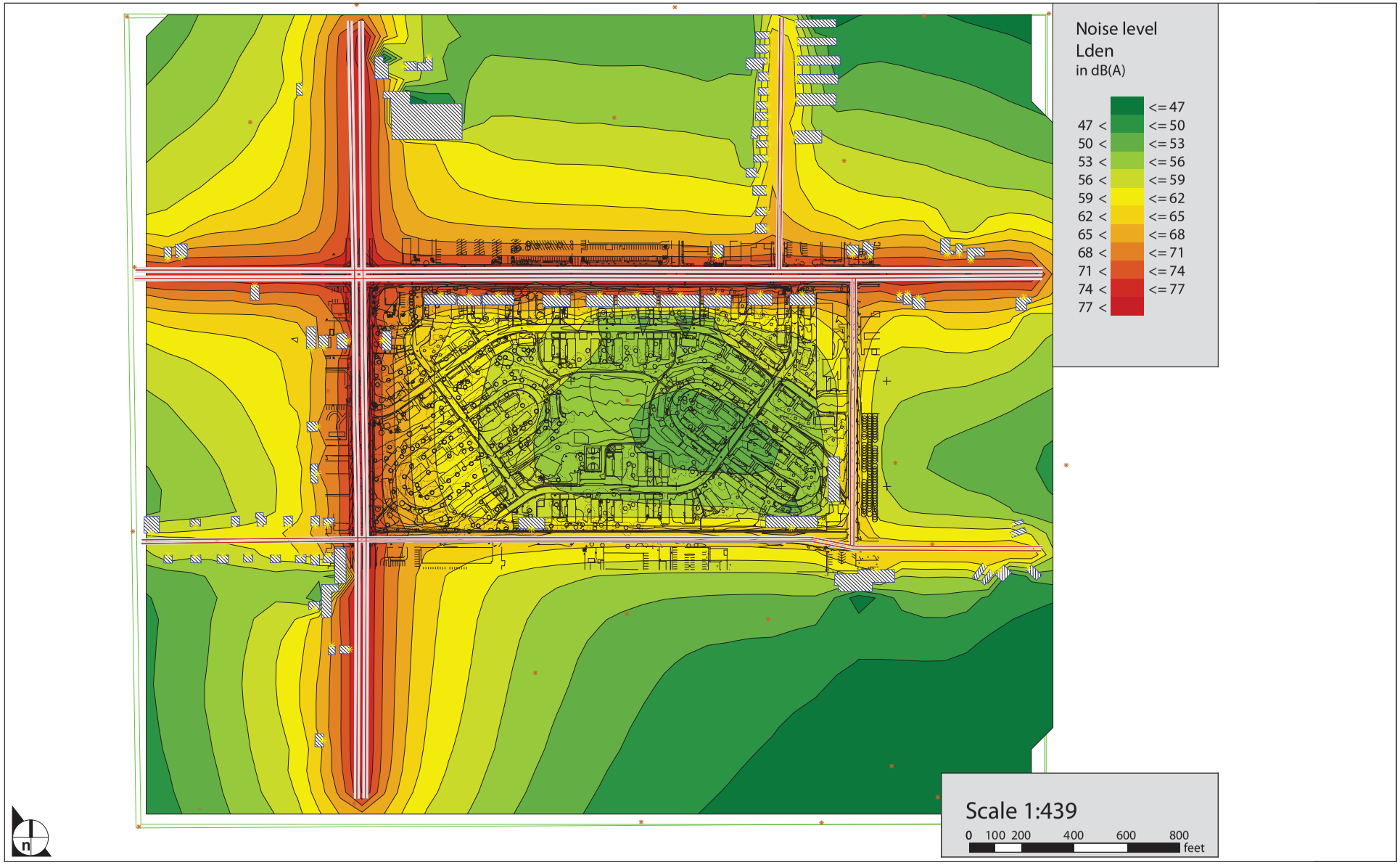
				Maximum Estimated Noise Level Ldn (dB(A))				
					Future Without Project		Future Plus Project	
Model ID	Receptor Type	Roadway	Road Segment	Existing	Estimated Noise Level	Change from Existing	Estimated Noise Level	Change from Existing
58	Residential	Olive	West of Waterman	56.1	56.3	0.2	56.3	0.2
59	Residential	Olive	West of Waterman	56.8	57.0	0.2	57.0	0.2
60	Residential	Olive	West of Waterman	55.6	55.8	0.2	55.7	0.1
61	Residential	Olive	West of Waterman	55.1	55.4	0.3	55.4	0.3
62	Residential	Olive	West of Waterman	58.1	58.2	0.1	58.2	0.1
64	Residential	Waterman	Between Baseline & Olive	65.8	66.0	0.2	66.2	0.4
3	Residential	Waterman	North of Baseline	61.8	62.1	0.3	62.2	0.4
5	Residential	Waterman	North of Baseline	56.1	56.3	0.2	56.5	0.4
6	Residential	Waterman	North of Baseline	53.7	54.0	0.3	54.1	0.4
63	Residential	Waterman	North of Olive	65.1	65.4	0.3	65.5	0.4
65	Residential	Waterman	South of Baseline	63.1	63.4	0.3	63.6	0.5
66	Church	Waterman	South of Baseline	73.6	73.9	0.3	74.0	0.4
67	Residential	Waterman	South of Baseline	65.0	65.2	0.2	65.4	0.4
44	Residential	Waterman	South of Olive	64.9	65.2	0.3	65.3	0.4
45	Residential	Waterman	South of Olive	73.9	74.1	0.2	74.3	0.4
46	Residential	Waterman	South of Olive	65.0	65.2	0.2	65.4	0.4
47	Residential	Waterman	South of Olive	56.5	56.7	0.2	56.8	0.3

Note: The effect of any existing noise barriers were not taken into account in the modeling analysis.
Source: Impact Sciences, Inc.

Source: Impact Sciences, Inc., 2011.

FIGURE 2

FUTURE (2013) ROADWAY NOISE CONTOURS - WITHOUT PROJECT



Source: Impact Sciences, Inc., 2011.

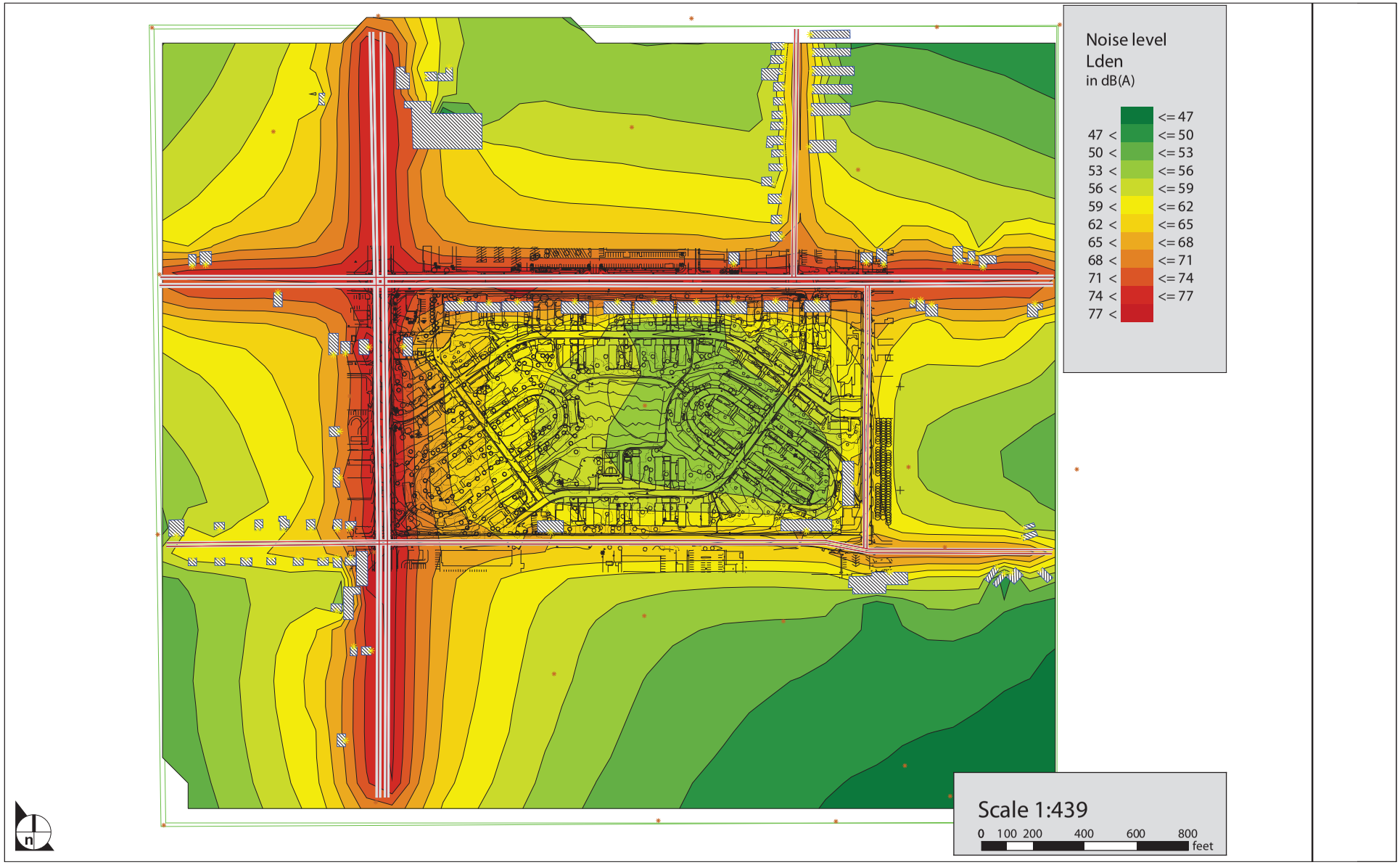
FIGURE 3

FUTURE (2013) ROADWAY NOISE CONTOURS - WITH PROJECT

Source: Impact Sciences, Inc., 2011.

FIGURE 4

CUMULATIVE FUTURE (2030) ROADWAY NOISE CONTOURS - WITHOUT PROJECT



Source: Impact Sciences, Inc., 2011.

FIGURE 5

CUMULATIVE FUTURE (2030) ROADWAY NOISE CONTOURS - WITH PROJECT

TABLE 4 ***SUMMARY OF FUTURE BUILDOUT YEAR (2030) NOISE LEVELS NEAR THE PROJECT SITE***

				Maximum Estimated Noise Level Ldn (dB(A))				
					Future Without Project		Future Plus Project	
Model ID	Receptor Type	Roadway	Road Segment	Existing	Estimated Noise Level	Change from Existing	Estimate d Noise Level	Change from Existing
28	Residential	Baseline	At La Junita	69.7	71.5	1.8	72.3	2.6
29	Residential	Baseline	East of La Junita	70.3	72.1	1.8	72.9	2.6
30	Residential	Baseline	East of La Junita	69.5	71.2	1.7	72.1	2.6
31	Residential	Baseline	East of La Junita	69.2	71.0	1.8	71.8	2.6
32	Residential	Baseline	East of La Junita	71.4	73.3	1.9	74.0	2.6
33	Residential	Baseline	East of La Junita	69.1	70.5	1.4	71.7	2.6
34	Residential	Baseline	East of La Junita	69.4	70.7	1.3	72.0	2.6
35	Residential	Baseline	East of La Junita	67.9	69.1	1.2	70.4	2.5
36	Residential	Baseline	East of La Junita	67.0	68.2	1.2	69.5	2.5
7	Residential	Baseline	West of Crestview	70.0	71.9	1.9	72.9	2.9
1	Residential	Baseline	West of Waterman	70.1	72.0	1.9	72.8	2.7
2	Residential	Baseline	West of Waterman	69.9	71.8	1.9	72.6	2.7
68	Residential	Baseline	West of Waterman	72.4	73.5	1.1	75.1	2.7
8	Residential	Crestview	North of Baseline	63.3	65.2	1.9	66.0	2.7
9	Residential	Crestview	North of Baseline	62.3	64.3	2.0	65.0	2.7
10	Residential	Crestview	North of Baseline	61.6	63.6	2.0	64.1	2.5
11	Residential	Crestview	North of Baseline	58.2	60.2	2.0	60.4	2.2
12	Residential	Crestview	North of Baseline	61.7	63.8	2.1	64.1	2.4
13	Residential	Crestview	North of Baseline	61.7	63.8	2.1	64.0	2.3
14	Residential	Crestview	North of Baseline	61.5	63.6	2.1	63.8	2.3
15	Residential	Crestview	North of Baseline	61.4	63.5	2.1	63.7	2.3
16	Residential	Crestview	North of Baseline	61.1	63.2	2.1	63.3	2.2
17	Residential	Crestview	North of Baseline	61.4	63.5	2.1	63.6	2.2
18	Residential	Crestview	North of Baseline	61.4	63.6	2.2	63.6	2.2
19	Residential	Crestview	North of Baseline	60.5	62.7	2.2	62.7	2.2
20	Residential	Crestview	North of Baseline	61.1	63.3	2.2	63.3	2.2
21	Residential	Crestview	North of Baseline	60.8	63.0	2.2	63.0	2.2
22	School	Crestview	North of Baseline	58.6	60.7	2.1	60.8	2.2

TABLE 4 ***SUMMARY OF FUTURE BUILDOUT YEAR (2030) NOISE LEVELS NEAR THE PROJECT SITE*** (CONTINUED)

				Maximum Estimated Noise Level Ldn (dB(A))				
					Future Without Project		Future Plus Project	
Model ID	Receptor Type	Roadway	Road Segment	Existing	Estimated Noise Level	Change from Existing	Estimated Noise Level	Change from Existing
23	School	Crestview	North of Baseline	59.0	61.1	2.1	61.1	2.1
24	School	Crestview	North of Baseline	59.3	61.4	2.1	61.4	2.1
25	School	Crestview	North of Baseline	59.5	61.6	2.1	61.6	2.1
26	School	Crestview	North of Baseline	59.9	62.0	2.1	62.0	2.1
27	School	Crestview	North of Baseline	60.7	62.8	2.1	62.9	2.2
43	Church	Olive	At La Junita	56.5	58.5	2.0	59.8	**3.3**
37	Residential	Olive	East of La Junita	52.7	54.9	2.2	55.5	2.8
38	Residential	Olive	East of La Junita	57.0	59.4	2.4	60.3	**3.3**
39	Residential	Olive	East of La Junita	57.3	59.3	2.0	60.6	**3.3**
40	Residential	Olive	East of La Junita	55.2	57.3	2.1	58.4	**3.2**
41	Residential	Olive	East of La Junita	55.2	57.3	2.1	58.4	**3.2**
42	Residential	Olive	East of La Junita	55.7	57.7	2.0	59.0	**3.3**
48	Residential	Olive	West of Waterman	61.5	63.9	2.4	64.3	2.8
49	Residential	Olive	West of Waterman	65.5	68.0	2.5	68.2	2.7
50	Residential	Olive	West of Waterman	60.9	63.3	2.4	63.7	2.8
51	Residential	Olive	West of Waterman	62.9	65.4	2.5	65.6	2.7
52	Residential	Olive	West of Waterman	59.5	61.9	2.4	62.4	2.9
53	Residential	Olive	West of Waterman	60.0	62.3	2.3	62.7	2.7
54	Residential	Olive	West of Waterman	58.0	60.3	2.3	61.0	**3.0**
55	Residential	Olive	West of Waterman	58.8	61.0	2.2	61.5	2.7
56	Residential	Olive	West of Waterman	56.7	58.8	2.1	59.8	**3.1**
57	Residential	Olive	West of Waterman	57.9	60.0	2.1	60.7	2.8
58	Residential	Olive	West of Waterman	56.1	58.1	2.0	59.3	**3.2**
59	Residential	Olive	West of Waterman	56.8	58.9	2.1	59.6	2.8
60	Residential	Olive	West of Waterman	55.6	57.5	1.9	58.8	**3.2**
61	Residential	Olive	West of Waterman	55.1	57.0	1.9	58.6	**3.5**
62	Residential	Olive	West of Waterman	58.1	60.1	2.0	60.9	2.8
64	Residential	Waterman	Between Baseline & Olive	65.8	68.4	2.6	68.5	2.7
3	Residential	Waterman	North of Baseline	61.8	64.4	2.6	64.5	2.7

TABLE 4 ***SUMMARY OF FUTURE BUILDOUT YEAR (2030) NOISE LEVELS NEAR THE PROJECT SITE*** (CONTINUED)

				Maximum Estimated Noise Level Ldn (dB(A))				
					Future Without Project		Future Plus Project	
Model ID	Receptor Type	Roadway	Road Segment	Existing	Estimated Noise Level	Change from Existing	Estimate d Noise Level	Change from Existing
5	Residential	Waterman	North of Baseline	56.1	58.7	2.6	58.8	2.7
6	Residential	Waterman	North of Baseline	53.7	56.3	2.6	56.4	2.7
63	Residential	Waterman	North of Olive	65.1	67.7	2.6	67.8	2.7
65	Residential	Waterman	South of Baseline	63.1	65.6	2.5	65.9	2.8
66	Church	Waterman	South of Baseline	73.6	76.2	2.6	76.4	2.8
67	Residential	Waterman	South of Baseline	65.0	67.5	2.5	67.7	2.7
44	Residential	Waterman	South of Olive	64.9	67.5	2.6	67.6	2.7
45	Residential	Waterman	South of Olive	73.9	76.5	2.6	76.6	2.7
46	Residential	Waterman	South of Olive	65.0	67.6	2.6	67.7	2.7
47	Residential	Waterman	South of Olive	56.5	59.0	2.5	59.1	2.6

Note: The effect of any existing noise barriers were not taken into account in the modeling analysis.
Source: Impact Sciences, Inc.

TABLE 5 ***SUMMARY OF FUTURE 2030 NOISE LEVELS FOR SELECT ON-SITE PROJECT RESIDENTS***

Model ID	Receptor Type	Roadway	Future Opening Year (2013) Noise Level Ldn (dB(A))	Future Buildout Year (2030) Noise Level Ldn (dB(A))
69	Residential	Waterman	70.9	73.2
70	Residential	Baseline	70.3	72.6
76	Residential	Baseline	69.7	71.9
77	Residential	Baseline	69.7	71.9
78	Residential	Baseline	69.2	71.4
79	Residential	Baseline	69.2	71.4
80	Residential	Baseline	69.3	71.5
81	Residential	Baseline	69.3	71.5
82	Residential	Baseline	69.3	71.5
71	Residential	Baseline	69.7	71.9
72	Residential	Baseline	69.6	71.9
73	Residential	La Junita	59.6	61.9
74	Residential	Olive	61.5	63.4
75	Residential	Olive	62.4	64.3

Source: Impact Sciences, Inc.

TABLE 6 ***SUMMARY OF FUTURE (2030) MITIGATED NOISE LEVELS FOR ON-SITE PROJECT RESIDENTS ALONG BASELINE STREET***

Model ID	Receptor Type	Roadway	Modeled Reduced Noise Levels* Ldn (dB(A))	Noise Reduction from Quiet Pavement Ldn (dB(A))	Estimated Mitigated Noise Level Ldn (dB(A))
70	Residential	Baseline	67.8	-4 to -6	64
76	Residential	Baseline	68.8	-4 to -6	65
77	Residential	Baseline	68.2	-4 to -6	64
78	Residential	Baseline	68.6	-4 to -6	65
79	Residential	Baseline	68.6	-4 to -6	65
80	Residential	Baseline	68.6	-4 to -6	65
81	Residential	Baseline	68.7	-4 to -6	65
82	Residential	Baseline	68.6	-4 to -6	56
71	Residential	Baseline	69.1	-4 to -6	65
72	Residential	Baseline	69.0	-4 to -6	65

* Note: Includes only those specific mitigation measures from **MM NOISE-4** and **MM NOISE-5** in which the model has the capability to account for the reduction in noise . For example, this column includes the effects of reduced vehicle speeds, decreased travel lane widths, center median, and increased distance to the roadway from the siting of sidewalks and bicycle lanes. The additional measures would reduce noise levels to a greater extent that shown in this table.

Source: Impact Sciences, Inc.

TABLE 7 ***ATTAINMENT STATUS – SOUTH COAST AIR BASIN (SAN BERNARDINO COUNTY PORTION)***

Pollutant	State	Federal
Ozone (O3)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO2)	Nonattainment	Attainment (Maintenance)
Sulfur Dioxide (SO2)	Attainment	Unclassified/Attainment
Respirable Particulates (PM10)	Nonattainment	Nonattainment
Fine Particulates (PM2.5)	Nonattainment	Nonattainment
Lead (Pb)	Attainment	Unclassified
Sulfates (SO4)	Attainment	—
Hydrogen Sulfide (H2S)	Unclassified	—
Vinyl Chloride	Unclassified	—
Visibility-Reducing Particles	Unclassified	—

Sources: California Air Resources Board, *"Area Designations Maps/State and National,"* http://www.arb.ca.gov/desig/adm/adm.htm. 2011.

U.S. Environmental Protection Agency, *"Air Quality Maps,"* http://www.epa.gov/region9/air/maps/index.html. 2011.

TABLE 8 ***AMBIENT AIR POLLUTANT CONCENTRATIONS***

Pollutant	Standards[a]	Year 2007	2008	2009
OZONE (O_3)				
Maximum 1-hour concentration (ppm)		0.153	0.157	0.150
Maximum 8-hour concentration (ppm)		0.121	0.122	0.126
Number of days exceeding State 1-hour standard	0.09 ppm	48	62	53
Number of days exceeding State 8-hour standard	0.07 ppm	74	90	79
Number of days exceeding federal 8-hour standard	0.075 ppm	51	62	62
NITROGEN DIOXIDE (NO_2)				
Maximum 1-hour concentration (ppm)		0.08	0.09	0.08
Annual average concentration (ppm)		*0.0245*	*0.0217*	0.0196
Number of days exceeding State 1-hour standard	0.18 ppm	0	0	0
CARBON MONOXIDE (CO)				
Maximum 1-hour concentration (ppm)		4	2	3
Maximum 8-hour concentration (ppm)		***2.3***	***1.8***	1.9
Number of days exceeding 1-hour standard	20 ppm	0	0	0
Number of days exceeding 8-hour standard	9.0 ppm	0	0	0
SULFUR DIOXIDE (SO_2)				
Maximum 1-hour concentration (ppm)		0.01	0.01	0.01
Maximum 24-hour concentration (ppm)		*0.004*	*0.003*	0.002
Number of days exceeding State 1-hour standard	0.25 ppm	0	0	0
Number of days exceeding State 24-hour standard	0.04 ppm	0	0	0
RESPIRABLE PARTICULATE MATTER (PM10)				
Maximum 24-hour concentration ($\mu g/m^3$)		136	76	66
Annual average concentration ($\mu g/m^3$)		***51.4***	***42.7***	41.5
Number of samples exceeding State standard	50 $\mu g/m^3$	***28***	***19***	11
Number of samples exceeding federal standard	150 $\mu g/m^3$	*0*	*0*	0
FINE PARTICULATE MATTER (PM2.5)				
Maximum 24-hour concentration ($\mu g/m^3$)		72.1	43.5	37.9
Annual average concentration ($\mu g/m^3$)		***18.3***	***13.5***	13.0
Number of samples exceeding federal 24-hour standard	35 $\mu g/m^3$	***11***	***3***	3

[a] Parts by volume per million of air (ppm), micrograms per cubic meter of air ($\mu g/m^3$), or annual arithmetic mean (aam).
Source: South Coast Air Quality Management District, "Historical Data by Year," http://www.aqmd.gov/smog/historicaldata.htm. 2010.

TABLE 9 ***ESTIMATED CONSTRUCTION EMISSIONS***

	Maximum Emissions in Pounds per Day[a]					
Construction Year	**VOC**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
2013	7.92	50.38	58.13	0.10	7.66	4.74
2014	4.40	25.83	29.65	0.05	2.83	2.03
2015	40.69	35.12	68.40	0.13	8.48	3.41
2016	19.63	15.44	69.34	0.14	7.75	1.00
2017	18.95	7.33	49.10	0.08	3.19	1.63
2018	15.52	16.51	88.80	0.16	4.69	1.97
2019	13.84	16.60	85.01	0.16	7.72	1.93
2020	25.46	14.25	71.78	0.14	5.97	1.89
2021	14.65	17.84	78.48	0.15	10.65	1.96
2022	12.38	7.45	49.02	0.09	1.81	0.40
SCAQMD Threshold:	75	100	550	150	150	55
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

Note: Totals in table may not appear to add exactly due to rounding in the computer model calculations.
[a] PM10 and PM2.5 fugitive dust emissions incorporate watering as a control measure.
Source: Impact Sciences, Inc.

TABLE 10 ***ESTIMATED OPERATIONAL EMISSIONS***

Emissions Source	Emissions in Pounds per Day					
	VOC	NOx	CO	SOx	PM10	PM2.5
SUMMERTIME EMISSIONS[A]						
Project Emissions						
Operational (Mobile) Sources	17.44	44.34	147.75	0.46	50.50	2.65
Area Sources	16.16	3.97	43.92	0.02	0.50	0.50
Summertime Emissions Total	33.60	48.31	191.67	0.48	51.00	3.15
Existing Land Use Emissions						
Operational (Mobile) Sources	19.43	53.53	198.08	0.27	30.57	2.94
Area Sources	33.25	2.56	106.00	0.21	13.53	13.53
Summertime Emissions Total	52.68	56.09	304.08	0.48	44.10	16.46
Net Summertime Emissions Total	**-19.08**	**-7.78**	**-112.41**	**0**	**6.90**	**-13.31**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	NO	NO	NO	NO	NO	NO
WINTERTIME EMISSIONS[B]						
Project Emissions						
Operational (Mobile) Sources	17.56	45.67	138.13	0.42	50.52	2.66
Area Sources	16.16	3.97	43.92	0.02	0.50	0.50
Wintertime Emissions Total	33.72	49.64	182.05	0.44	51.02	3.16
Existing Land Use Emissions						
Operational (Mobile) Sources	19.57	56.85	182.55	0.24	30.60	2.97
Area Sources	33.25	2.56	106.00	0.21	13.53	13.53
Wintertime Emissions Total	52.82	59.41	288.55	0.45	44.13	16.49
Net Wintertime Emissions Total	**-19.10**	**-9.77**	**-106.5**	**-0.01**	**6.89**	**-13.33**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

Note: Totals in table may not appear to add exactly due to rounding in the computer model calculations.
[a] Summertime Emissions" are representative of the conditions that may occur during the ozone season (May 1 to October 31).
[b] Wintertime Emissions" are representative of the conditions that may occur during the balance of the year (November 1 to April 30).
Source: Impact Sciences, Inc.

TABLE 11 ***COMPARISON OF VEHICLE MILES TRAVELED TO POPULATION (2022)***

Comparison Item	Vehicle Miles Traveled	Population
Proposed Project	14,747 [NET]	533 [NET]
San Bernardino County	70,872,000	2,659,237
Ratio of Project to San Bernardino County	0.000208	0.000312

Note: The estimated project VMT was estimated from CalEEMod. The estimated VMT in San Bernardino County in 2022 was determined by EMFAC2007. The project population includes residents only. The county population projections were obtained from the latest SCAG projections in its 2008 RTP Growth Forecast. The 2022 population was linearly interpolated from the 2020 and 2025 SCAG projections.
Source: Impact Sciences, Inc.

TABLE 12 ***LOCALIZED SIGNIFICANCE THRESHOLDS ANALYSIS***

	Pollutant (pounds per day)[a]			
Significance Threshold	**NOx**	**CO**	**PM10**	**PM2.5**
Construction				
Maximum Daily On-site Emissions	50.38	88.80	10.65	4.74
LST Screening Criteria	270	1,746	14	8
Exceeds Threshold?	NO	NO	NO	NO
Operational				
Maximum Daily On-site Emissions	3.97	43.92	0.50	0.50
LST Screening Criteria	270	1,746	4	2
Exceeds Threshold?	NO	NO	NO	NO

[a] The NOx thresholds contained in the SCAQMD lookup tables are based on emissions of NOx and assume gradual conversion to NO_2 based on the distance from the project site boundary.
Source: *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology*, (2008), Appendix C.

TABLE 13 ***MAXIMUM CARBON MONOXIDE CONCENTRATIONS***

	Concentration at 0 Feet (parts per million [ppm])	
Intersection	**1-Hour**	**8-Hour**
Waterman Avenue / Highland Avenue	4.7	2.8
Waterman Avenue / Baseline Street	4.8	2.8
Waterman Avenue / 5th Street	4.9	3.0
La Junita Street / Baseline Street	4.5	2.7
Exceeds State 1-Hour Standard of 20 ppm?	NO	—
Exceeds Federal 1-Hour Standard of 35 ppm?	NO	—
Exceeds State 8-Hour Standard of 9.0 ppm?	—	NO
Exceeds Federal 8-Hour Standard of 9 ppm?	—	NO

Source: Impact Sciences, Inc.

TABLE 14 ***ESTIMATED CONSTRUCTION GREENHOUSE GAS EMISSIONS***

GHG Emissions Source	Emissions (Metric Tons CO_2e/year)
2013 Construction Emissions	716.17
2014 Construction Emissions	591.79
2015 Construction Emissions	919.16
2016 Construction Emissions	855.44
2017 Construction Emissions	669.90
2018 Construction Emissions	888.80
2019 Construction Emissions	896.97
2020 Construction Emissions	787.10
2021 Construction Emissions	799.24
2022 Construction Emissions	504.56
Total Construction Emissions	**7,629.13**
Annualized over Project Lifetime	**254.30**

Note: Totals in table may not appear to add exactly due to rounding.
Source: Impact Sciences, Inc.

TABLE 15 ***ESTIMATED OPERATIONAL GREENHOUSE GAS EMISSIONS***

Operational GHG Emissions from Area, and Mobile and Indirect Sources	GHG Emissions ($MTCO_2e$/Year)
Proposed Project	
Construction (Annualized) Emissions	254
Operational (Mobile) Sources	6,046
Area and Natural Gas Sources	13
Electrical Consumption	1,845
Solid Waste and Wastewater Generation	390
Water Supply	876
Total Proposed	**9,424**
Existing	
Operational (Mobile) Sources	4,402
Area and Natural Gas Sources	190
Electrical Consumption	558
Solid Waste and Wastewater Generation	53
Water Supply	111
Total Existing	**5,314**
Total Net Emissions	**4,110**
SCAQMD Threshold	**3,000**
Exceed Threshold?	**YES**

Source: Impact Sciences, Inc.

TABLE 16 ***MITIGATED OPERATIONAL GREENHOUSE GAS EMISSIONS***

Operational GHG Emissions from Area, and Mobile and Indirect Sources	GHG Emissions ($MTCO_2e$/Year)
Proposed Project	
Construction (Annualized) Emissions	254
Operational (Mobile) Sources	5,358
Area and Natural Gas Sources	13
Electrical Consumption	1,723
Solid Waste and Wastewater Generation	195
Water Supply	717
Total Proposed	**8,260**
Total Existing	**5,314**
Total Net Emissions	**2,946**
SCAQMD Threshold	**3,000**
Exceed Threshold?	**NO**

Source: Impact Sciences, Inc.

Socioeconomic	Code	Source or Documentation
Demographic Character Changes	1	The project site is currently occupied by residents of the 252 existing housing units. The proposed project would add up to 159 new dwelling units to the area and approximately 533 additional residents of the project site, based on the current persons per household estimate of 3.35. The proposed project responds to the affordable and senior housing needs identified in the General Plan with new residential units for a mix of income levels (available for a mix of income levels 20 to 110 percent of Area Median Income [AMI], as well as a 75-unit building dedicated to seniors. Over 50 percent of the site will consist of affordable housing units for families at 20 to 60 percent AMI.
Displacement	1	A relocation plan, provided in Appendix L, has been prepared to ensure residents are provided with temporary housing during project construction. The relocation plan includes the projected dates of displacement, an analysis of the relocation needs and relocation housing resources, a description of the relocation advisory services program, and temporary relocation plans. The project will replace all existing housing and add up to 159 additional units. Following construction, there will be no need to construct replacement housing elsewhere.
Employment and Income Patterns	1	In addition to the new dwelling units, the project includes a 45,800-square foot Recreational Facility, 58,200-square foot Community

Socioeconomic	Code	Source or Documentation
		Support Center, 7,400-square foot Administration and Community Room, 18,400-square foot Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building. The new and expanded community center would provide improved recreational facilities and classroom space for various social services, contributing opportunities for physical and mental wellness for both residents and the greater community. The existing central shop yard would be maintained for reuse as part of a job training program, increasing employment and education opportunities in the project area. As stated above, the project would replace all existing housing and add up to 159 additional units. The additional residents would represent an income range somewhat higher than the existing residents, creating a new socioeconomic mix expected to add more disposable income to the neighborhood and more diversity to the mix of neighbors and participants in the neighborhood's institutions.

Community Facilities and Services	Code	Source or Documentation
Educational Facilities	1	Schools adjacent to the site include the San Bernardino Adult School, Sierra High School, and E. Neal Roberts Elementary to the south, and Bradley Elementary school to the north. The project site falls into the E. Neal Roberts Elementary School zone, which extends west to Mt View Avenue, north to Baseline and south to 6th Street. The property site is also within Arrowview Middle School zone, which extends west to Highway 215, and the Pacific High School zone, which extends only as far west as Waterman Avenue. Sierra High School is a continuation school. The city is also home to California State University at San Bernardino The proposed project would result in a total of up to 159 additional units on the project site. This increase would add approximately 178 new students to San Bernardino City Unified School District (SBCUSD) schools, based on student generation rates used by SBCUSD.[16] The SBCUSD currently has the capacity to enroll these additional students. As determined in the General Plan Update Environmental Impact Report (EIR), buildout of the city would result in a substantial increase in student population, which would require additional school facilities and personnel. The EIR concludes that upon

[16] Tim Deland, Facilities Management, SBCUSD, Personal communication with Heather Martinelli, May 3, 2011.

Community Facilities and Services	Code	Source or Documentation
		implementation of General Plan policies, regulatory requirements, and standard conditions of approval, the impact to school services would be less than significant. Construction and operation of new school facilities would be funded through school impact fees assessed on new developments that occur within the school district. The project would contribute school impact fees based on square footage shown on the building plans during plan check review.
Commercial Facilities	1	The project site is surrounded by a range of businesses. Businesses oriented around sales in proximity to the project site include retail stores as well as health and auto related businesses. There are numerous fast food restaurants within walking distance of the project site.
Health Care	1	Residents may utilize numerous health care facilities, although not all are within walking distance of the project site. These facilities include the St. Bernadine Medical Center, the Medical Center/Convalescent Hospital, Arrowhead Regional Medical Center, and the Loma Linda University and Medical Center. In addition, the project includes a potential medical clinic, which would increase the service capacity and access of health and social services already provided through the community center.
Social Services	1	Many community services and amenities are located within and adjacent to the project site, including day-care programs, schools, and churches. In the southern portion of the project site, there is a community center as well as day-care facilities operated by First Steps Child Development Center and Head Start. As part of the project, a new and expanded community center would be developed.
Solid Waste	1	Solid waste collection services for the proposed project will be provided by the City of San Bernardino Refuse and Recycling Division. According to the California Integrated Waste Management Board's estimated solid waste disposal rate, the proposed residential units are expected to dispose of approximately 189 tons per year (411 units times 0.46 tons per unit per year).[17] The other structures on the site would produce additional solid waste; however, the overall project is not anticipated to generate a significant amount of additional solid waste into the City's waste stream.[18] Refuse would be disposed of at the San Timoteo and Mid-Valley sanitary landfills, which are permitted to receive 365,000 tons per year and 2.7 million tons per year, respectively.[19] The estimated

[17] California Integrated Waste Management, *Solid Waste Characterization Database*, http://www.calrecycle.ca.gov/wastechar/ResDisp.htm, accessed on April 20, 2011.

[18] Gracie Washington, Integrated Waste Field Inspector, City of San Bernardino Public Works, Personal communication with Heather Martinelli on April 26, 2011.

[19] CalRecycle Website, *Active Landfill Profiles for San Timoteo and Mid Valley Landfills*, http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=36&FACID=36-AA-0087, accessed on

Community Facilities and Services	Code	Source or Documentation
		project-generated waste represents approximately 0.06 percent and 0.0085 percent of the total permitted waste received at the landfill facilities, respectively and the landfills have sufficient permitted capacity to handle the proposed project's needs.
Waste Water	1	The proposed project is consistent with the City's General Plan and would be required to meet the requisites of the City of San Bernardino and the Santa Ana RWQCB regarding wastewater quality. However, as described in the General Plan EIR, the existing flow to the SBWRP of 28 MGD could be expected to increase cumulatively by 20.2 MGD for a total General Plan buildout flow of 48.2 MGD. This amount would exceed the existing design capacity of 33 MGD by 15.2 MGD. Further, in accordance with the City of San Bernardino Municipal Code Sections 13.08 and 13.32 regulating Connections with Public Sewer and Wastewater facilities respectively, the proposed project will pay the associated development impact fee prior to issuance of final occupancy. The proposed project will be served by the City of San Bernardino sewer system and the San Bernardino Water Reclamation Plant (SBWRP). As described in the Wastewater Management and Flow Analysis Report (Appendix K), the proposed project will use highly-efficient water fixtures and a graywater system for irrigation and flushing toilets, which will save potable water and decrease sewer outflow to a level that will not affect downstream flows in the City's sanitary sewer network. The proposed project is not projected to increase offsite wastewater flows from the existing volumes estimated on the site. In addition, the graywater system would decrease overall volume discharged to the City's sewer system by millions of gallons per year.
Storm Water	1	As described in the Water Quality Management Plan (Appendix J), the project involves the construction of new on-site storm water drainage facilities, including bioswales, pervious concrete areas, perforated storm drains, green roofs and four detention basins. These Treatment Control BMPs would be designed to fully accommodate surface flows from the project. The rate of discharge of surface flows from the project would not exceed the existing rate of discharge from the project site. As described in the Drainage Report (Appendix I) the proposed project would distribute runoff such that total flows and flows to each intersection are less than 90 percent of lower return period storm flow rates in the existing condition in accordance with San Bernardino County Flood Control District requirements. The

Community Facilities and Services	Code	Source or Documentation
		overall result limits proposed flows to approximately 40 percent of existing flows. Flow reductions have been achieved with the implementation of four (4) onsite detention basins. In addition, the depth of water in the basins would be less than 3 feet and would drain within 24 hours of the peak depth in accordance with City and Flood Control District requirements. As an added factor of safety the proposed site utilizes approximately 200,000 square feet of pervious concrete pavement with rock subgrade which would provide significantly reduced impervious area and additional detention, which was not accounted for in the flood management analysis.
Water Supply	1	Water service to the project vicinity is provided by the San Bernardino Municipal Water District (SBMWD) and will be provided to the project site from lateral connections to existing water and wastewater lines in the adjacent streets. Since the project is consistent with the City's adopted General Plan, the project-related water demand has been accounted for in the 2005 Urban Water Management Plan (UWMP) and has been planned for in the City's current Capital Improvement Plan. Additionally, the implementation of water-saving strategies, including highly-efficient fixtures and a graywater system for irrigation and flushing toilets, will reduce overall water usage, as described in Appendix K. The project would not require or result in the construction of new water facilities or the expansion of existing facilities other than lateral connections and would not cause a significant environmental impact.[20] The proposed project is consistent with the City's General Plan Land Use Map and has been accounted for in the projections of the 2005 UWMP. Therefore, the proposed project will have sufficient water supplies available from existing entitlements and resources.
Public Safety - Police	1	The proposed project would increase the population of the project site by approximately 533 persons, which may increase the number of police service calls and increase response times, it is not anticipated to be a significant increase.[21] In addition, developer impact fees are collected at the time of building permit issuance to offset project impacts.
- Fire	1	The proposed project would increase the population of the project site by approximately 533 persons, which could increase the demand for fire protection and emergency medical services provided by the City of San Bernardino Fire Department (SBFD). The average response times in the project area are currently within the adopted

[20] Mike Nevarez, Engineer, City of San Bernardino Water Department, Personal communication with Heather Martinelli, April 26, 2011.

[21] Brian Pellis, District Resources Officer, Southeast District, City of San Bernardino Police Department, Personal communication with Heather Martinelli, April 19, 2011.

Community Facilities and Services	Code	Source or Documentation
		standard of 7:59 minutes. SBFD does not anticipate that the proposed project will have a negative affect on response times nor impact the ability of SBFD to provide fire and medical services. The project area is surrounded by multi-company stations, including a station located approximately 1 mile from the project site, which means that if one unit isn't available to respond to an emergency, there is another unit available to respond.[22] In addition, developer impact fees are collected at the time of building permit issuance.
- Emergency Medical	1	The City of San Bernardino Fire Department provides emergency medical services in the city, with emergency medical team personnel and paramedics. As stated above, the proposed project would increase the population of the project site by approximately 533 persons, which could increase the demand for emergency medical services provided by the City of San Bernardino Fire Department. Since the nearest fire station is located approximately 1 mile from the project site, and since the project site is an in-fill development within an established residential area, the Fire Department does not anticipate the need for services beyond what can currently be provided.[23] In addition, developer impact fees are collected at the time of building permit issuance.
Open Space and Recreation - Open Space	1	The proposed project is anticipated to generate approximately 533 additional people based on a household size of 3.35 persons per household.[24] Based on the City's policy of five acres of parkland per 1,000 residents, the proposed project would require an additional 2.67 acres of parkland. In order to meet this requirement, the proposed project would include on-site recreation amenities, including a 45,800 square foot recreational facility and natatorium, a 58,200 square foot community center, pedestrian-only greenways and walking paths, community garden, and three neighborhood parks with playing fields, play structures and picnic areas. The inclusion of these facilities would not preclude residents from utilizing the City's public parks. Residential projects are required to pay developer impact fees for Parks and Recreation which will be collected at the time of building permit issuance.
- Recreation	1	The proposed project would provide residential development with both private and common area recreational facilities on site; therefore, it would not significantly increase the use of existing neighborhood and regional parks or other recreational facilities such

[22] Eric Esquivel, Division Chief, City of San Bernardino Fire Department, Personal communication with Heather Martinelli, June 7, 2011.

[23] Eric Esquivel, Division Chief, City of San Bernardino Fire Department, Personal communication with Heather Martinelli, April 14, 2011.

[24] State of California, Department of Finance, 2011, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2010-2011, with 2010 Benchmark*, http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php, accessed on May 3, 2011.

Community Facilities and Services	Code	Source or Documentation
		that substantial physical deterioration of any facilities would result. Implementation of policies listed in the Parks and Recreation Element of the General Plan Update, and collection of developer impact fees would ensure impacts to recreational facilities are less than significant. The proposed project would include the construction of on-site recreation amenities, including a 45,800 square foot recreational facility and natatorium, a 58,200 square foot community center, pedestrian-only greenways and walking paths, community garden, and three neighborhood parks with playing fields, play structures and picnic areas. As the site is already highly urbanized and developed and sensitive environmental resources are not located onsite, the construction of these facilities would not result in an adverse physical affect on the environment. Therefore, impacts associated with the construction of recreational facilities are anticipated to be less than significant.
- Cultural Facilities	4	The following discussion is based on the Archeological Assessment Literature Study and the Historic Resource Evaluation prepared by Cogstone Resource Management, Inc. in May 2011 (Appendix F and G, respectively). The project site is not located within a sensitive archeological area as identified in Figure 5.4-2 of the City's General Plan EIR. There are no known archaeological resources present on the surface of the project site, and there are no known subsurface archaeological resources present. No direct impacts to known archaeological resources are anticipated. However, the project area is considered to have a low to moderate sensitivity for the discovery of prehistoric, ethnohistoric, and historic-era cultural resources, and there is potential for the existence of buried or undocumented surface archaeological materials within the project area. **Impact CUL-1:** Grading, over excavation, and trenching would be required for foundations and utilities. These activities would likely be up to 10 feet below the existing ground surface. Therefore, buried and previously unknown archaeological resources could be encountered during the construction phase of the project, and the project could cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measure CUL-1 is required to reduce potential impacts in the unlikely event that archaeological resources are encountered during the construction phase. Mitigation Measure CUL-1 would reduce impacts to less than significant levels. **Mitigation Measure CUL-1:** On an ongoing basis during the construction phase of the project, a certified archaeologist shall

Community Facilities and Services	Code	Source or Documentation
		monitor grading and excavation operations for ground-disturbing activities within native soils/sediments only; not in previously disturbed areas. The archeologist should meet the Secretary of the Interior's Standards for archaeologists. In addition, a Native American monitor from a federally-recognized tribe should monitor alongside the certified archaeologist. In the event that cultural resources are exposed during project implementation, the archeologist must be empowered to temporarily halt construction activities in the immediate vicinity of the discovery while it is evaluated for significance. Construction activities could continue in other areas. If cultural resources are discovered while the archaeologist is not present, work in the immediate area must be halted and the archaeologist notified immediately to evaluate the resource(s) encountered. If any cultural resources discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with the Housing Authority of the County of San Bernardino (HACSB). Prehistoric or ethnohistoric materials within the project area might include flaked stone tools, tool-making debris, stone milling tools, pottery, culturally modified animal bone, fire-affected rock, or soil darkened by cultural activities (midden). Historical materials might include building remains; metal, glass, or ceramic artifacts; or debris. Artifacts less than 50 years old do not require further work. **Impact CUL-2:** Although there are no historical resources on the project site that have been listed in the State Historical Resources Commission or the National Register of Historic Places (NHRP), the Waterman Gardens housing complex has been found eligible for listing in the NHRP. Therefore, the proposed project activities to remove by demolition the existing buildings will be considered an adverse effect. Adverse effects are associated with adverse indirect and/or direct effects which include alteration, physical destruction, removal of a property from its historic location, change in the character or use of a property's physical features within its setting that contributes to a historic properties significance, and introduction of visual changes, shadows, or changes in use that diminish the integrity of the property's significant features. With compliance with Mitigation Measures CUL-2a and 2b however, the impact to historical resources would be less than significant. The project site is located in an urbanized area which has already experienced a high level of disturbance. There are no known paleontological resources or unique geologic features associated with the project site. Therefore, it is not likely that the project would

Community Facilities and Services	Code	Source or Documentation
		have direct or indirect impacts on unique paleontological resources or geologic features. **Mitigation Measure CUL-2a:** In the event that activities associated with the proposed project cannot be implemented in a manner that meets adherence to Secretary of the Interior's Standards for the Rehabilitation of Historic Properties, the project proponent/owner shall prepare a Historic American Building Survey (HABS) document pursuant to Section 110(b) of the National Historic Preservation Act (NHPA). Prior to any action, a Secretary of the Interior-qualified professional photographer shall perform photodocumentation and a qualified historian or architectural historian shall prepare written documentation consistent with the standards of the National Parks Service HABS. HABS documentation is described by the National Parks Service as the last means of preserving a historic property. The documentation of a property that is to be demolished preserves its history for future researchers. The project proponent shall be required to prepare a HABS document to create a comprehensive understanding of the resource. The HABS document shall consist of the following: 1. All the buildings and structures of Waterman Gardens should be photodocumented by a professional photographer familiar with presenting the correct spatial relationship of the individual structures of the resource, and of the resources context to the surrounding landscape. It is recommended that the front and rear elevations of each type of housing unit (A, B, C, D, or E) be photographed. A representative group of photographs (not exceeding eight) should be taken of street viewscapes and of the area between housing units (for example: the area behind the units in Sycamore and Elm Circle). Digital color photographs are recommended with a representative sampling of photographs developed on paper to at least 5" x 7" photographs. 2. HASBC has a digital copy of the full set of the original blueprints of Waterman Gardens dating from 1942. Additional digital copies of the blueprints should be produced to document the physical properties of the housing complex. 3. The text of the Historic Context and Historic Structures Evaluation sections found within Cogstone Historic Resource Evaluation of Waterman Gardens Public Housing Complex should suffice as the written history of Waterman Gardens. The text section of the HABS document should be printed on archivally stable paper. 4. At least four complete copies of the Waterman Gardens

Community Facilities and Services	Code	Source or Documentation
		HABS document shall be prepared. One shall be delivered to the California Room at Feldheym Branch of the City of San Bernardino Library. The others shall be delivered to the Water Resources Institute at California State University-San Bernardino; the Heritage Room at A.K. Smiley Library, City of Redlands; and Pfau Library Special Collections at California State University-San Bernardino. **Mitigation Measure CUL-2b:** In connection with HABS documentation, the project proponent/owner shall develop an interpretive signage concerning the history of Waterman Gardens. The signage would be based on available historic photographs of the housing complex when it was first constructed and the history of the property contained within this report. It is recommended that the signage be located in an interior space open to the public and residents. **Impact CUL-3:** The project may require excavation at depths up to 10 feet below existing ground surface on the project site. Therefore, the project has the potential to destroy buried and unknown, previously undiscovered, subsurface resources during grading and construction of the project. This is a potentially significant adverse impact of the project. In the unlikely event that unique paleontological resources are encountered during construction, Mitigation Measure CUL-3 could be implemented to reduce impacts to less than significant levels. (Less than significant with mitigation) **Mitigation Measure CUL-3:** Should resources be unearthed during grading, a vertebrate paleontologist shall be contacted to determine the significance, and make recommendations for appropriate mitigation measures in compliance with CEQA guidelines.
Transportation	4	This discussion is based on the Waterman Gardens Master Plan Traffic Impact Analysis prepared by Fehr &Peers in June 2012 (Appendix C). The traffic impact analysis uses a methodology based on research conducted by the Transportation Research Board and other authorities. The intersections evaluated in the analysis are shown in Figure 6. Signalized and unsignalized intersection operations were evaluated using methodologies provided in *Highway Capacity Manual* (HCM 2000) (Transportation Research Board), are considered the state-of-the-practice methodologies for evaluating intersection operations, and are consistent with the City of San Bernardino and CMP analysis requirements. In conformance with the City's guidelines, the analysis includes a 3 percent per year growth rate to existing volumes to develop future conditions. To

Community Facilities and Services	Code	Source or Documentation
		develop a conservative assessment of future conditions, manual assignment of trips from approved and pending projects in the project study area were also applied to future year forecasts. Pending and approved projects are shown in Figure 7. To identify significant project impacts, Fehr & Peers evaluated the following scenarios: ♦ Existing Conditions – Consists of existing (May 2011) counts collected at the study intersection locations. Existing counts were conducted on May 4, 2011 from 7:00 to 9:00 AM for the morning peak hour and from 4:00 to 6:00 PM for the evening peak hour (Figure 8). ♦ Project Opening Year (2013) Base Conditions – Consists of the Existing Conditions traffic volumes plus an annual growth factor of three percent per year over the two-year period between the existing counts and the project opening year. ♦ Project Opening Year (2013) plus Project Conditions – Consists of Project Opening Year (2013) Base Conditions plus traffic generated from the proposed project. ♦ Future Build-Out Year (2033) Base Conditions – Consists of Existing Conditions traffic volumes plus a three percent per year growth factor plus traffic generated from approved and pending projects in the proposed project's vicinity. ♦ Future Build-Out Year (2033) plus Project Conditions – Consists of Future Build-Out Year (2033) Base Conditions plus traffic generated from the proposed project. The scenarios described above were evaluated during the weekday morning and evening peak hours. The project is proposing both on-site and off-site improvements to roadways. The on-site improvements include the reconstruction of new roadways within the project site. Concurrent with these on-site improvements, a series of off-site improvements will be constructed along several roadways adjacent to the project site including Baseline Street, Waterman Avenue, Olive Street, and La Junita Street. These proposed improvements include: ♦ Narrowed travel lanes, to slow down traffic and decrease the permeable surface area. ♦ On-street parallel and diagonal parking, to decrease the needed travel surface area to parking spaces and decrease traffic speeds. ♦ Raised crosswalks and curb bulb outs, to increase pedestrian safety. ♦ Increased sidewalk width, to promote walking and the

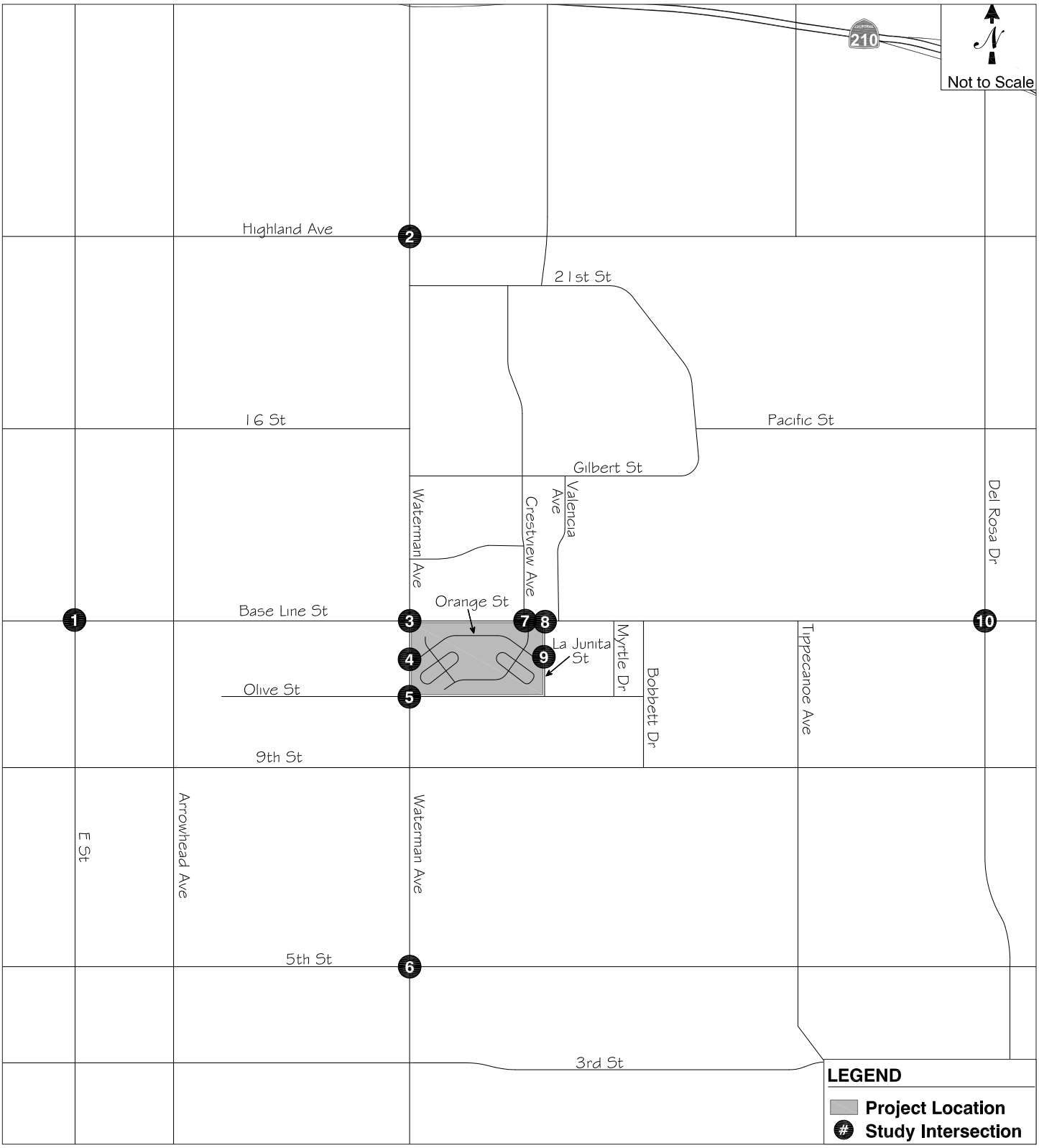
Community Facilities and Services	Code	Source or Documentation
		accessibility of pedestrian routes. ♦ Addition of street trees. ♦ Under-grounding of existing electrical lines. With these proposed improvements, the number of existing travel lanes on Baseline Street and Waterman Avenue would be maintained to preserve roadway and intersection capacity. The Opening Year (2013) scenario analyzes the intersection conditions with the addition of ambient growth per year from the existing volumes to 2013 (the opening year for the proposed project). A 3 percent ambient growth per year, over the two year period between the existing and opening year scenario (equal to 6.09%) was applied to the existing conditions volumes per City of San Bernardino Traffic Impact Study Guidelines. There are no roadway improvements planned and funded at the study intersections that will be completed by 2013. With the application of ambient growth, most of the study intersections will continue to operate at LOS C or better, with the exception of the following two intersections: ♦ Waterman Avenue/Orange Street – LOS E during the AM peak hour and LOS F during the PM peak hour ♦ Waterman Avenue/Olive Street – LOS E during the AM peak hour and LOS F during the PM peak hour The opening year (2013) conditions, described above, plus the project conditions were used to evaluate the net change in traffic conditions and to identify potential traffic impacts associated with the proposed project. Fehr & Peers estimated the project trip generation by applying standard trip generation rates, based on ITE's Trip Generation, 8th Edition, 2008. At the study intersections, the proposed project includes the following intersection improvements shown on the project site plan: ♦ Waterman Avenue/Baseline Street – Signal modification. ♦ Proposed Alder Street/Baseline Street – Install traffic signal. ♦ Crestview Avenue/Baseline Street – Intersection realignment to connect Crestview Avenue and signal modification. ♦ Waterman Avenue/Orange Street – Intersection realignment to connect Orange Street and install traffic signal. ♦ Waterman Avenue/Olive Street – Install traffic signal.

Community Facilities and Services	Code	Source or Documentation
		♦ La Junita Street/Orange Street – All-way stop controlled. The project-related trips were added to the Opening Year No Project volumes to develop Opening Year with Project volumes. The change in volume-to-capacity ratios at intersections that operate at LOS C, D, E, or F were used to determine project impacts. Based on this analysis, the project does not significantly impact the street network for the opening year (2013) scenario. In order to determine traffic impacts on the existing circulation system associated with buildout of the project, the traffic volumes generated by the proposed project were added to the Future Year Buildout (2033) No Project peak hour traffic volumes for the study intersections. This resulted in the Future Year Buildout (2033) Plus Project peak hour volumes shown on Figure 9 and listed in Tables 17 and 18. The HCM 2000 methodology for signalized and all-way stop-controlled intersections estimates the average control delay for the vehicle at the intersection. For side-street stop-controlled intersections, the methodology estimates the control delays for each turning movement and identifies the delay for the longest delayed approach (if there is a shared lane, delay is averaged for all turning movements from that lane). After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Existing lane configurations and peak hour traffic volumes at the intersections analyzed are shown in Figure 7. Lane configurations and peak hour traffic volumes at full buildout of the project (2033) are shown in Figure 9. Table 18 compares the change in volume-to-capacity ratios at intersections that operate at LOS C, D, E, or F to determine project impacts. As shown in Table 17, several intersections would have deficient operations in either the AM or PM Peak Hour but would not exceed City of San Bernardino thresholds as described below: ♦ **Waterman Avenue/Highland Avenue – AM and PM Peak Hour:** The intersection would operate at LOS E in the AM peak hour with a Volume to Capacity (V/C) ratio difference of 0.00 and LOS F in the PM peak hour with a V/C ratio difference of 0.01 from the "without project" scenario. The

Community Facilities and Services	Code	Source or Documentation
		V/C ratio, not delay, is the controlling factor of significant impacts in the City of San Bernardino. The V/C ratio difference for this intersection falls within the allowable difference in V/C ratios. Therefore, mitigation measures are not required for this location. ♦ **Waterman Avenue/5th Street – AM and PM Peak Hour:** The intersection would operate at LOS D in the AM peak hour with a V/C ratio difference of 0.00 and LOS F in the PM peak hour with a V/C ratio difference of -0.07 from the "without project" scenario. The V/C ratio, not delay, is the controlling factor of significant impacts in the City of San Bernardino. The V/C ratio difference for this intersection falls within the allowable difference in V/C ratios. Therefore, this location does not need to be mitigated and no mitigation is required for this scenario. ♦ **La Junita/Baseline Street – AM and PM Peak Hour:** The intersection operates at LOS D in the AM peak hour and LOS F in the PM peak hour. Although the "with project" scenario surpasses the LOS C minimum requirement for unsignalized intersections, it does not satisfy the peak hour signal warrant requirements to install a traffic signal. Therefore, mitigation measures are not required for this location since the City requires that an unsignalized intersection exceed both the LOS threshold and meet with peak hour signal warrant. ♦ **Del Rosa/La Junita Street– AM Peak Hour:** The intersection operates at LOS D in the AM peak hour with a V/C ratio difference of 0.01 from the "without project" scenario. The V/C ratio, not the delay is the controlling factor of significant impacts in the City of San Bernardino. The V/C ratio difference for this intersection falls within the allowable difference in V/C ratios. Therefore, this location does not need to be mitigated and no mitigation is required for this scenario. As shown in Table 18, the traffic impact analysis found that at full buildout the project would impact the following two intersections: ♦ **Impact TRAF-1: Waterman Avenue/Baseline Street – AM and PM Peak Hour:** The intersection would operate at LOS E during the AM and PM peak hour with the addition of project-generated traffic. The V/C ratio would increase by 0.05 in the AM peak hour and 0.03 in the PM peak hour. This would be a significant impact. Proposed bicycle routes in the study area are planned on Waterman Avenue. Fifty-foot pedestrian-only greenways with natural bioswales and walking paths are planned throughout the

Community Facilities and Services	Code	Source or Documentation
		project. The proposed project has a very high level of pedestrian connectivity within the site with an extensive network of pedestrian-only trails and sidewalks connecting all areas of the project. This internal pedestrian network is complemented through additional pedestrian facilities on the boundary of the project including sidewalks on Olive Street, Waterman Avenue, and Baseline Street. It is therefore concluded that the project would have a positive impact on pedestrian connectivity. The proposed project would not impact the existing transit operations in the study area. The intersection impacts identified above would be reduced to a less-than-significant level by the following mitigation measures, shown in Figure 25. Therefore, impacts on the existing circulation system would be less than significant with mitigation. (*Less than significant with mitigation*) ♦ **Impact TRAF-2: Waterman Avenue/Orange Street – AM and PM Peak Hour:** Deficient condition for this intersection occur because of delays occurring on the side streets (Orange Street) connecting to Waterman Avenue, in that vehicles turning onto Waterman Avenue may have to wait for gaps in incoming traffic. This would be a significant impact. The impacts would be reduced to a less-than-significant level by the following mitigation measures. These mitigation measures are summarized in Figure 10. **Mitigation Measure TRAF-1:** For the intersection to operate at an acceptable level, signal modification and optimization would be needed. The measure would help alleviate congestion at this movement. With the improvement, the intersection would operate at LOS D with a V/C ratio increase of 0.02 in the AM peak hour and at LOS D with a V/C ratio increase of 0.00 in the PM peak hour from "without project" conditions. The project is responsible for a fair share contribution of each mitigation measure. Project fair share contributions are calculated by comparing the project's peak hour traffic generated against future growth. It is recommended that the intersection implement signal optimization to bring LOS delay to within allowable limits. **Mitigation Measure TRAF-2:** It is recommended that the project implement a right-turn-in/right-turn-out, left-turn-in rule at this intersection. This measure will substantially alleviate delay

Community Facilities and Services	Code	Source or Documentation
		experienced by drivers wanting to turn left out of the Orange Street driveway. Although this intersection is warranted for a signal, it is not recommended given the intersection's close proximity (~350 feet) to the Waterman Avenue and Baseline Street intersection.



Source: Fehr & Peers, 2011.

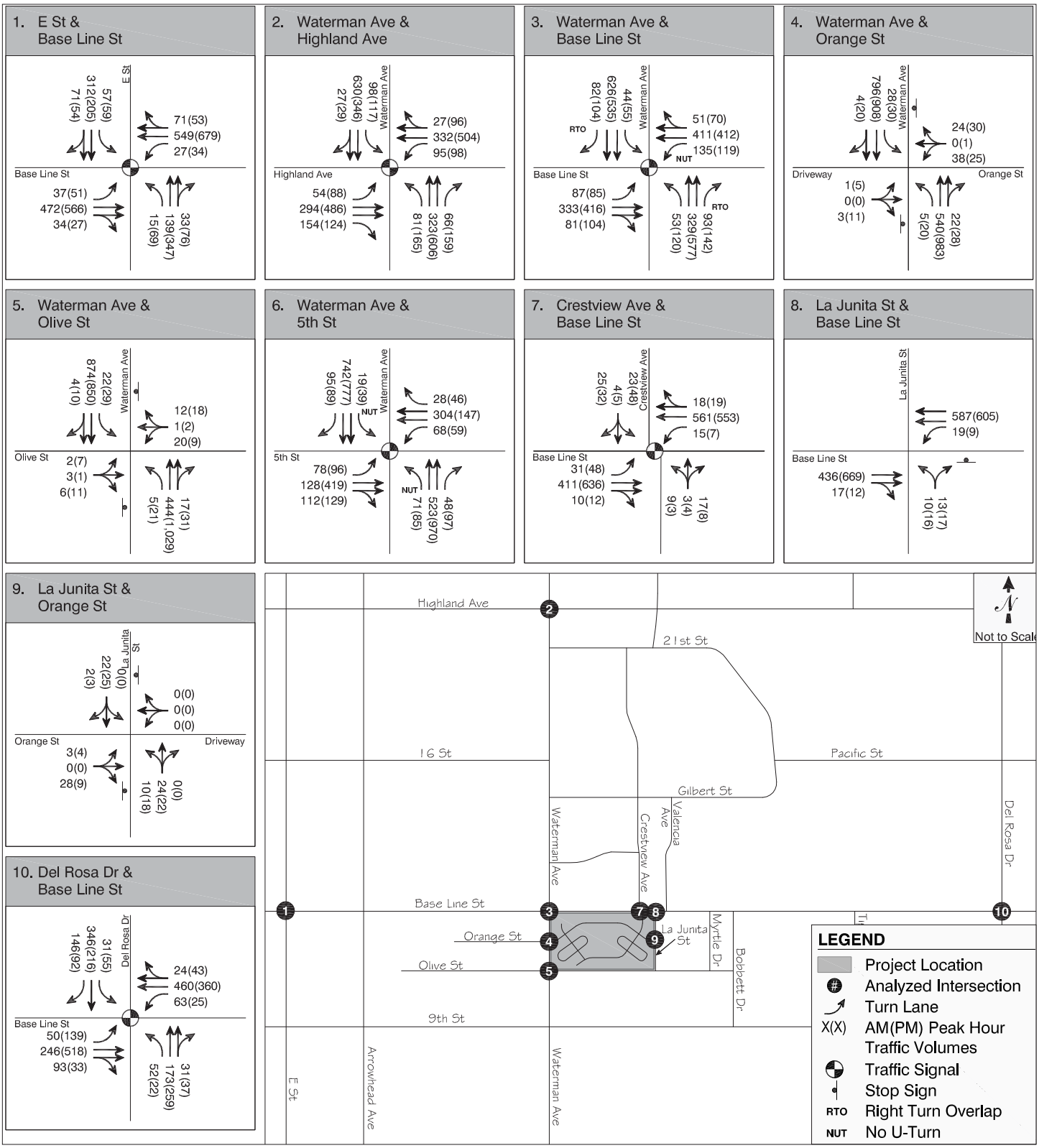
FIGURE 6

PROJECT LOCATION AND STUDY INTERSECTIONS

Source: Fehr & Peers, 2011.

FIGURE 7

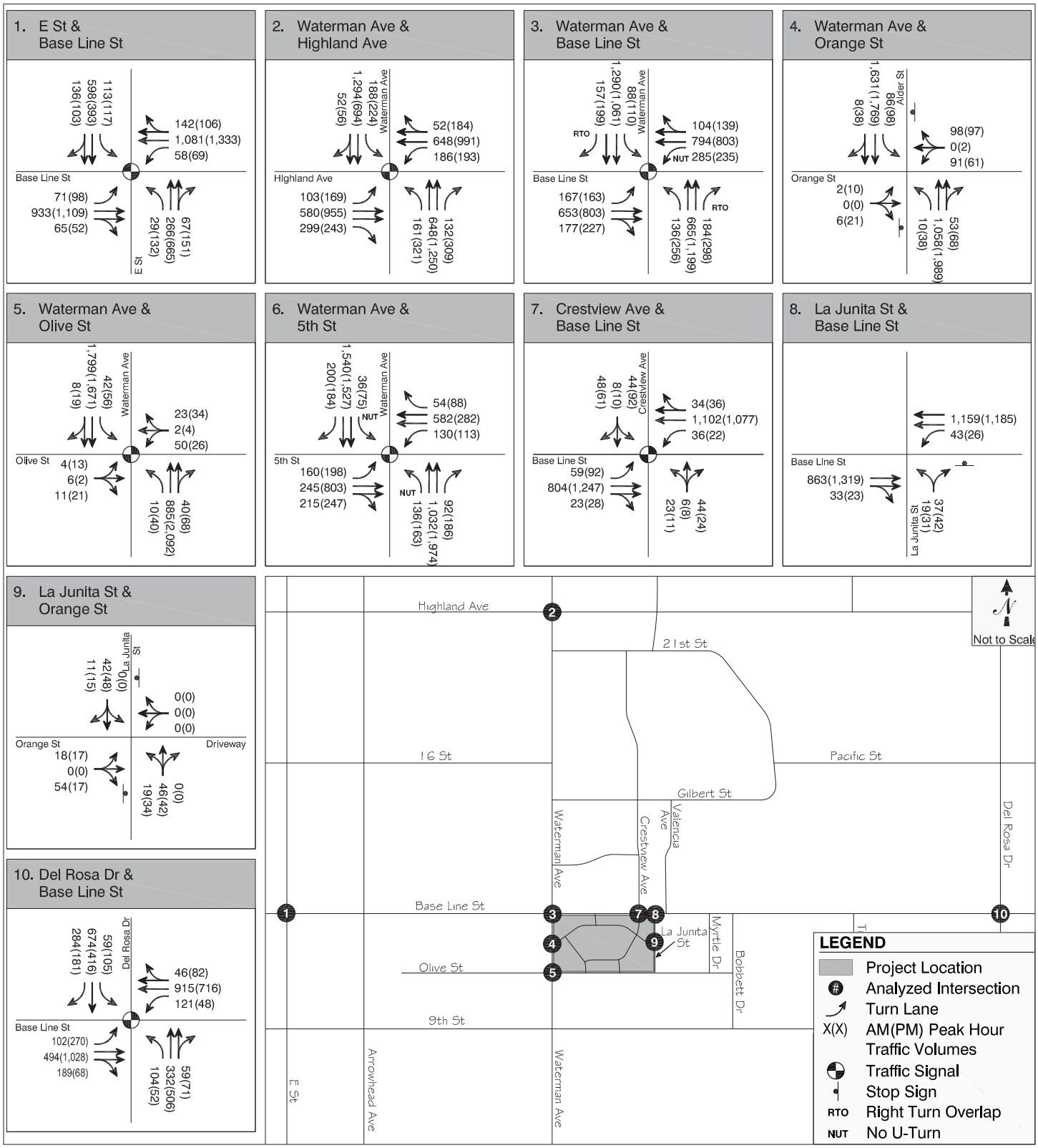
PENDING AND APPROVED PROJECTS



Source: Fehr & Peers, 2012.

FIGURE 8

EXISTING LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES



Source: Fehr & Peers, 2012.

FIGURE 9

FUTURE BUILDOUT YEAR (2033) PLUS PROJECT LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES

TABLE 17 ***INTERSECTION LEVELS OF SERVICE: FUTURE BUILDOUT YEAR (2033) PLUS PROJECT***

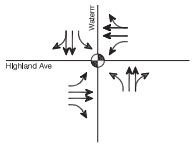
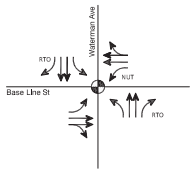
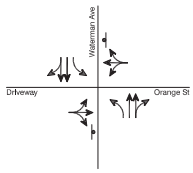
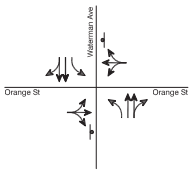
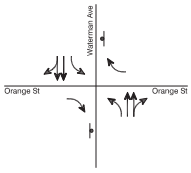
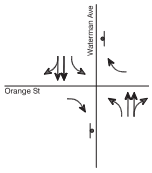
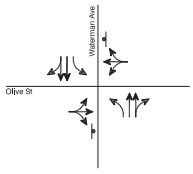
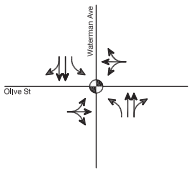
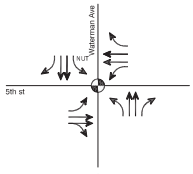
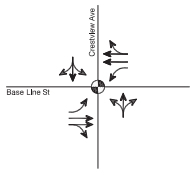
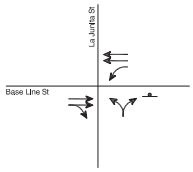
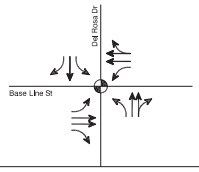
			AM Peak Hour			PM Peak Hour		
Intersection		**Control**	**Delay[a]**	**LOS**	**V/C[c]**	**Delay[a]**	**LOS**	**V/C[c]**
1.	E Street/Baseline Street	Signalized	18.1	B	0.67	28.8	C	1.03
2.	Waterman Avenue/Highland Avenue[2]	Signalized	56.7	E	0.84	93.4	F	1.15
3.	Waterman Avenue/Baseline Street[2]	Signalized	55.2	E	0.96	55.6	E	1.00
4.	Waterman Avenue/Orange Street	SSSC[d,e]	132.1	F	n/a	ERR	F	n/a
5.	Waterman Avenue/Olive Street	Signalized	9.5	A	0.65	16.1	B	0.76
6.	Waterman Avenue/5th Street[b]	Signalized	43.6	D	0.85	104.5	F	1.09
7.	Crestview Avenue/Baseline Street	Signalized	5.1	A	0.41	6.3	A	0.50
8.	La Junita Street/Baseline Street	SSSC[e]	31.2	D	n/a	207.5	F	n/a
9.	La Junita Street/Orange Street	SSSC[e]	9.1	A	n/a	9.3	A	n/a
10.	Del Rosa Drive/Baseline Street	Signalized	39.7	D	0.85	31.3	C	0.74

[a] Delay for intersections based on application of *2000 Highway Capacity Manual* Methodology. Delay was calculated using Synchro 6.0 software.
[b] CMP intersection
[c] V/C = Volume to Capacity ratio. Note – V/C is not calculated for unsignalized intersections.
[d] Includes proposed improves by project including intersection installations of traffic signals and stop signs
[e] SSSC= Side street stop controlled
Source: Fehr & Peers, 2012.

TABLE 18 ***IMPACTS FOR SIGNALIZED INTERSECTIONS: FUTURE BUILDOUT YEAR (2033) PLUS PROJECT***

			AM Peak Hour			PM Peak Hour		
Intersection	**LOS AM (PM)**	**Allowable ΔV/C AM (PM)**	**No Project**	**With Project**	**ΔV/C**	**No Project**	**With Project**	**ΔV/C**
1. E Street/ Baseline Street	B(C)	n/a (0.04)				***1.01***	***1.03***	***0.02***
2. Waterman Avenue/ Highland Avenue[a]	D(F)	0.02 (0.01)	0.84	0.84	0.00	1.14	1.15	0.01
3. Waterman Avenue/ Baseline Street[a]	D(D)	0.02 (0.02)	***0.91***	***0.96***	***0.05***	***0.97***	***1***	***0.03***
4. Waterman Avenue/ Orange Street	F(F)							
5. Waterman Avenue/ Olive Street	A(B)							
6. Waterman Avenue/ 5th Street[a]	C(F)	0.04(0.01)	0.85	0.85	0.00	1.16	1.09	-0.07
7. Crestview Avenue/ Baseline Street	A(A)							
8. La Junita Street/ Baseline Street	D(F)							
9. La Junita Street/ Orange Street	A(A)							
10. Del Rosa Drive/ Baseline Street	D(C)	0.02(0.04)	0.84	0.85	0.01	0.73	0.74	0.01

Notes: V/C = Volume to Capacity ratio. Calculated using the Synchro 6 software package.
Shaded cells indicate where intersections operate at LOS A or B.
Bold-Italicized type indicates project impact.
[a] CMP intersection.
Source: Fehr & Peers, 2012.

	EXISTING CONDITIONS	WITH PROJECT CONDITIONS	OPENING YEAR (2013) PLUS PROJECT MITIGATION MEASURES	FUTURE BUILDOUT YEAR (2030) MITIGATION MEASURES
an Ave & d Ave		Same As Existing		
an Ave & e St		Same As Existing		Signal timing optimizat
an Ave & y/Orange St				
an Ave &			Right-turn-in/Right-turn-out Left-turn-in only	Right-turn-in/Right-turn Left-turn-in only
an Ave &		Same As Existing		
w Ave & e St		Same As Existing		
a St & e St		Same As Existing		
a St & St		Same As Existing		
a Dr & e St		Same As Existing		

Source: Fehr & Peers, 2012.

FIGURE 10

TRAFFIC MITIGATION MEASURES

Natural Features	Code	Source or Documentation
Water Resources	1	The project would not require dewatering or interfere with the existing groundwater table below the project site. The project has been included in the planned build-out of the City of San Bernardino pursuant to the approved General Plan Land Use Map. Additionally, the project will include bioswales, pervious concrete areas, green roofs, four detention basins, and perforated storm drains, which will allow infiltration of surface water.
Surface Water	1	The project site is not within an identified protected wetland, nor near any jurisdictional drainage and would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means, (see Section VIII for additional discussion).[25] The project is subject to compliance with the discharge requirements of the RWQCB pursuant to NPDES Permit No. CA618036 with regard to pollutants carried in storm water runoff. RWQCB requirements are incorporated into the project design as Best Management Practices (BMPs) to protect surface water quality. RWQCB requirements will be administered through plan check review and approval of the Water Quality Management Plan (WQMP), provided in Appendix J (for long-term water quality management) and Storm Water Pollution Prevention Plan (for short-term water quality management) in order to reduce pollutants from the project. The long-term operations of the project are subject to pollution control requirements of the RWQCB related to all significant redevelopment, which is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. As described in the Drainage Report (Appendix I) the proposed project would distribute runoff such that total flows and flows to each intersection are less than 90 percent of lower return period storm flow rates in the existing condition in accordance with San Bernardino County Flood Control District requirements. The overall result limits proposed flows to approximately 40 percent of existing flows. Flow reductions will be achieved with the implementation of four (4) onsite detention basins. In addition, the depth of water in the basins would be less than 3 feet and would drain within 24 hours of the peak depth in accordance with City and Flood Control District requirements. As an added factor of safety the proposed site will utilize approximately 200,000

[25] City of San Bernardino, 2005, *General Plan Update and Associated Specific Plans EIR*, page 5.3-11.

Natural Features	Code	Source or Documentation
		square feet of pervious concrete pavement with rock subgrade which would provide significantly reduced impervious area and additional detention, which was not accounted for in the flood management analysis.
Unique Natural Features and Agricultural Lands	1	There are no areas designated as Prime and Unique Farmland by the California Resources Agency within the City. The project site is an existing residential developed and disturbed site and will not convert farmland to non-agricultural use. The project site is currently designated residential and there is no forest land, timberland, or timberland zoned Timberland Production on the site.
Vegetation and Wildlife	1	The site and surrounding area occur within a developed and highly disturbed area. The project site does not occur within an area designated as potential habitat for sensitive wildlife or a biological resource area, and the project site is unlikely to provide an important location relative to regional wildlife movement. There is no adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or State habitat conservation plan in the City of San Bernardino.

Other Factors	Code	Source or Documentation
Flood Disaster Protection Act [Flood Insurance] [§58.6(a)]	1	According to the City's General Plan, Figure S-1 "100 Year Flood Plain," the project site occurs outside of the 100-year flood zone as mapped on the federal Flood Insurance Rate Map.[26]
Coastal Barrier Resources Act/ Coastal Barrier Improvement Act [§58.6(c)]	1	The project site is located inland in a city that is not along a coastline; therefore, the Act is not applicable to the project site.
Airport Runway Clear Zone or Clear Zone Disclosure [§58.6(d)]	1	As shown in Figure LU-4 of the City's General Plan, the project site does not occur within the San Bernardino International Airport (SBIA) Influence Area and the project would not result in a safety hazard for people living or working in the project area.

[26] City of San Bernardino, 2005, *General Plan*, page 10-13.

Summary of Findings and Conclusions

ALTERNATIVES TO THE PROPOSED ACTION

Alternatives and Project Modifications Considered [24 CFR 58.40(e), Ref. 40 CFR 1508.9] (Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

The HACSB has owned and operated the existing project for 70 years. As part of the HA's commitment to provide affordable housing to its constituents, the Hope VI/Choice Neighborhoods program for revitalization of existing older housing stock was selected among many funding sources. The Hope VI/Choice Neighborhoods program features elements of new-urbanism and mixed income development to provide more sustainable communities which blend into the existing fabric of the surrounding community. The mix of residential units, both multi-family and senior housing, is designed to meet the greatest needs of the community, and allow an opportunity for residents to climb the housing latter into home ownership.

- **Residential Alternative –** The project could be designed as an entirely multi-family housing project and still be operated by the HACSB. This alternative would not offer the residents the recreational, educational, and social service support opportunities provided through the community recreation center, and would not fulfill the intent of the goal of mixed-use development. This alternative was rejected by the HACSB because it was not in the best interests of the residents.
- **Alternative Site –** The existing site is currently owned and has been operated by the HACSB for approximately 69 years. The site is ideally situated in the City of San Bernardino close to schools and in close proximity to commercial shopping and downtown, affording the residents convenient access to public services. No other site is currently owned by the HACSB offering this type of revitalization opportunity.
- **Alternative Use –** The HACSB was organized to provide affordable housing to low-income residents of the County of San Bernardino. The HACSB has provided this service for over 70 years. Providing revitalized, affordable housing on the project site is the appropriate use of the land and consistent with the City of San Bernardino General Plan and Housing Element. Alternative uses would not be consistent with the General Plan and Housing Element.

No Action Alternative [24 CFR 58.40(e)]
(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).

The no action alternative will not provide the revitalization of the project site and the existing blighted housing stock would remain. The HA would maintain the existing project and would not pursue revitalization and development of new housing.

Mitigation Measures Recommended [24 CFR 58.40(d), 40 CFR 1508.20]
(Recommend feasible ways in which the proposal or its external factors should be modified in order to minimize adverse environmental impacts and restore or enhance environmental quality.)

GEO-1a: Prior to issuance of Grading Permits, a licensed geotechnical consultant shall review the final grading and foundation plans to finalize the geotechnical recommendations for the project. Said recommendations shall be incorporated into the plans for the project as notes and specifications, which shall be verified during plan check by the City of San Bernardino Engineering and Building Department.

GEO-1b: Ongoing during rough grading, areas of active grading shall be tested and field monitored by a qualified geotechnical consultant pursuant to the final geotechnical recommendations. Said monitoring and

testing shall be documented in a log and shall remain on-site during the construction phase for review by the City Inspector.

GEO-1c: To minimize post-construction soil movement and to maintain the seismic-induced settlement within tolerable limits, it is recommended that at least 5 feet below the base of the footings and the slab system be excavated, moisture-conditioned as necessary, and recompacted to a minimum of 90 percent of maximum density based on ASTM D1557 Test Method.

GEO-1d: A representative of the geotechnical engineering firm will be present during all site clearing and grading operations to test and observe earthwork construction. The geotechnical engineer will reject any material that does not meet compaction and stability requirements.

GEO-1e: Prior to issuance of permits project plans shall include the geotechnical engineer's recommended treatment of fill material as a note. The potential for structural damage at the site can be minimized by constructing the proposed building on compacted fill. For preliminary planning purposes, a remedial removal depth of 36 inches could be utilized in building pad areas. Remedial removals should include all existing fill and any native materials deemed geotechnically unsuitable for support of structures and fill.

GEO-1f: To minimize the potential soil movement, the upper 18 inches of soil within building or exterior flatwork areas be non-expansive fill. The fill material should be a well-graded silty sand or sandy silt soil. A clean sand or very sandy soil is not acceptable for this purpose.

GEO-1g: The replacement soils should extend 5 feet beyond the perimeter of the building. The nonexpansive replacement soil should be compacted to at least 90 percent relative compaction based on ASTM D1557 Test Method. The exposed native soils in the excavation should not be allowed to dry out and should be continuously moist prior to backfilling. Also slab-on-grade continuous footings shall be nominally reinforced to minimize cracking and vertical off-set.

GEO-1h: Prior to the placement of non-expansive Engineered Fill, the exposed Sub-grade in building pad, exterior flatwork, and pavement areas will be scarified to a depth of 12 inches, worked until uniform and free from large clods, moisture-conditioned to at least 2 percent above optimum moisture, and re-compacted to a minimum of 90 percent of maximum density based on ASTM D1557 Test Method. Over-saturated soils will be allowed to dry to approximately 2 percent above optimum moisture before re-compaction.

GEO-2a: Dewatering waterproofing will be required should structures or excavations extend below the groundwater table. If groundwater is encountered, geotechnical engineering firm will be consulted prior to dewatering the site.

GEO-2b: Project site winterization consisting of placement of aggregate base and protecting exposed soils during construction will be performed.

HAZ-1a: Prior to structure disturbance, a State-certified asbestos professional and State-certified lead professional should survey the site structures and determine whether sampling of building materials for ACMs and LBP is warranted. Any abatement or removal of ACMs and LBP shall be performed in accordance with applicable federal, State, and local regulations.

HAZ-1b: Prior to structure disturbance, a qualified professional should survey the site structures and determine whether suspect PCB-containing equipment is present. PCB-containing equipment must be handled and disposed of in accordance with applicable federal, State, and local regulations.

HAZ-2: Prior to issuance of Grading Permits, the City Engineer shall require soils samples and testing for contamination in areas shown on the Grading Plan were soils will be excavated. The Grading Plan for the project shall include a note requiring testing for contamination as well as proper disposal based on test results.

NOISE-1: The project shall comply with the following construction best management practices:

- Two weeks prior to the commencement of construction for any phase, notification must be provided to surrounding land uses within 1,000 feet of the project site disclosing the construction schedule, including various types of activities that would be occurring throughout the duration of each construction phase.
- Provide designated truck routes that minimize impacts on local traffic and neighborhoods.
- Schedule high noise-producing activities between the hours of 8:00 AM and 4:00 PM Monday through Saturday to minimize disruption to neighboring residential homes.
- Ensure that construction equipment is properly muffled according to industry standards and in good working condition.
- Place noise-generating construction equipment and locate construction staging areas away from residential homes.
- Use electric air compressors and similar power tools rather than diesel equipment to the extent that the necessary equipment are commercial available.
- Construction-related equipment, including heavy-duty equipment, motor vehicles, generators, air compressors, and other portable equipment, shall be turned off when not in use for more than 30 minutes.
- Construction vehicles and equipment outfitted with back-up alarms shall utilize "smart back-up alarms" that will generate sound at least five decibels louder than the surrounding noise instead of fixed-decibel back-up alarms.
- Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding residents to contact the job superintendent. If the superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action to the reporting party.

NOISE-2a: The project shall be required to implement the following noise reduction features on Baseline Street and Waterman Avenue.

- The travel lane widths adjacent to the project site will be reduced from 12 feet down to 10 feet.
- On-street parking shall be provided in areas adjacent to the project site.
- Bicycle lanes shall be provided on Baseline Street.
- A raised center median with dense ground vegetation or ground cover shall be provided.
- Trees and ground vegetation or ground cover shall be provided between the proposed residential buildings and travel lanes.
- Sidewalks shall be setback approximately 8 feet in areas adjacent to the project site.
- One additional signalized intersection and one relocated intersection, compared to existing conditions, shall be added adjacent to the project site.
- The signalized intersection along Baseline Street adjacent to the project site, including the two additional proposed intersections, shall be set in progression such that vehicle speeds are reduced to approximately 30-35 miles per hour.

NOISE-2b: The pavement along Baseline Street and Waterman Avenue in the area adjacent to the project site shall be upgraded with features and materials that reduce vehicle noise according to the following parameters.

- The pavement shall be upgraded with "quiet pavement" materials, such as rubberized pavement.
- The project site shall include planter strips along Baseline Street with dense vegetation or ground cover.
- The project site shall include "sitting walls" with landscaping materials along Baseline Street approximately 2 to 2.5 feet in height, that will act as noise barriers, with landscaping material placed toward the proposed residential buildings.

GHG-1: The project shall comply with and incorporate the following measures:

- Exceed the Title 24 energy use standards for green buildings by 15 percent;
- Use energy-efficient LED lights for outdoor lighting;
- Install low-flow faucets and toilets;
- Provide active stormwater management for reuse in landscape irrigation;
- Install water-efficient landscaping;
- Include a recycling center on-site;
- Enhance street and walkway design for improved pedestrian use and connection to public transit;
- Install light-colored roofs and walkways as well as shade trees to reduce heat island effects.

CUL-1: On an ongoing basis during the construction phase of the project, the contractor and Project Proponent/Owner shall monitor grading and excavation operations for subsurface archaeological and paleontological resources. If archaeological and/or paleontological resources are encountered, grading operations near these resources shall cease and the contractor shall notify the Planning Division and the Grading Inspector of the find. The Project Proponent/Owner shall provide proof to the City Planning Division that a qualified individual has been hired to determine the significance of the resources and the requirement for further monitoring and proper treatment meeting the intent of §15064.5 of the CEQA Guidelines.

CUL-2a: In the event that activities associated with the proposed project cannot be implemented in a manner that meets adherence to Secretary of the Interior's Standards for the Rehabilitation of Historic Properties, the project proponent/owner shall prepare a Historic American Building Survey (HABS) document pursuant to Section 110(b) of the National Historic Preservation Act (NHPA).

Prior to any action, a Secretary of the Interior-qualified professional photographer shall perform photodocumentation and a qualified historian or architectural historian will prepare written documentation consistent with the standards of the National Parks Service HABS. HABS documentation is described by the National Parks Service as the last means of preserving a historic property. The documentation of a property that is to be demolished preserves its history for future researchers.

The project proponent will be required to prepare a HABS document to create a comprehensive understanding of the resource. The HABS document will consist of the following:

1. All the buildings and structures of Waterman Gardens should be photodocumented by a professional photographer familiar with presenting the correct spatial relationship of the individual structures of the resource, and of the resources context to the surrounding landscape. It is recommended that the front and rear elevations of each type of housing unit (A, B, C, D, or E) be photographed. A representative group of photographs (not exceeding eight) should be taken of street viewscapes and of the area between housing units (for example: the area behind the units in

Sycamore and Elm Circle). Digital color photographs are recommended with a representative sampling of photographs developed on paper to at least 5" x 7" photographs.

2. HASBC has a digital copy of the full set of the original blueprints of Waterman Gardens dating from 1942. Additional digital copies of the blueprints should be produced to document the physical properties of the housing complex.
3. The text of the Historic Context and Historic Structures Evaluation sections found within Cogstone Historic Resource Evaluation of Waterman Gardens Public Housing Complex should suffice as the written history of Waterman Gardens. The text section of the HABS document should be printed on archivally-stable paper.
4. At least four complete copies of the Waterman Gardens HABS document will be prepared. One will be delivered to the California Room at Feldheym Branch of the City of San Bernardino Library. The others will be delivered to the Water Resources Institute at California State University-San Bernardino; the Heritage Room at A.K. Smiley Library, City of Redlands; and Pfau Library Special Collections at California State University-San Bernardino.

CUL-2b: In connection with HABS documentation, the project proponent/owner shall develop an interpretive signage concerning the history of Waterman Gardens. The signage would be based on available historic photographs of the housing complex when it was first constructed and the history of the property contained within this report. It is recommended that the signage be located in an interior space open to the public and residents.

CUL-3: Should resources be unearthed during grading, a vertebrate paleontologist shall be contacted to determine the significance, and make recommendations for appropriate mitigation measures in compliance with CEQA guidelines.

TRAF-1: For the intersection to operate at an acceptable level, signal modification and optimization would be needed. The measure would help alleviate congestion at this movement. With the improvement, the intersection would operate at LOS D with a V/C ratio increase of 0.02 in the AM peak hour and at LOS D with a V/C ratio increase of 0.00 in the PM peak hour from "without project" conditions..

The project is responsible for a fair share contribution of each mitigation measure. Project fair share contributions are calculated by comparing the project's peak hour traffic generated against future growth. It is recommended that the intersection implement signal optimization to bring LOS delay to within allowable limits.

TRAF-2: It is recommended that the project implement a right-turn-in/right-turn-out, left-turn-in rule at this intersection. This measure will substantially alleviate delay experienced by drivers wanting to turn left out of the Orange Street driveway. Although this intersection is warranted for a signal, it is not recommended given the intersection's close proximity (~350 feet) to the Waterman Avenue and Baseline Street intersection.

Additional Studies Performed

The following studies were prepared for the project and are included as appendices to this Environmental Assessment:

A. C.H.J., Inc., 2010, Engineering Geology Investigation for Proposed Redevelopment of Waterman Gardens Project
B. LSA Associates, Inc., 2010, Phase I Environmental Assessment
C. Fehr & Peers, July 2012, *Draft Waterman Gardens Master Plan Traffic Impact Analysis*
D. Impact Sciences, Inc., July 2011, *Waterman Gardens Master Plan Project Air Quality Assessment*

E. Impact Sciences, Inc., July 2011, *Waterman Gardens Master Plan Project Greenhouse Gas Assessment*
F. Impact Sciences, Inc., October 2012, *Waterman Gardens Master Plan Project Noise Assessment*
G. Cogstone Resource Management, Inc., May 2011, *Archeological Assessment Literature Study for the Waterman Gardens Redevelopment Project*.
H. Cogstone Resource Management, Inc., May 2011, *Historic Resource Evaluation of Waterman Gardens Public Housing Complex*.
I. Dan Guerra & Associates, July 2011, *Drainage Report Waterman Gardens.*
J. Dan Guerra & Associates, July 2011, *Water Quality Report Waterman Gardens*.
K. Hyphae Design Laboratory, July 2011, *Wastewater Management and Flow Analysis Report*.
L. Overland, Pacific & Cutler, Inc., July 2001, *Relocation Plan for Waterman Gardens Revitalization*.

List of Sources, Agencies, and Persons Consulted [40 CFR 1508.9(b)]

The City of San Bernardino General Plan Update and Associated Specific Plans Environmental Impact Report (State Clearinghouse Number 2004111132) is herein incorporated by reference. Copies of this document and all other documents referenced herein are available for review at the City of San Bernardino Community Developmemt Department, 300 North D Street, San Bernardino, CA, or are available online. This includes the following documents:

1. City of San Bernardino General Plan, 2005
2. City of San Bernardino General Plan Update and Associated Specific Plans Environmental Impact Report, 2005
3. City of San Bernardino Municipal Code
4. City of San Bernardino Development Code (Title 19 of the San Bernardino Municipal Code)
5. City of San Bernardino Historic Resources Reconnaissance Survey
6. Site Visits and Analysis
7. State of California Hazardous Waste & Substances List
8. California Building Code
9. Uniform Fire Code
10. Alquist-Priolo Earthquake Fault Zones Map
11. South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993
12. Federal Emergency Management Agency, Flood Insurance Rate Maps, 2008
13. Public Works Standard Requirements – Water
14. Public Works Standard Requirements – Grading
15. Tim Deland, Facilities Management, San Bernardino City Unified School District
16. Mike Nevarez, Engineer, San Bernardino Municipal Water Department
17. Brian Pellis, District Resources Officer, San Bernardino Police Department
18. Tiffany Emon, San Bernardino Police Department
19. Eric Esquivel, Division Chief, San Bernardino Fire Department

Environmental Assessment Work Sheet

This worksheet provides a suggested format that may be used to complete the Environmental Assessment process.

Project Name and Description: (The description should include location of the project and types of activities to be included)
Project Name: Waterman Gardens Master Plan
Location: San Bernardino, CA

Activities included in the project: The proposed project is located within the City of San Bernardino, shown on a regional map in Figure 11. The project site, shown in Figure 12, is located at the southeastern corner of Baseline Street and N. Waterman Avenue and stretches from north-south from Baseline Street to Olive Street, and east-west from La Junita Street to N. Waterman Avenue. N. Waterman Avenue and Baseline Street are both major arterials that connect the site to Interstates 210 and 215.

The proposed project, shown in Figure 13, would demolish the existing 252-residential unit Waterman Gardens Public Housing project at the southeast corner of the intersection of N. Waterman Avenue and Baseline Street in the City of San Bernardino and construct new residential units, a community center, and other community service-oriented uses at the same location. The new structures would include 411 new dwelling units including a mix of one-to-four bedroom apartments and townhouses. Specifically, the project would include 57 one-bedroom units, 137 two-bedroom units, 133 three-bedroom units, 11 four-bedroom units, and 73 senior units. The overall residential density of the site would be 10.8 dwelling units per acre. In addition to the new dwelling units, the project would include a 45,800 square-foot Recreational Facility, 58,200 square-foot Community Center, 7,400 square-foot Administration and Community Room, and 18,400 square-foot Existing Central Shop, Maintenance Building, Recycling yard and Community Garden Building. A Conditional Use Permit would be required for the Density Bonus Agreement, Day Care Center, Social Service Uses/Recreation Center, and Development Plan.

The project will be subdivided into nine separate parcels as follows:

- Parcel 1: Residential buildings (38 dwelling units, 2.54 acres, 14.96 du/ac)
- Parcel 2: Community and Recreational Centers (0 dwelling units, 5.12 acres)
- Parcel 3: Senior Housing Buildings (73 dwelling units, 4.12 acres, 17.96 du/ac)
- Parcel 4: Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building (0 dwelling units, 1.67 acres)
- Parcel 5: Administration Building (0 dwelling units, 0.54 acres)
- Parcel 6: Residential buildings (75 units, 5.64 acres, 13.30 du/ac)
- Parcel 7: Residential Buildings (76 dwelling units, 5.15 acres, 14.76 du/ac)
- Parcel 8: Residential Buildings (79 dwelling units, 5.76 acres, 13.72 du/ac)
- Parcel 9: Residential Buildings (69 units, 6.40 acres, 10.78 du/ac)

The structures would have variable setbacks from N. Waterman Avenue, Baseline Street, La Junita Street, and Olive Street. There would be six vehicular access points to and from the project site: two along Olive Street located towards the west and east end respectively; one located mid-block on La Junita Street, two along Baseline Street located mid-block and towards the east end respectively; and one located mid-block at Orange Street along N. Waterman Avenue. Additional pedestrian and bicycle access would be located throughout the project. The proposed project would include many on-site recreation amenities, including the 45,800-square-foot recreational facility and natatorium, pedestrian-only greenways, walking paths, and three neighborhood parks with playing fields and picnic areas. A total of 1,070 spaces would be provided on site, including 898 off-street parking spaces and 172 on-street parking spaces.

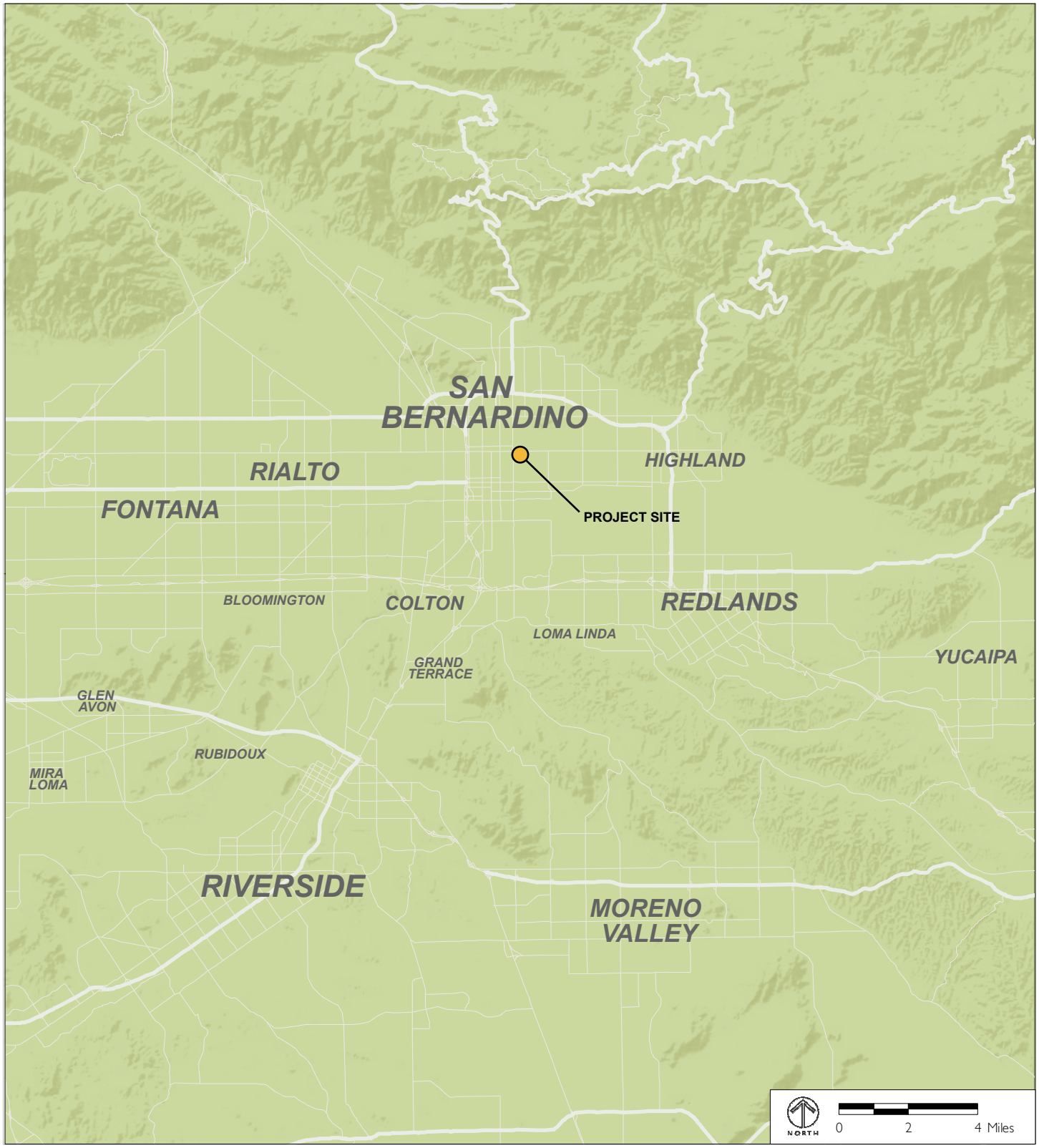


FIGURE 11
REGIONAL LOCATION MAP

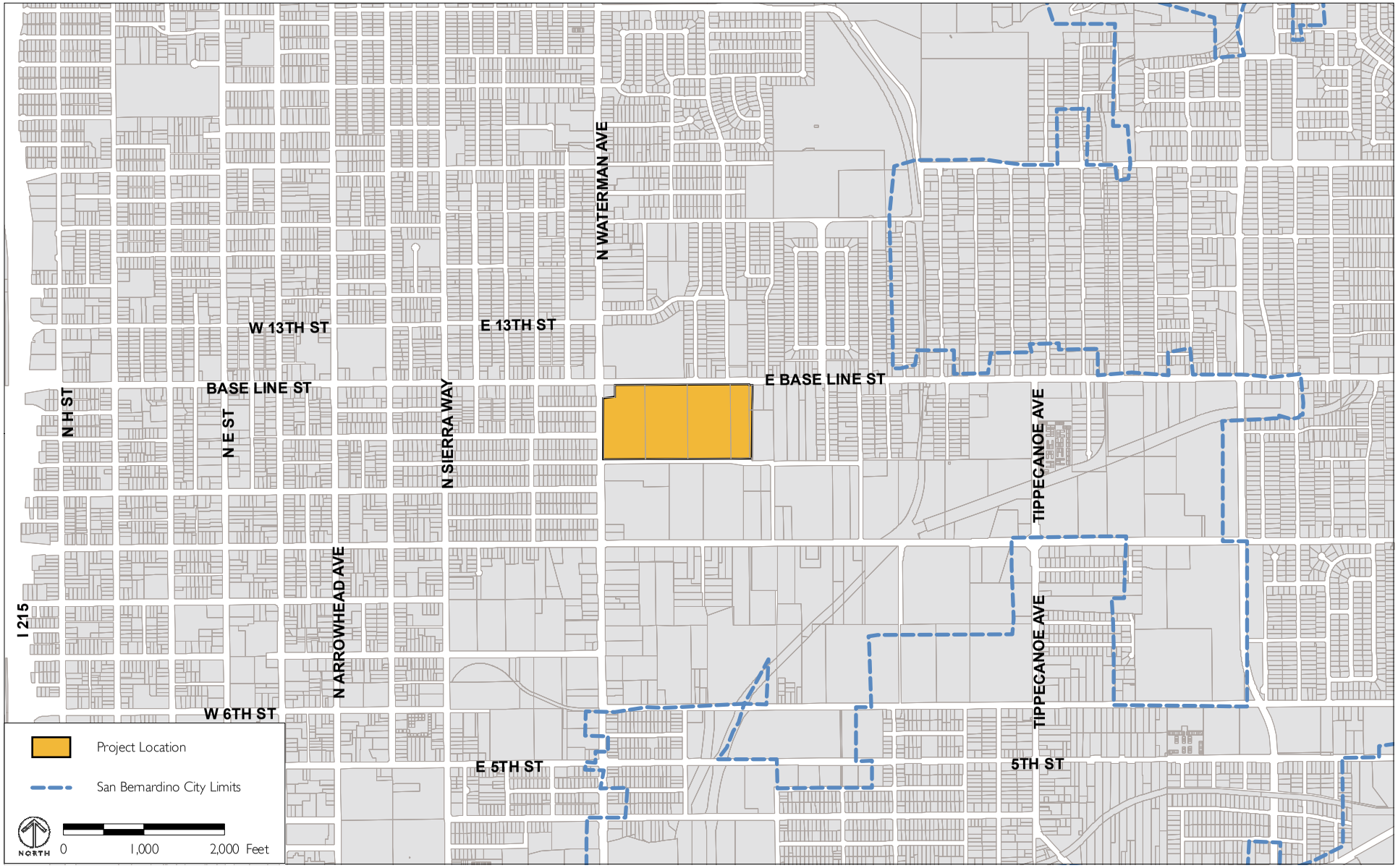
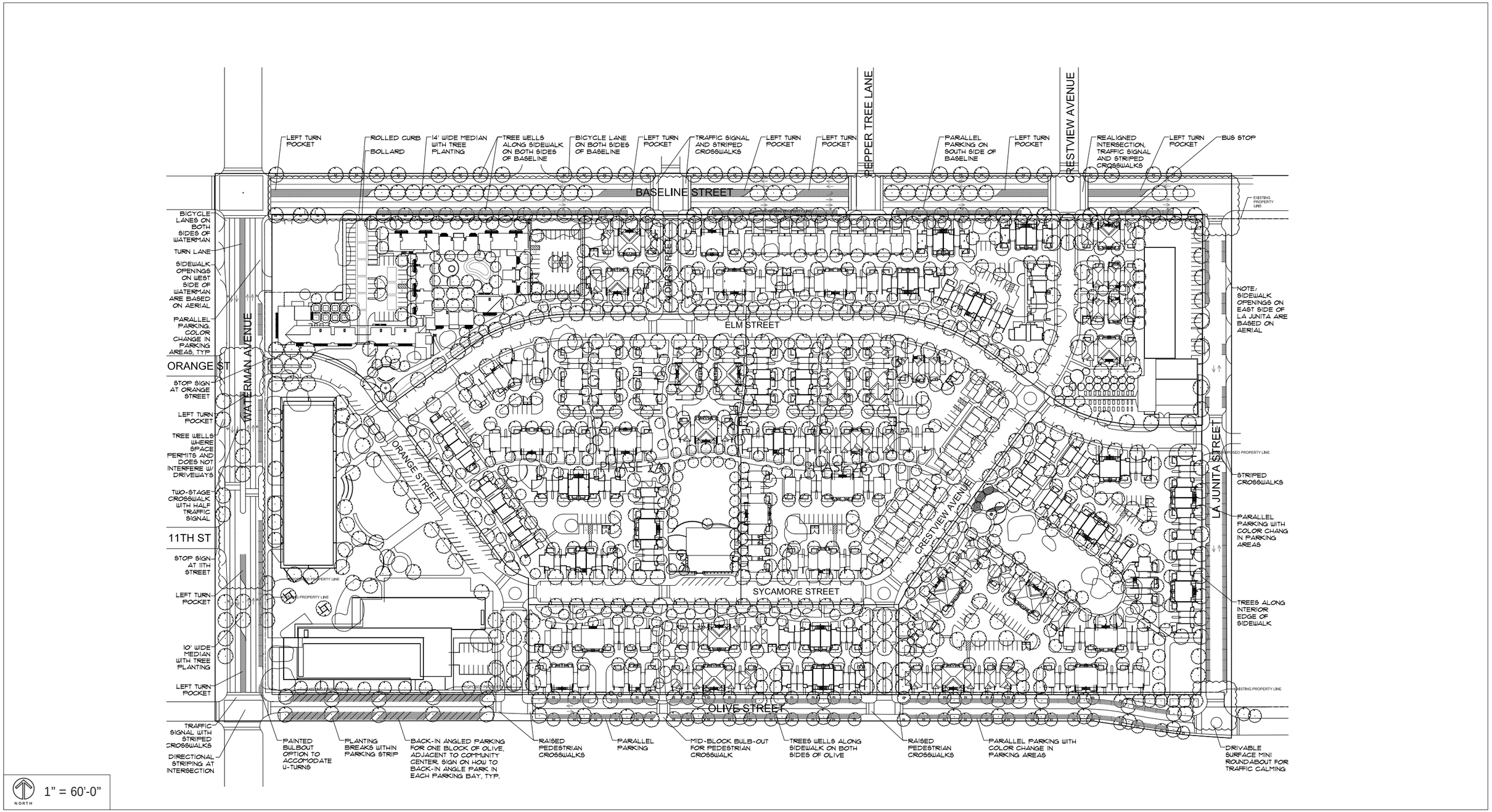


FIGURE 12
PROJECT AREA

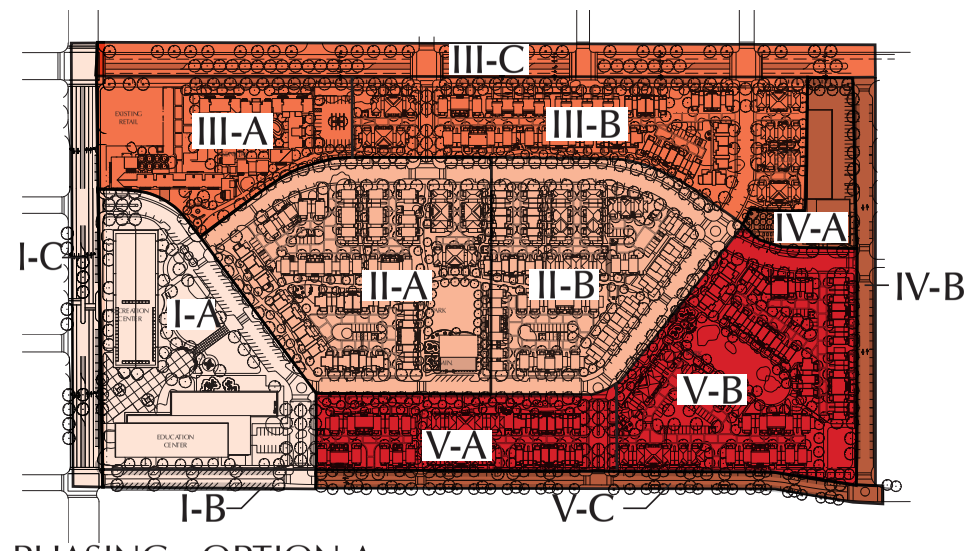


Source: Pyatok Architects, 2012.

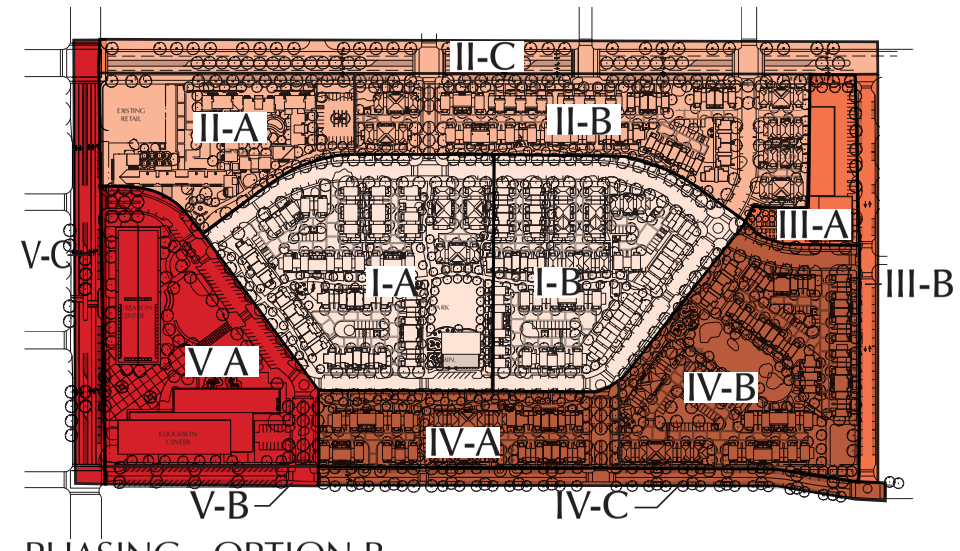
FIGURE 13A

PROJECT SITE PLAN

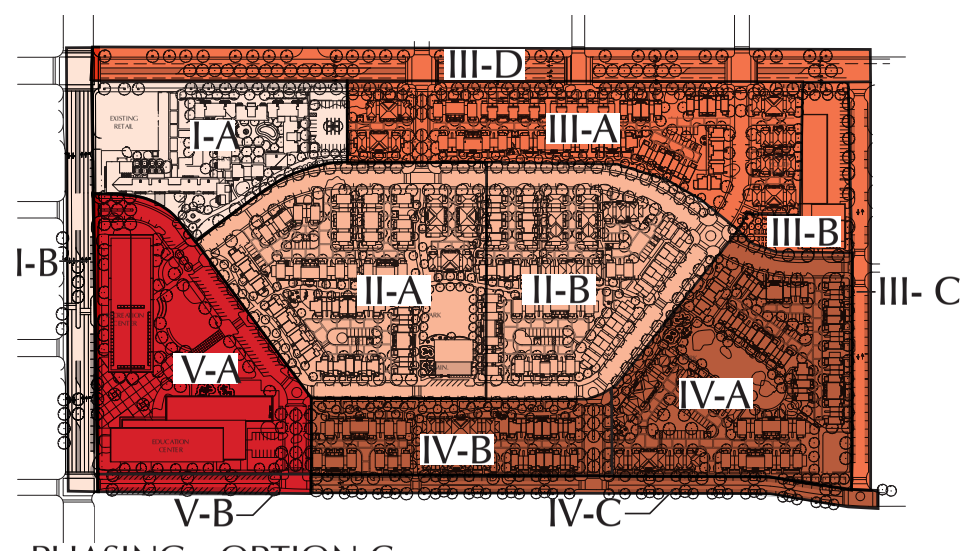
Back of 11 x 17



PHASING - OPTION A



PHASING - OPTION B



PHASING - OPTION C

NORTH

Source: Pyatok Architects, 2012.

FIGURE 13B

PROJECT PHASING PLAN ALTERNATIVES

Based on the U.S. Census Bureau 2010 census data, the project site currently houses 844 people, which is equivalent to 3.35 persons per dwelling unit. Using this same population density, the proposed project would have a population of 1,377 or an increase of 533 persons. Since the proposed project will result in the demolition of existing residential structures, these residents will need to be relocated. As described in the Relocation Plan, provided in Appendix L, sufficient replacement housing is available in the area surrounding the project site to house all displaced residents of Waterman Gardens. The Housing Authority of the County of San Bernardino (HACSB) will provide relocation assistance and other services as described in the Relocation Plan.

There are three phasing alternatives proposed for the project. The land owner shall submit the final proposed phasing plan prior to issuance of first building permit.

Under **Phasing-Option A**, the project would be phased as follows:

- Phase-1A would include demolition of existing structures in the southwest corner of the property and construction of the Recreation Center and Community Center. A total of 50 dwelling units would be removed during this phase.
- Phase-1B would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along the western portion of Olive Street.
- Phase-1C would include the improvements to the public roadway surrounding the project site including the traffic calming measures including center medians and traffic signals along Waterman Avenue.
- Phase-2A would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 75 units and the Administration Building would be created during this phase.
- Phase-2B would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 76 units would be created during this phase.
- Phase-3A would include demolition of existing structures and construction of new structures in the northwest corner of the site. A total of 18 units would be removed and 73 units would be created during this phase.
- Phase-3B would include demolition of existing structures and construction of new structures in the northeast portion of the site. A total of 48 units would be removed and 79 units would be created during this phase.
- Phase-3C would include the improvements to the public roadway adjacent the project site including the traffic calming measures including center medians and traffic signals along Baseline Street.
- Phase-4A would include rehabilitation of the Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building during this phase.
- Phase-4B would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along La Junita Street.
- Phase-5A would include demolition of existing structures and construction of new structures along the south edge of the site along Olive Street. A total of 14 units would be removed and 38 units would be created during this phase.
- Phase-5B would include demolition of existing structures and construction of new structures in the southeast corner of the site. A total of 40 units would be removed and 69 units would be created during this phase.

- Phase-5C would include the improvements to the public roadway adjacent the project site including traffic calming measures including traffic signals along the eastern portion of Olive Street.

Under **Phasing-Option B**, the project would be phased as follows:

- Phase-1A would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 75 units and the Administration Building would be created during this phase.
- Phase-1B would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 76 units would be created during this phase.
- Phase-2A would include demolition of existing structures and construction of new structures in the northwest corner of the site. A total of 18 units would be removed and 73 units would be created during this phase.
- Phase-2B would include demolition of existing structures and construction of new structures in the northeast portion of the site. A total of 48 units would be removed and 79 units would be created during this phase.
- Phase-2C would include the improvements to the public roadway adjacent the project site including the traffic calming measures including center medians and traffic signals along Baseline Street.
- Phase-3A would include rehabilitation of the Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building during this phase.
- Phase-3B would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along La Junita Street.
- Phase-4A would include demolition of existing structures and construction of new structures along the south edge of the site along Olive Street. A total of 14 units would be removed and 38 units would be created during this phase.
- Phase-4B would include demolition of existing structures and construction of new structures in the southeast corner of the site. A total of 40 units would be removed and 69 units would be created during this phase.
- Phase-4C would include the improvements to the public roadway adjacent the project site including traffic calming measures including traffic signals along the eastern portion of Olive Street.
- Phase-5A would include demolition of existing structures in the southwest corner of the property and construction of the Recreation Center and Community Center. A total of 50 dwelling units would be removed during this phase.
- Phase-5B would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along the western portion of Olive Street.
- Phase-5C would include the improvements to the public roadway surrounding the project site including the traffic calming measures including center medians and traffic signals along Waterman Avenue.

Under **Phasing-Option C**, the project would be phased as follows:

- Phase-1A would include demolition of existing structures and construction of new structures in the northwest corner of the site. A total of 18 units would be removed and 73 units would be created during this phase.

- Phase-1B would include the improvements to the public roadway surrounding the project site including the traffic calming measures including center medians and traffic signals along Waterman Avenue.
- Phase-2A would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 75 units and the Administration Building would be created during this phase.
- Phase-2B would include demolition of existing structures and construction of new structures in the interior of the site. A total of 38 units would be removed and 76 units would be created during this phase.
- Phase-3A would include demolition of existing structures and construction of new structures in the northeast portion of the site. A total of 48 units would be removed and 79 units would be created during this phase.
- Phase-3B would include rehabilitation of the Existing Central Shop, Maintenance Building, Recycling Yard, and Community Garden Building during this phase.
- Phase-3C would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along La Junita Street.
- Phase-3D would include the improvements to the public roadway adjacent the project site including the traffic calming measures including center medians and traffic signals along Baseline Street.
- Phase-4A would include demolition of existing structures and construction of new structures in the southeast corner of the site. A total of 40 units would be removed and 69 units would be created during this phase.
- Phase-4B would include demolition of existing structures and construction of new structures along the south edge of the site along Olive Street. A total of 14 units would be removed and 38 units would be created during this phase.
- Phase-4C would include the improvements to the public roadway adjacent the project site including traffic calming measures including traffic signals along the eastern portion of Olive Street.
- Phase-5A would include demolition of existing structures in the southwest corner of the property and construction of the Recreation Center and Community Center. A total of 50 dwelling units would be removed during this phase.
- Phase-5B would include the improvements to the public roadway surrounding the project site including the traffic calming measures including traffic signals along the western portion of Olive Street.

Based on available funding, Phase 1 of the final phasing plan would begin in 2013 and last approximately two years. Phase 2 would begin in 2015 and last approximately three to four years. Phase 3 would begin in 2018 and last approximately two to three years. Phase 4 would begin in 2020 and last just over two years. Phase 5 would begin in 2022 and last just over two years. The existing project site is currently developed; therefore, demolition activity would occur during the start of each construction phase. The phases would overlap to some extent such that demolition for the upcoming phase would occur during the final months of construction from the preceding phase.

Directions: The Responsible Entity (RE) must make a determination as to whether the activities affiliated with the project will affect the resource under consideration and trigger formal compliance consultation procedures with the appropriate oversight agency and/or subsequent mitigation. You may consult guidance by clicking on links in each box below which also will take you to information from agency web sites. If the activity affects the resource, indicate (**A**) in the Status Determination Column below. Or indicate (**B**) in that column if the activity does not affect the resources under consideration. The compliance documentation column should indicate what source documentation was used to make the compliance determination and

copies of all necessary documentation should be attached to the completed form for inclusion in the Environmental Review Record (ERR).

Statutes, Executive Orders, and Regulations listed at 24 CFR Sec. 58.5 and 58.6	**Status Determination (A or B)**	**Compliance Documentation**
Wetland Protection [Executive Order 11990]	B	City of San Bernardino, 2005, *General Plan Update and Associated Specific Plans EIR*, page 5.3-11.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/floodplain		
Coastal Zone Management [Coastal Zone Management Act, 1972, sec. 307 (c) and (d)]	B	City of San Bernardino, 2005, *General Plan*, Figure I-1.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/coastal		
Historic Preservation [36 CFR Part 800]	B	Cogstone Resource Management, Inc., May 2011, *Historic Resource Evaluation*, pages 32-36. The Waterman Gardens housing complex has been found eligible for listing in the National Register of Historic Places (NHRP). Therefore, the proposed project activities to remove by demolition the existing buildings will be considered an adverse effect. Compliance with Mitigation Measures CUL-2a and 2b would reduce the impact to historical resources to a less than significant level.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/historic		
Floodplain Management [Executive Order 11988; 24 CFR Part 55]	B	City of San Bernardino, 2005, *General Plan*, Figure S-1.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/floodplain		
Sole Source Aquifers [40 CFR 149]	B	Environmental Protection Agency, Region 9, Sole Source Aquifer website, available at http://www.epa.gov/region9/water/groundwater/ssa.html. Accessed May 23, 2011.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/aqui		

Statutes, Executive Orders, and Regulations listed at 24 CFR Sec. 58.5 and 58.6	Status Determination (A or B)	Compliance Documentation
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Endangered Species Act [50 CFR 402]	B	City of San Bernardino, 2005, *General Plan Update and Associated Specific Plans EIR*, pages 5.3-5 and 5.3-11.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/endangeredspecies		
Wild and Scenic Rivers [16 U.S.C. 1271, Sec. 7(b), (c)	B	The project site does not contain any rivers or waterways.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/rivers		
Clean Air Act [40 CFR Parts 6, 51, 93]	A	The project is located in the San Bernardino Region of the South Coast Air Basin, which is nonattainment for ozone and particulate matter. Impact Sciences, Inc., July 2011, *Waterman Gardens Master Plan Project Air Quality Assessment*
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/cleanair		
Farmland Policy Act [7CFR Part 658]	B	State of California Department of Conservation, Farmland Mapping and Monitoring Program, 2008.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/farmlands		
Environmental Justice [Executive Order 12898]	B	The project would provide replacement affordable housing units and new community services. All environmental impacts can be mitigated to less-than-significant levels.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/justice		
Noise Abatement and Control [24 CFR Part 51, Subpart B]	B	Impact Sciences, Inc., October 2012, *Waterman Gardens Master Plan Project Noise Assessment*
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/noise		
Explosive and Flammable Operations [24 CFR Part 51 C]	B	The project site is surrounded by a variety of commercial businesses and is not in the immediate vicinity of

Statutes, Executive Orders, and Regulations listed at 24 CFR Sec. 58.5 and 58.6	Status Determination (A or B)	Compliance Documentation
		hazardous industrial operations. San Bernardino County Housing Authority, Waterman Gardens Master Plan Report, page 9.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/explosive		
Toxic Chemicals and Radioactive Materials [24 CFR Part 58, Sec 5(i)(2)]	B	The project site does not occur on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/hazardous		
Airport Clear Zones and Accident Potential Zones [24 CFR Part 51 Subpart D]	B	City of San Bernardino, 2005, *General Plan*, Figure LU-4.
Guidance: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/review/airport		

Determination: The preparers have complied with all provisions of 24 CFR Part 58, Subpart E—Environmental Review Process: Environmental Assessments, examining alternatives to the project itself, feasible ways to modify the project to eliminate or minimize adverse impacts, and based on steps (a) through (f) found in the regulations, determined one of the following:

(1) Finding of No Significant Impact (FONSI), whereby the Responsible Entity may proceed to Dissemination and publication of the FONSI, per regulations found at 24 CFR Part 58, sec. **58.43(a).**

(2) Finding of Significant Impact whereby the Responsible Entity must proceed to develop an Environmental Impact Statement (EIS) in compliance with 24 CFR Part 58, Subparts F or G.

PREPARER SIGNATURE:

DATE: _____

THE PLANNING CENTER
DC&E

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