Los Angeles County
Metropolitan Transportation Authority

Crenshaw/LAX Transit Corridor

Supplemental Draft Environmental Impact Statement / Recirculated Draft Environmental Impact Report

February 2011

Metro

U.S. Department of Transportation
Federal Transit Administration

CRENSHAW/LAX TRANSIT CORRIDOR PROJECT

SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT/ RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

prepared by

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

and

LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY

Pursuant to:

National Environmental Policy Act (42 USC §4332) 49 USC Chapter 53, 49 USC §303, 16 USC §470, 23 CFR Part 771, 23 CFR Part 450, Executive Order 12898 Section 6002 SAFETEA-LU, 40 CFR parts 1500-1508, and California Environmental Quality Act, PRC 21000 *et seq.*; and the State of California CEQA Guidelines, California Administrative Code, 15000 *et seq.*

Leslie T. Rogers

Leslie T. Rogers
Region IX Regional Administrator
Federal Transit Administration

Date: FEB 9 2011

Arthur T. Leahy

Arthur T. Leahy
Chief Executive Officer
Los Angeles County
Metropolitan Transportation Authority

Date: January 27, 2011

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SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT/

RECIRCULATED ENVIRONMENTAL IMPACT REPORT

LEAD AGENCIES: Federal Transit Administration, U.S. Department of Transportation and Los Angeles County Metropolitan Transportation Authority

STATE CLEARINGHOUSE NO. 2007091148

TITLE OF PROPOSED ACTION: Crenshaw/LAX Transit Corridor Project

ABSTRACT: This document evaluates maintenance facility sites considered after the Draft Environmental Impact Statement (DEIS) and Draft Environmental Impact Report (DEIR) was circulated to public agencies and the general public between September 11 and October 26, 2009. A new evaluation of maintenance sites is required because the LACMTA Board directed that the prior sites evaluated in the DEIS/DEIR be removed from consideration. Additionally, this document evaluates the Section 4(f) resources (parklands and historic resources) for refinements made to the Locally Preferred Alternative (LPA) for the Project and the corresponding area of potential effects (APE) for the Project based on more advanced engineering design.

Public and agency participation and comments as well as engineering requirements and environmental impact analysis of the proposed sites guided both the site identification and selection process for the maintenance site alternatives. The four sites examined in the SDEIS/RDEIR include one in each of the cities of Los Angeles, Inglewood, Hawthorne, and Redondo Beach. Potentially significant impacts could occur in each of the four alternatives. They are in the areas of land use planning, displacements and relocation, air quality, noise and vibration, hazardous materials, water quality, historic, archaeology, paleontology, economic, safety and security, Section 4(f), and construction. [No sites listed under Section 65962.5 of the Government Code (i.e., Cortese list) are located within the project study area.] Where appropriate, mitigation measures are identified to reduce potentially adverse environmental impacts that may result from the alternatives being considered.

COMMENTS ON THIS DOCUMENT: There is a minimum 45-day public review and comment period on the Supplemental Draft Environmental Impact Statement/Recirculated Environmental Impact Report that starts on February 18, 2011 and ends on April 4, 2011. A Public hearing will be held at the following location:

- **Flight Path Learning Center**
  Tuesday, March 1, 2011 6-8 p.m.
  6661 West Imperial Highway, Los Angeles, CA 90045

The Public hearing location is accessible to persons with disabilities. Any individual who requires special assistance, such as a sign language interpreter, to participate in a public hearing should contact Bronwen Trice at least 72 hours prior to the hearing at (213) 922-4465. Comments may be submitted at the public hearings in written or oral form. Comments may also be submitted in written form to: Roderick Diaz, Project Manager, Metro, One Gateway Plaza, MS 99-22-3, Los Angeles, CA 90012-2952, diazroderick@metro.net. Comments must be received no later than April 4, 2011 for inclusion in the Final Environmental Impact Statement/ Environmental Impact Report.

Additional written comments and/or questions concerning this document should be directed to:

Mr. Roderick Diaz
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Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza, MS 99-22-3
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INTRODUCTION

This Supplemental Draft Environmental Impact Statement (SDEIS)/Recirculated Draft Environmental Impact Report (RDEIR) presents additional information pertaining to the Crenshaw/Los Angeles International Airport (LAX) Transit Corridor Project, previously known as the Crenshaw Transit Corridor Project. Specifically, Part I of this environmental document provides additional environmental analysis of four new alternative maintenance facility sites for the proposed Project. Part II of this document presents the 4(f) Evaluation of eligible historic resources and parklands within the updated APE for the Project, including the additional maintenance site alternatives evaluated in Part I, that are eligible for the National Register of Historic Places. The Federal Transit Administration (FTA) is the federal lead agency pursuant to the National Environmental Policy Act (NEPA). The Los Angeles County Metropolitan Transportation Authority (Metro) is the local lead agency under the California Environmental Quality Act (CEQA).

Organization of the SDEIS/RDEIR for the Crenshaw/LAX Transit Corridor Project

Introduction

Part I Evaluation of New Maintenance Site Alternatives

- S.0 Summary of Maintenance Site Alternatives
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Relationship between the SDEIS/RDEIR and the Crenshaw/LAX Transit Corridor Project FEIS/FEIR

The Federal Transit Administration (FTA) planning and project development process, within which federal, State, and local officials plan and make decisions regarding major transit capital investments, contains five phases. These phases include: (1) system planning; (2) alternatives analysis and environmental review; (3) preliminary engineering; (4) final design; and (5) construction. As projects are conceived and advanced through these phases, their design, costs, benefits, and impacts are more clearly defined, with alternatives screened with the goal of identifying a Locally Preferred Alternative (LPA), which is cost-effective and provides the greatest benefit with the fewest adverse impacts. The

analysis in this SDEIS/RDEIR focuses on the new alternatives for the maintenance facilities site and the Locally Preferred Alternative (LPA) which have resulted in some changes in impacts from those evaluated in the Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR). Final design and construction of the project is initiated after project consideration and approval. This SDEIS/RDEIR is circulated for public and agency review. It is a focused document and is not a recirculation of the entire DEIS/DEIR.

A new evaluation of light rail maintenance sites is required because the Metro Board directed that the prior sites evaluated in the DEIS/DEIR be removed from consideration. Public and agency participation and comments were solicited and helped guide both the site identification and selection process for the maintenance site alternatives. Both California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) require consideration of a reasonable range of alternatives. The analysis of environmental impacts presented in this document identifies the type and severity of environmental impacts for each maintenance site alternative. Measures to avoid and mitigate adverse environmental impacts also are identified in this SDEIS/RDEIR.

Since the circulation of the DEIS/DEIR for the Crenshaw/LAX Transit Corridor Project, advanced conceptual engineering has been completed and the area of potential effects (APE) for the Project has been refined to reflect the LPA. This document evaluates the Section 4(f) resources (parklands and historic resources) for the refined APE. This document also presents a Section 4(f) evaluation. Section 4(f) of the Department of Transportation Act of 1966, as amended, (49 United States Code [U.S.C.] 303) states that the U.S. Department of Transportation may not approve the use of land from a significant publicly owned public park, recreation area, wildlife or wildfowl refuge, or any significant historic site unless a determination is made that:

- There is no feasible and prudent alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from such use.

This document is available for public review for a 45-day period between February 18, 2011 and April 4, 2011. The circulation period will include a public hearing. After the public hearing, the Metro Board will select a priority maintenance site based off this technical analysis and the comments received. After circulation of this SDEIS/RDEIR, a Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR) will be prepared for the project. The FEIS/FEIR will incorporate the following:

1. Draft Crenshaw/LAX Transit Corridor DEIS/DEIR
2. Comments on DEIS/DEIR
3. This SDEIS/RDEIR
4. Comments on Part I and Part II of this environmental document

All comments received will be addressed in the FEIS/FEIR and commitments, upon adoption by the Metro Board, will be made for implementing mitigation measures.

Local, state, regional, and Federal agencies will review the FEIS/FEIR to determine if all comments reflecting community and agency issues of concern have been addressed properly and to determine if interagency agreements and project mitigation measures have been incorporated into the document. If the FEIR is certified by the Metro Board, the FTA will issue a Record of Decision (ROD) for the FEIS and

Metro will file a Notice of Determination for the FEIR. The issuance of this environmental document is the final step in the environmental review process. Following publication of the ROD, Metro would enter into the final design and construction phases of the proposed Crenshaw/LAX Transit Corridor Project.

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PART I
EVALUATION OF NEW MAINTENANCE SITE ALTERNATIVES

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S.0 SUMMARY

This Supplemental Draft Environmental Impact Statement (SDEIS)/Recirculated Draft Environmental Impact Report (RDEIR) presents additional information pertaining to the Crenshaw/Los Angeles International Airport (LAX) Transit Corridor Project. Specifically, Part I of this environmental document provides additional environmental analysis on four new alternative maintenance facility sites for the proposed Project.

S.1 Project History

In December 2009, the Los Angeles County Metropolitan Transportation Authority (Metro) Board deliberated on the findings of the Crenshaw Transit Corridor Project Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR) that was circulated for public review between September 11 and October 26, 2009. Based on public input and Metro staff recommendations, the Metro Board adopted LRT as the preferred mode in the corridor. The Metro Board also adopted a route alignment evaluated in the DEIS/DEIR as the Locally Preferred Alternative (LPA). The Metro Board identified vertical alignment and station options for light rail for further consideration with the LPA in the future Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR).

Based on public comments and concerns expressed during the comment period, the Metro Board, as part of its actions on the Project, removed from further consideration the two preferred maintenance facility sites (Sites B and D) that were originally evaluated in the DEIS/DEIR. However, the development of a new maintenance facility in connection with the Crenshaw/LAX Transit Corridor Project is essential to the successful implementation of the Project. Moreover, there is a lack of adequate capacity at Metro's existing light rail maintenance facilities and logistical issues require that a new maintenance facility be constructed.

S.2 Purpose of the Crenshaw/LAX Transit Corridor Project

The purpose of the Crenshaw/LAX Transit Corridor Project is to provide an effective north-south transportation network within the Crenshaw Transit Corridor that is vital to alleviate current and projected connectivity and mobility problems.

S.3 Purpose of the Light Rail Maintenance Facility Project

The purpose of the Light Rail Maintenance Facility Project (Project) is to identify and evaluate sites for a light rail maintenance facility for the Crenshaw/LAX Transit Corridor Project. A maintenance facility must be constructed to support the line's light rail vehicle (LRV) maintenance and storage, and the operational needs of this extension of the Metro LRT system. The proposed Crenshaw/LAX Transit Corridor Project is an extension of the existing Metro LRT system. The existing system has maintenance facilities that potentially could be used for the proposed facilities; however, many are currently operating near or beyond their planned capacity. Therefore, additional capacity is required to operate the Crenshaw/LAX Transit Corridor Project. The Crenshaw/LAX

Transit Corridor Project requires 33 LRVs operating on opening day in 2018 and a base capacity of 45 LRVs with potential to expand to an ultimate storage capacity for 70 LRVs.

S.4 Purpose of the Document

The existing system has maintenance facilities that are currently operating near or beyond their planned capacity. Therefore, an additional maintenance facility is required to operate the Crenshaw/LAX Transit Corridor Project and environmental review of potential alternative sites is required. This environmental document is designed to provide an opportunity for federal, State, and local agencies, the general public, and affected property owners to comment on the potential environmental effects of four new maintenance facility sites that were not originally evaluated in the DEIS/DEIR.

To satisfy the requirements of the National Environmental Policy Act (NEPA), this SDEIS has been prepared to evaluate these four maintenance facility sites for the proposed Project. As is the case with the overall Crenshaw/LAX Transit Corridor Project, the Federal Transit Administration (FTA) and Metro are joint lead agencies under NEPA.

Similarly, this document has been prepared as an RDEIR to address additional information needed to assess the impacts of the four new maintenance facility sites consistent with California Environmental Quality Act (CEQA) guidelines. The recirculation of changed portions of the DEIR is provided for in CEQA guidelines, Section 15088.5. For purposes of satisfying CEQA requirements, Metro is the lead agency. Under CEQA, a lead agency is required to recirculate an Environmental Impact Report (EIR), or portions thereof, when significant new information is added to the EIR after public notice is given of the availability of the EIR for public review (under Section 15087), but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. The four new alternative maintenance facility sites satisfy these criteria, and are evaluated in this document.

Chapter I.1 of this document establishes the purpose and need for the new maintenance alternative sites. Chapter I.2 describes the identification, screening and description of the maintenance site alternatives. Chapter I.3 of this document describes the environmental impacts of the maintenance site alternatives. Chapter I.4 of this document describes the public outreach process for the identification, screening and evaluation of the maintenance site alternatives.

The public review and comment period for this document will extend from February 18, 2011 to April 4, 2011. Public testimony regarding the environmental effects of the alternative maintenance facility sites will be taken at a public hearing to be held during the review period on March 1, 2011 at 6:00 p.m.

This SDEIS/RDEIR is one component of the Crenshaw/LAX Transit Corridor Project and the analysis of the four new sites will be incorporated into the FEIS/FEIR along with responses to comments received during the public circulation and hearing. The FEIS/FEIR for the Crenshaw/LAX Transit Corridor Project FEIS/FEIR is scheduled to be completed in Summer 2011.

S.5 Proposed New Maintenance Facility Sites Evaluated

A multi-stage evaluation process that included extensive community outreach was conducted. This process initially identified 16 potential sites. With community input on the screening criteria, a fatal-flaw analysis found that eight of the potential sites should be eliminated from consideration. A subsequent advanced screening and selection process identified two additional sites. With the 18 total sites evaluated, four reasonable sites were selected for detailed environmental evaluation. As such, this document presents the additional environmental impact information pertaining solely to the four new alternative maintenance facility sites now under consideration.

The four new alternative maintenance facility sites evaluated in this document include the following:

- Site #14 – Arbor Vitae/Bellanca Alternative. This 17.6-acre site is located in the City of Los Angeles. This industrial use site is bounded by Arbor Vitae Street to the north, Neutrogena Corporation to the west, and Bellanca Avenue to the east.
- Site #15 – Manchester/Aviation Alternative. This 20.5-acre site is located in the City of Inglewood. This industrial use site is bounded by Aviation Boulevard to the east, Portal Avenue to the west, Arbor Vitae Street to the south, and LA Car Guy to the north.
- Site #17 – Marine/Redondo Beach Alternative. This 14.2-acre site is located in the City of Redondo Beach. This industrial use site is bounded by Redondo Beach Avenue to the west, the Harbor Subdivision to the east, and is adjacent to additional industrial warehouses to the north and south.
- Division 22 Northern Expansion Alternative. This 3.5-acre site is located in the City of Hawthorne. This industrial use site is bounded by the existing Division 22 Green Line Maintenance Facility to the south, the Harbor Subdivision to the east and north, and is adjacent to a professional office building to the west.

S.6 Summary of Impacts

This SDEIS/RDEIR has been prepared to analyze potential significant environmental impacts associated with the maintenance site alternatives for the Crenshaw/LAX Transit Corridor Project. As required by CEQA, mitigation measures are identified to avoid or substantially reduce the level of all identified significant adverse impacts, to the extent feasible. Table S-1 provides a brief summary of the impacts in each environmental topic and lists any required mitigation measures associated with identified significant impacts.

The following is a summary of significant impacts that would potentially occur with the proposed alternatives:

- Displacement and relocation impacts for the Site #14 - Arbor Vitae/Bellanca, Site #15 - Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives
- Economic and Fiscal impacts for the Site #14 - Arbor Vitae/Bellanca, Site #15 - Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives
- Historical building impacts would occur for all of the alternatives, should a building on the selected site be identified as historic
- Regional air quality impact during construction for the Site #14 - Arbor Vitae/Bellanca, Site #15 - Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives
- Localized air quality impact for the Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Alternatives during construction
- Noise impact during construction for the Site #14 – Arbor Vitae/Bellanca and Division 22 Northern Expansion Alternatives

All other impacts evaluated would be no impact, less-than-significant impact, or less than significant after mitigation.

Table S-1. Impact Summary with Mitigation Measures

Environmental Criteria	Site #14: Arbor Vitae/Bellanca	Site #15: Manchester/Aviation	Site #17: Marine/Redondo Beach	Division 22 Northern Expansion
Traffic	No Impact	No Impact	No Impact	No Impact
Mitigation Measure(s)	None Required			
Land Use and Development				
Division of Established Community	No Impact	No Impact	No Impact	No Impact
Adopted Plan Consistency	No Impact	No Impact	No Impact	No Impact
Surrounding Land Use Compatibility	No Impact	No Impact	No Impact	No Impact
Mitigation Measure(s)	None Required			
Displacements and Relocation of Existing Uses	Significant Impact After Mitigation	Significant Impact After Mitigation	Significant Impact After Mitigation	Less Than Significant After Mitigation
Mitigation Measure(s)	**DR1** Metro shall provide relocation assistance and compensation, per the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act, to those who are displaced or whose property is acquired as a result of a maintenance facility for the Crenshaw/LAX Light Transit Corridor Project located on Sites #14, #15, #17, or the D22N Expansion site.. **DR2** Metro shall set up a business relocation committee to oversee the relocation needs of the businesses that would be displaced as a result of a maintenance facility for the Crenshaw/LAX Transit Corridor Project located on Sites #14, #15, #17, or the D22N Expansion site. In addition, Metro shall attempt to minimize disruption to overall production of businesses that are connected with airport activities by relocating in as close proximity to LAX as possible. **DR3** For a maintenance facility located on Site #14 or Site # 15, Metro shall work with Los Angeles World Airports (LAWA) to ensure that potential displacement and relocation of rental car businesses are compatible with the long term implementation of the LAX Master Plan consolidated rental car center.			
Community and Neighborhood Impacts	Less-Than-Significant	Less-Than-Significant	Less-Than-Significant	Less-Than-Significant
Mitigation Measure(s)	None Required			
Visual Quality	No Impact	No Impact	No Impact	No Impact
Mitigation Measure(s)	None Required			
Air Quality	Less-Than-Significant	Less-Than-Significant	Less-Than-Significant	Less-Than-Significant
Mitigation Measure(s)	None Required			

Table S-1. Impact Summary with Mitigation Measures (continued)

Environmental Criteria	Site #14: Arbor Vitae/Bellanca	Site #15: Manchester/Aviation	Site #17: Marine/Redondo Beach	Division 22 Northern Expansion
Noise and Vibration	Less Than Significant	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None required			
Ecosystems/Biological Resources	No Impact	No Impact	No Impact	No Impact
Mitigation Measure(s)	None required			
Geotechnical/Subsurface/ Seismic/Hazardous Materials	Less Than Significant After Mitigation	Less Than Significant After Mitigation	Less Than Significant After Mitigation	Less Than Significant After Mitigation
Mitigation Measure(s)	**GEO1** All hazardous materials, drums, trash, and debris shall be removed and disposed of in accordance with regulatory guidelines. **GEO2** A health and safety plan shall be developed for persons with potential exposure to the constituents of concern , prior to construction of the Project.. **GEO3** Historical and present site usage along the many areas of the proposed alignment included businesses that stored hazardous materials and/or waste and used underground storage tanks, from at least the 1920s to the present. It is possible that areas with soil and/or groundwater impacts may be present that were not identified in this report, or were considered a low potential to adversely impact the subject property. In general, observations should be made during any future development activities for features of concern or areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, soil staining, or odorous soils. Phase II assessments shall be conducted for the properties within the selected alternative site and any contaminated sites shall be remediated to a level suitable for industrial development. **GEO4** There is a potential for lead based paint and asbestos containing building materials to be present at the maintenance facility sites. An asbestos survey and lead based paint survey shall be conducted on all sites where on-site structures would be demolished or significantly renovated. **GEO5** Best Management Practices (BMPs), required as part of the National Pollutant Discharge Elimination System (NPDES) permit program and application of the South Coast Air Quality Management District (SCAQMD) Rule 403, shall be implemented for any of the selected site alternatives to not only reduce potential soil erosion, but also to maintain soil stability and integrity during grading, excavation, below-grade construction, and the installation of foundations for aerial structures, and maintenance and operations facilities. BMPs would comply with applicable Uniform Building Codes and would include, but not be limited to, scheduling excavation and grading activities during dry weather, covering stockpiles of excavated soils with tarps or plastic sheeting, and debris traps on drains			
Water Resources	Less Than Significant After Mitigation	Less Than Significant After Mitigation	Less Than Significant After Mitigation	Less Than Significant After Mitigation
Mitigation Measure(s)	**WQ1** During project construction and operation, remediation should be required at maintenance facilities and vehicle storage areas, where a potential exists for grease and oil contamination to flow into storm drains. Various types of ditch structures, including grease traps, sediment traps, detention basins, and/or temporary dikes, may be used to control possible pollutants. These facilities shall be constructed pursuant to guidance published in Section 402 of the Clean Water Act (CWA) and shall follow the most current guidance within the NPDES permit program for any of the site alternatives. **WQ2** The flood capacity of existing drainage or water conveyance features within the project study corridor shall not be reduced in a			

Table S-1. Impact Summary with Mitigation Measures (continued)

Environmental Criteria	Site #14: Arbor Vitae/Bellanca	Site #15: Manchester/Aviation	Site #17: Marine/Redondo Beach	Division 22 Northern Expansion
	way that causes ponding or flooding during storm events. A drainage control plan shall be developed during project design to ensure that drainage is properly conveyed from the study area and does not induce ponding on adjacent properties. **WQ3** A dewatering permit shall be required if groundwater is encountered during construction. The proposed project is located in an urbanized area where potential groundwater contamination may exist. If contaminated groundwater is encountered during construction, the contractor shall stop work in the vicinity of the suspect find, cordon off the area, and contact the appropriate hazardous waste coordinator and maintenance hazardous spill coordinator at Metro and immediately notify the Certified Unified Program Agencies (City of Los Angeles Fire Department, County of Los Angeles Fire Department, and Los Angeles Regional Water Quality Control Board or RWQCB) responsible for hazardous materials or waste incidents. Coordination with the Los Angeles RWQCB shall be initiated immediately to develop an investigation plan and remediation plan for expedited protection of public health and environment. Contaminated groundwater is prohibited from being discharged to the storm drain system. The contractor shall properly treat or dispose of any hazardous or toxic materials, according to local, state, and federal regulations). **WQ4** The study area currently drains indirectly to Ballona Creek and Dominguez Creek through the Municipal Separate Storm Sewer System (MS4). Treatment control BMPs shall be incorporated into the project design. The project shall consider placing the treatment BMPs in series or in a complimentary system to increase the control of pollutants to the maximum extent practicable. The systems shall be designed to efficiently and effectively handle and treat dry and wet weather flows to the maximum extent practicable. A Standard Urban Stormwater Mitigation Plan (SUSMP) and appropriate drainage control plan shall be implemented to select and place appropriate permanent treatment BMPs. **WQ5** During construction of the project, on-site integrated management strategies that employ green infrastructure strategies to capture runoff and remove pollutants shall be used. Green infrastructure strategies combine a variety of physical, chemical, and biological processes that focus on conveying runoff to bioretention areas, swales, or vegetated open spaces.			
Energy	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required			
Historic, Archaeological, and Paleontological Resources	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required			
Parklands and Community Facilities	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required			

Table S-1. Impact Summary with Mitigation Measures (continued)

Environmental Criteria	Site #14: Arbor Vitae/Bellanca	Site #15: Manchester/Aviation	Site #17: Marine/Redondo Beach	Division 22 Northern Expansion
Economic and Fiscal Impacts	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Less-Than-Significant Impact After Mitigation
Mitigation Measure(s)	**DR1** Metro shall provide relocation assistance and compensation, per the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act, to those who are displaced or whose property is acquired as a result of a maintenance facility for the Crenshaw/LAX Transit Corridor Project located on Sites #14, #15, #17, or the D22N Expansion site.. **DR2** Metro shall set up a business relocation committee to oversee the relocation needs of the businesses that would be displaced as a result of a maintenance facility for the Crenshaw/LAX Transit Corridor Project located on Sites #14, #15, #17, or the D22N Expansion site. In addition, Metro shall attempt to minimize disruption to overall production of businesses that are connected with airport activities by relocating in as close proximity to LAX as possible. **DR3** For a maintenance facility located on Site #14 or Site # 15, Metro shall work with LAWA to ensure that potential displacement and relocation of rental car businesses are compatible with the long term implementation of the LAX Master Plan consolidated rental car center.			
Safety and Security	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact After Mitigation
Mitigation Measure(s)	**SS1** The maintenance facility shall be lit to standards that minimize shadows and all pedestrian pathways leading to/from sidewalks and parking shall be well illuminated. **SS2** Metro shall coordinate and consult with the LAPD, the Hawthorne Police Department, the Inglewood Police Department, or the Redondo Beach Police Department to develop safety and security plans for the alignment, parking facilities, and station areas, where such facilities fall within the specific jurisdiction..			
Construction Impacts (All Except Air Quality, Noise and Vibration)	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact After Mitigation
Construction (Air Quality)	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact

Table S-1. Impact Summary with Mitigation Measures (continued)

Environmental Criteria	Site #14: Arbor Vitae/Bellanca	Site #15: Manchester/Aviation	Site #17: Marine/Redondo Beach	Division 22 Northern Expansion
Construction (Noise)	Significant and Unavoidable Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact After Mitigation	Significant and Unavoidable Impact
Mitigation Measure(s)	**CON1** Visually obtrusive erosion control devices, such as silt fences, plastic ground cover, and straw bales shall be removed as soon as the area is stabilized. **CON2** Stockpile areas shall be located in less visibly sensitive areas and, whenever possible, not be visible from the road or to residents and businesses. **CON3** For security lighting during construction, lighting shall be aimed at the downward and away from residential and other sensitive uses adjacent the maintenance site alternatives, to the extent feasible. **CON4** Contractor shall maintain a clean and neat work environment at all times. **CON5** Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes. **CON6** Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday. **CON7** Contractors shall be required to utilize at least one of the measures set forth in SCAQMD Rule 403 Section (d)(5) to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site. **CON8** All haul trucks hauling soil, sand, and other loose materials shall maintain at least 6 inches of freeboard in accordance with California Vehicle Code Section 23114. **CON9** All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions). **CON10** Traffic speeds on unpaved roads shall be limited to 15 mph. **CON11** Operations on unpaved surfaces shall be suspended when winds exceed 25 mph. **CON12** Heavy equipment operations shall be suspended during first and second stage smog alerts. **CON13** On-site stockpiles of debris, dirt, or rusty materials shall be covered or watered at least two times per day. **CON14** Contractors shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications. **CON15** Contractors shall utilize electricity from power poles rather than temporary diesel or gasoline generators, as feasible. **CON16** Heavy-duty trucks shall be prohibited from idling in excess of five minutes, both on- and off-site. **CON17** Construction parking shall be configured to minimize traffic interference. **CON18** Construction activity that affects traffic flow on the arterial system shall be limited to off-peak hours, as feasible. **CON19** During project construction, remediation shall be required at maintenance facilities and vehicle storage areas, where a potential exists for grease and oil contamination to flow into storm drains. Various types of ditch structures, including grease traps, sediment traps, detention basins, and/or temporary dikes shall be used to control possible pollutants. These facilities shall be constructed pursuant to guidance published in Section 402 of the Clean Water Act (CWA) and shall follow the most current guidance within the NPDES program. **CON20** The maintenance site alternatives currently drain indirectly to Ballona Creek and Dominguez Channel through the MS4. Treatment control BMPs shall be incorporated into the project design. The project shall consider placing the treatment BMPs in series or in a complimentary system to increase the control of pollutants to the maximum extent practicable. The systems shall			

Table S-1. Impact Summary with Mitigation Measures (continued)

Environmental Criteria	Site #14: Arbor Vitae/Bellanca	Site #15: Manchester/Aviation	Site #17: Marine/Redondo Beach	Division 22 Northern Expansion
	be designed to efficiently and effectively handle and treat dry and wet weather flows to the maximum extent practicable. A SUSMP and appropriate drainage control plan shall be implemented to select and place appropriate permanent treatment BMPs. **CON21** Nearby business owners and commercial property owners shall be notified of the schedule for specific planned construction activities, changes in traffic flow, and required short-term modifications to property access. **CON22** Architectural coatings shall be purchased from a compliant architectural coating manufacturer as identified by the SCAQMD. **CON23** Contractors shall comply with SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). The requirements for demolition activities include asbestos surveying, notification, Asbestos-containing materials (ACM) removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. **CON24** Noise barriers (e.g., sound attenuation blankets or solid walls) shall be placed such that the line-of-sight is blocked between sensitive receptors (e.g., residential and institutional land uses) and the project site, as feasible. **CON25** During the early stages of construction plan development, natural and artificial barriers, such as ground elevation changes and existing buildings, shall be considered for use as shielding against construction noise. **CON26** The contractor shall comply with Standard Specification 1565, FTA noise criteria and all local sound control and noise level rules, regulations, and ordinances that apply to any work performed pursuant to the contract. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated without a muffler. **CON27** Grading and construction contractors shall use quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than metal-tracked equipment) as much as possible. **CON28** The contractor shall submit a noise plan for construction activity associated with the Division 22 Northern Expansion and Site #14 – Arbor Vitae/Bellanca Alternatives. The plan shall be prepared by a qualified acoustical engineer and should be approved by the resident engineer before construction is initiated. The noise control plan shall include an inventory of the equipment, the estimated noise level at 50 feet for each major piece of equipment, calculations of the noise levels at impacted sensitive receptors, and noise reduction measures for sensitive receptor locations where the predicted noise levels exceed the ambient noise level by 5 dBA. Impacted receptors include, but may not be limited to, adjacent residences to the south of the Division 22 Northern Expansion Alternative and residences to the west of the Site #14 – Arbor Vitae/Bellanca Alternative.			
Growth-Inducing Impacts	No Impact	No Impact	No Impact	No Impact
Mitigation Measure(s)	None Required			
Cumulative Impacts	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required			

1.0 PURPOSE AND NEED

1.1 Purpose of the Crenshaw/LAX Transit Corridor Project

The purpose of the Crenshaw/Los Angeles International Airport (LAX) Transit Corridor Project is to provide an effective north-south transportation network within the Crenshaw Transit Corridor that is vital to alleviate current and projected connectivity and mobility problems.

1.2 Purpose of the Light Rail Maintenance Facility

The purpose of the Light Rail Maintenance Facility Project (Project) is to select a light rail maintenance facility for the Crenshaw/LAX Transit Corridor Project. A maintenance facility must be constructed to support the line's light rail vehicle (LRV) maintenance and storage, and the operational needs of this extension of the Metro light rail transit (LRT) system.

The proposed Crenshaw/LAX Transit Corridor Project is an extension of the existing Metro LRT system. The existing system has maintenance facilities that potentially could be used for the proposed facilities; however, many are currently operating near or beyond their planned capacity. Therefore, additional capacity is required to operate the Crenshaw/LAX Transit Corridor Project. The Crenshaw/LAX Transit Corridor Project requires 33 LRVs operating on opening day in 2018, with anticipated operation of the maintenance facility beginning in 2015. In December 2010, the Metro Board adopted a consolidated development strategy for maintenance facilities associated with the expansions of the Metro Green Line and the three new transit extensions – the Crenshaw/LAX Transit Corridor, the South Bay Metro Green Line Extension, and the Metro Green Line Extension to LAX. Under the consolidated development strategy, the maintenance facility proposed as part of the Crenshaw/LAX Transit Corridor Project would service cars for the Crenshaw/LAX Transit Corridor and the Metro Green Line. In order to accommodate future growth of all these lines, consideration is being made for the maintenance facility to have a base capacity of 45 LRVs and to eventually expand the maintenance facility to accommodate up to 70 LRVs.

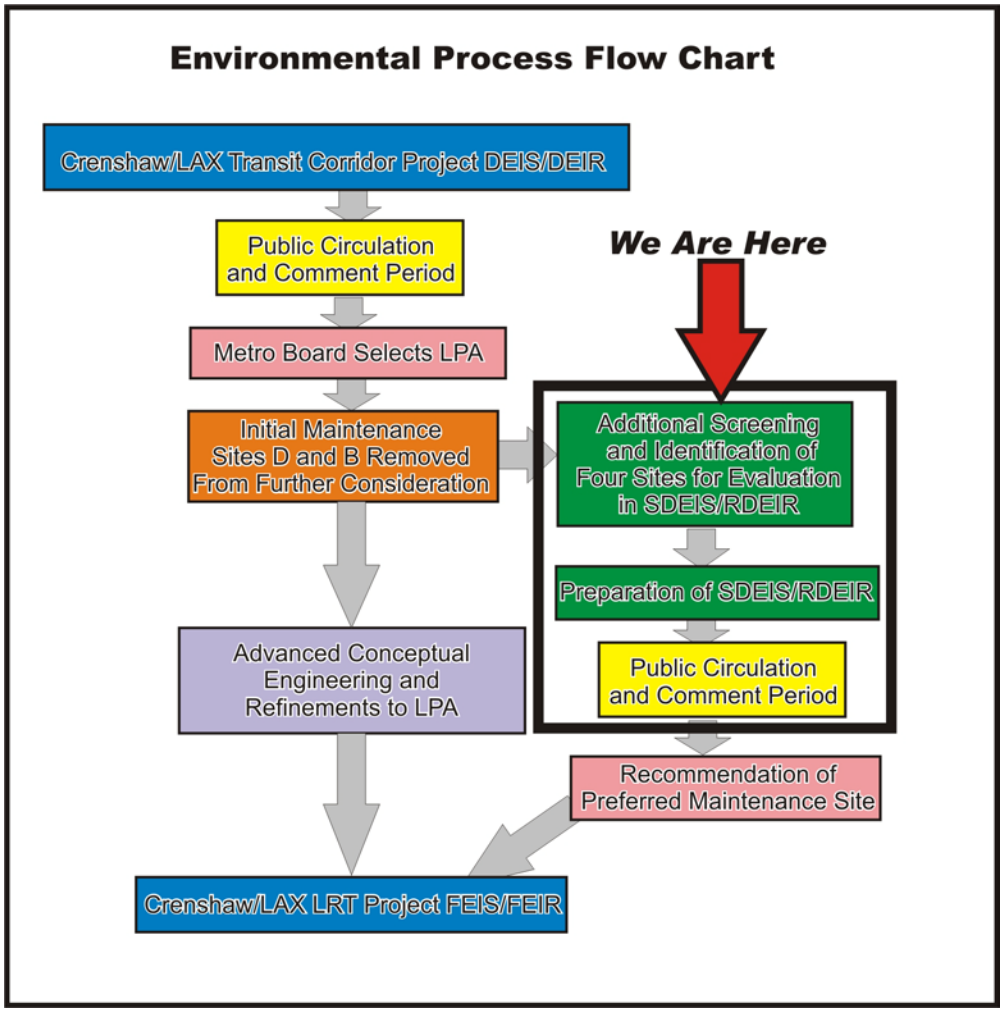
Routine maintenance activities are necessary to ensure the daily, reliable operation of the LRVs, including preventative, corrective, overhaul, and warranty maintenance activities. These services consist of regularly scheduled maintenance activities to maintain the performance level of the vehicle and its components. When an LRV becomes disabled, it must be moved to the closest maintenance facility to be serviced quickly. In order to provide LRV service that is reliable, cost effective, and does not adversely affect the remainder of the LRT system, it is important that the maintenance facility be located in close proximity to the proposed alignment for the light rail tracks.

1.3 Environmental Process

This document discloses to interested agencies, the public, and other interested parties the potential impacts of the maintenance facility site alternatives for the Crenshaw/LAX Transit Corridor Project. Following the public review and comment period, the Metro Board of Directors will review and consider the comments together with the outcome of

the technical analyses to determine the preferred maintenance facility site to be included as part of the Crenshaw/LAX Transit Corridor Project. Figure 1-1 shows the environmental process for the selection of a maintenance facility within the overall Crenshaw/LAX Transit Corridor Project.

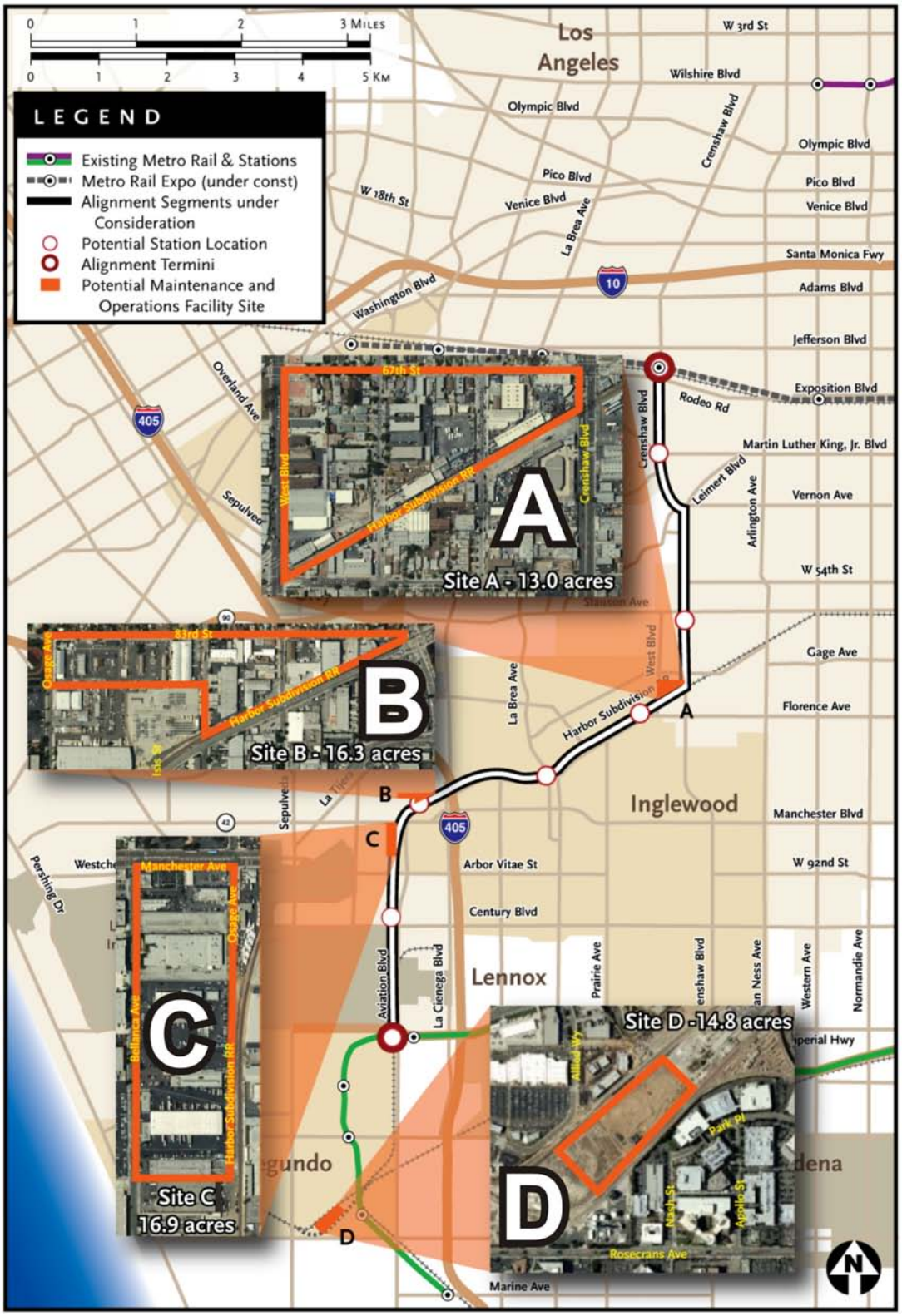
Figure 1-1. Environmental Process



On December 10, 2009, Metro Board of Directors adopted the LRT Alternative as the Locally Preferred Alternative (LPA) for the project. Construction of the Crenshaw/LAX Transit Corridor Project is scheduled to begin in Fiscal Year 2012, with operation commencing in 2018, or earlier, depending on funding availability. A total of four potential maintenance facility sites (A-D) were evaluated in the Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR) for the project. These sites are shown in Figure 1-2.

These four sites were compared and contrasted using several factors including: size and proximity to the line; land use and zoning; land ownership; buffers; potential expansion; community disruption; and, most valuable and best use.

Figure 1-2. Previous Maintenance Facility Sites Considered in DEIS/DEIR



Source: Parsons Brinkerhoff 2008.

Based on the analysis, the four potential maintenance facility sites were ranked as follows: 1) Site D, 2) Site B, 3) Site C, and, 4) Site A. Site A and Site C were screened out based on the criteria and Site B and Site D were evaluated in the DEIS/DEIR. During circulation of the DEIS/DEIR, Site D and Site B elicited local opposition from some, including municipal officials, elected representatives, and abutting business and property owners.

To try to address and resolve these concerns, the Metro Board directed that Sites D and B be removed from further consideration and an additional alternative maintenance facility sites be evaluated. One site will ultimately be selected to be the maintenance facility for the Crenshaw/LAX Transit Corridor Project.

In the analysis of new alternative sites, a total of 18 sites were identified for consideration. These sites were screened using the same criteria that was used to evaluate the original four sites and was developed from public input at community outreach meetings. This evaluation and screening process resulted in the selection of four sites to be analyzed in this Supplemental Draft Environmental Impact Statement/Recirculated Draft Environmental Impact Report (SDEIS/RDEIR).

1.4 Need

The Crenshaw/LAX Transit Corridor Project requires a maintenance facility in order to operate and maintain the fleet. The need is based on the capacity constraints of the existing light rail transit system and lack of interchangeability of the existing light rail maintenance facilities.

The new maintenance facility would need to be approximately 10 to 15 acres (3 to 4 cars per acre) in size to store, inspect, maintain, and repair LRVs and to provide a base for the maintenance and repair of the track, power, and signal systems for operation of the light rail service. A facility of this size would require approximately 200 employees with approximately 60 employees working 3 shifts, street access for employee and visitor parking and truck deliveries, a new wye track connection for rail access to the proposed light rail track alignment, and additional tracks to store and maintain the LRVs when they are not in service. The maintenance facility would require a traction power substation and an emergency generator to provide 24-hour lighting and power to the overhead catenary system that powers the LRVs.

1.5 Existing Light Rail Maintenance Facilities

Metro currently has a total of three light rail maintenance facilities, which are summarized in Table 1-1.

1.6 Planned or Proposed Light Rail Maintenance Yards

Metro is active in ongoing efforts to expand the light rail network and services. Currently, the Exposition light rail line is under construction. Another, the Gold Line Foothill Extension, is a new line with a two-phase construction and the Gold Line Eastside Extension is an extension of an existing line. Six additional new lines, or

Table 1-1. Summary of Existing Light Rail Maintenance Facilities

	Long Beach Maintenance Facility (Division 11)	Hawthorne Maintenance Facility (Division 22)	Midway Maintenance Facility (Division 21)
Function	Vehicle storage, inspection, cleaning, and all major light and running repair functions for LRVs assigned to the Metro Blue Line.	Vehicle storage, inspection, cleaning and light and running repair functions for LRVs assigned to the Metro Green Line. The facility does not provide services for heavy repair, painting, overhauls, reconditioning, and structural repairs. When such repairs are necessary, Metro Green Line LRVs are moved via rail to the Metro Blue Line Maintenance Facility. A non-revenue track at the Imperial/Wilmington Station connects the Metro Green and Blue Lines.	Vehicle storage, inspection, cleaning, and light and running repair functions for LRVs assigned to the Metro Gold Line. The facility does not provide services for heavy repair, painting, overhauls, reconditioning, and structural repairs. When necessary, Metro Gold Line LRVs are moved via surface transportation (truck/trailer) to the Metro Blue Line Maintenance Facility.
Location	15 miles south of Downtown Los Angeles, adjacent to the Metro Blue Line right-of-way between the Del Amo and Wardlow Stations in North Long Beach	Adjacent to the Metro Green Line right-of-way, between the Douglas and Redondo Beach Stations	1.5 miles north of Union Station, adjacent to the Los Angeles River and the Metro Gold Line right-of-way, between the Chinatown and Lincoln/Cypress Stations
Total Storage Capacity (LRVs)	86	39	50

extensions, are in various planning phases. However, not all are committed to becoming a rail project or being implemented prior to the planning horizon for the Crenshaw/LAX Transit Corridor Project. However, three maintenance facility expansions are planned to support routine vehicle maintenance needs for lines currently in the construction phase. Their purpose and a description of the Line are summarized in Table 1-2.

A new body shop is being constructed at the Midway Maintenance Facility to support increased exposure associated with extended street running sections on the Metro Gold Line Eastside Extension. This facility will give Division 21 adequate facilities to support Metro Gold Line LRVs. The new body shop will greatly reduce the need to move vehicles via truck or trailer to the Long Beach Maintenance Facility (Division 11) for major repairs. Total capacity at this expanded facility remains at 50 LRVs.

The Exposition Metro Line Construction Authority, a separate autonomous public agency from Metro, has proposed a new maintenance facility (storage only) for vehicles assigned to the Exposition Line in Santa Monica. With the addition of the Exposition Line and the trunked operation from the Washington and Flower junction to 7th Street/Metro Center, all operational facets of the Exposition Line and Blue Line will be combined, similar to

Table 1-2. Summary of Planned Light Rail Maintenance Facility Expansions

	Exposition Line	Gold Line Foothill Extension	Gold Line Eastside Extension
Function	Vehicle storage, inspection, cleaning and all major light and running repair functions for LRVs assigned to the Metro Exposition Line.	Vehicle storage, inspection, cleaning and light and running repair functions for LRVs assigned to the Metro Gold Line Foothill Extension.	Heavy repair, painting, overhauls, reconditioning, and structural repairs for LRVs assigned to the Metro Gold Line Eastside Extension.
Description of Line	Phase I extends Exposition Line from 7th/Metro Center Station in downtown Los Angeles to Culver City via Exposition Park. Phase II extends from Culver City to Santa Monica	Phase I extends from downtown Los Angeles to Pasadena. Phase 2A extends from Sierra Madre Villa Station in Pasadena to Azusa	Extends Metro Gold Line from Union Station to Pomona/Atlantic Station (East Los Angeles).
Line Operation Date (LRTP)	Phase I – FY 2011-2012 Phase II - FY 2015	Phase I – In operation Phase IIA - FY 2017	In operation
Line Operation Date (30/10)	Phase I – FY 2011-2012 Phase II - FY 2015	Phase I – In operation Phase IIA - FY 2015	In operation

Note: LRTP – Metro Long Range Transportation Plan. 30/10 – Accelerated plan to build all 30-year planned transportation projects within ten years.

the Heavy Rail Red and Purple Lines. The lines will be operated as a combined service with extensive use of "interlining" or sharing trunks. It would include, at a minimum, the following functions: vehicle storage, inspection, cleaning, and light and running repair functions. The proposed facility will have storage capacity for up to 48 LRVs. However, at this time, the proposal for this facility does not include heavy repair, paint, or bodywork shops. Currently, the only light rail maintenance facility that can provide these services is the Long Beach Maintenance Facility (Division 11), which is near capacity for these specific activities. A proposed paint and body shop is currently proposed to be built at the Green Line Division 22 facility. Additional facilities are required to provide services for heavy repairs.

The Foothill Construction Authority, working in cooperation with Metro, will construct a new maintenance facility for Metro Gold Line LRVs. This facility is tentatively designated Division 14 and would be located adjacent to the proposed right-of-way (exact location to be determined). It would provide vehicle storage, inspection, cleaning, and all major, light, and running repair functions. The proposed facility would have storage capacity for at least 50 LRVs with future expansion up to 80 LRVs.

1.7 Maintenance Facility Demand and Capacity

The Metro light rail system does not have practical interchangeability between the Metro Gold, Green, Blue, and Exposition Lines for the following reasons:

- The Metro Gold Line is isolated from the remainder of the system;
- The Metro Green Line train control system is unique to the line and Metro does not possess vehicles capable of operating between lines in revenue service; and

- It is impractical for Metro to retain the equipment, parts and maintainer skill-set for all maintenance facilities to be able to maintain all rolling stock types, except in an emergency.

As a result, practical interchangeability can only occur between the Blue and Exposition Lines and the Green Line and Crenshaw/LAX Transit Corridor Project. In addition, the Crenshaw/LAX Transit Corridor Project will ultimately have service that operates on the Green Line South Bay Extension. Therefore, because the existing Green Line is near capacity, additional maintenance service capacity is needed to operate the Crenshaw/LAX Transit Corridor Project. Table 1-3 displays a summary of maintenance facility fleet demand and capacity for the existing rail lines in the year 2018, when the Crenshaw/LAX Transit Corridor Project is scheduled to be in operation. Fleet demand represents the number of vehicles required to operate a given service. It is determined based upon the planned frequency of service (the number of cars per train required for the forecasted ridership) and the end to end travel time associated with the service.

Table 1-3. Metro Light Rail System Maintenance Facility Demand and Capacity - 2018

	Metro Blue/ Exposition Line	Metro Green Line	Metro Gold Line	Metro Crenshaw Line
Fleet Demand (Required Vehicles)	146	33	93	33
Expected Fleet Size	146	33	125	33
Maintenance Facility Capacity	146	39	134	0
Maintenance Facility Excess	0	+6	+9	-33

Source: Metro Rail Fleet Management Plan Revision 2, 2010.

1.8 Proposed Project Specific Maintenance Facility Requirements

The program for the proposed maintenance facility for the Crenshaw/LAX Transit Corridor Project was developed in consultation with Metro Operations and vehicle maintenance staff. Metro initially developed the *Rail Fleet Management Plan Revision 2* in October of 2010. This plan identified the need for additional maintenance facilities to be sited adjacent to the Metro rail system tracks to support future planned light rail lines. Metro Operations developed a detailed program of activities, equipment, and space requirements for a new maintenance facility to serve the proposed project. Metro has determined that the maintenance facility for the Crenshaw/LAX Transit Corridor Project should:

- Have a minimum operating capacity of 33 LRVs for opening day and a base capacity of 45 LRVs with potential to expand to an ultimate storage capacity for 70 LRVs, which would require approximately 125 to 200 employees working during three shifts over a 24-hour period;
- Be designed to allow for future expansion of additional services; and,

- Contain at least 40 parking spaces for employees, a transformer generator and traction power substation, a sheriff/security trailer, and buildings/shops to perform maintenance facility functions.

The specific maintenance activities that would be provided at the proposed maintenance facility are described in the following paragraphs.

Daily Maintenance

Interior Cleaning –Interior cleaning is performed during non-revenue service hours or when the vehicles are out of service. Basic hand tools and indoor space, to store cleaning equipment and chemicals, are required. The spacing of the yard tracks needs to accommodate aisles for personnel to access the vehicles. A raised platform is necessary within the yard, as well as space to deposit trash removed from the vehicles into trash receptacles.

Exterior Cleaning Car Wash – Exterior cleaning is performed within a blow down facility and a wash area that houses a self-contained system that sprays cleaner onto the vehicle, allows for a dwell time for cleaner reaction, brushes the exterior of the vehicle after the cleaner application and dwell, then rinses the vehicle. Drip pans and drains are used to facilitate the recycling of water.

Service

Running Repairs. Running repairs are those that can be easily accomplished by taking the vehicle off the line and out of revenue service, and into the facility, completing repairs in less than four hours. Examples of running repairs include broken window glass, indication light failure, and door system malfunctions. These tracks can be shared with inspection/ preventive maintenance tasks.

Component Replacement. Component replacement can be required for either a repair or a periodic maintenance item. When a component fails, it requires removal and replacement. When a component has reached the end of its predictable service life, it needs to be removed, rebuilt, and replaced. This relates to the preventive maintenance program, as described above.

Inspections

Daily Inspections – Inspection entails an exterior and interior examination to ensure the safe, clean, and timely operation of the vehicle. This inspection is performed by a mechanic and the operator of the vehicle prior to revenue service operation. The person conducting the inspection looks at lighting, door operations, mounted equipment, and conducts a terminal brake and horn test.

Periodic Inspections – Periodic inspections or a preventive maintenance program includes inspecting each vehicle based on mileage and vehicle operation time. The preventative maintenance program consists of regularly scheduled activities that are necessary to maintain the performance level of the vehicle and its components. Examples of typical activities include complete lubrication, calibration adjustments as required, and replacement of consumables such as air filters, brake pads/shoes, and pantograph carbon strips. Additionally, many items are subject to visual inspection and,

if necessary, repair and/or replacement. The space required to accomplish these tasks includes a track with a depressed pit and a track to perform trucking removal when required. A roof level platform (either fixed or mobile) will be required to access roof mounted equipment.

Support Shops

These are areas designated for the repair of subcomponents removed from the vehicles for repair. Support shops for an electrified LRV fleet would include:

- **Electrical Shop** – To facilitate the repair and rebuild of components utilized within the electrical system and power supply system.
- **Electronic/Communications Shop** – To facilitate the repair of components and circuit boards utilized in the communications and train control of the vehicles.
- **Maintenance of Way (MOW)** – The staff and equipment that maintain the railroad, related equipment, and right-of-way. The MOW tracks and facilities denoted within the site designs define where the MOW staff shall be housed as well as the MOW specialized vehicles/equipment stored.
- **Mechanical Component Shop** – To facilitate the repair of couplers, draft gears, and related sub-components.
- **Wheel Truing and Axle Shop** – To facilitate the repair, rebuilding, and testing of the wheel-set assemblies utilized on the subject vehicle fleet.
- **Wash/Cleaning** – To facilitate the power washing of vehicles and cleaning of components prior to repair.
- **Stores/Storeroom** – To facilitate the shipping, receiving, and storage of related parts and materials required to maintain vehicles, the facility, and support equipment. A separate building is often required for this activity.

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2.0 ALTERNATIVES CONSIDERED

This chapter describes the development, screening, and selection of alternative maintenance facility sites for the operation of the Crenshaw/Los Angeles International Airport (LAX) Transit Corridor Project. This information supplements information about alternatives considered included in the Draft Environmental Impact Statement (DEIS)/Draft Environmental Impact Report (DEIR). This chapter also presents the capital, operating, and maintenance cost estimates for each of the proposed maintenance facility site alternatives. Other project elements remain the same as described in the DEIS/DEIR.

The No Build Alternative for the Crenshaw/LAX Transit Corridor Project was evaluated in the DEIS/DEIR and has not changed. For a complete description of the No Build Alternative, refer to Chapter 2 of the DEIS/DEIR for the Crenshaw/LAX Transit Corridor Project.

2.1 Development of Alternatives

The identification of four maintenance site alternatives for this Supplemental Draft Environmental Impact Statement/Recirculated Draft Environmental Impact Report (SDEIS/RDEIR) followed a four-step process: 1. Identification of potential sites, 2. Initial screening, 3. Secondary screening, and 4. Advanced screening and design refinement. Each of these steps is described below.

2.1.1 Identification of Potential Sites

A public outreach meeting was held on February 24, 2010 to solicit community input on the identification of new potential maintenance facility sites. Concerned agencies and the public were presented with typical maintenance facility images and details. The site should include a maintenance building for daily servicing, preventive maintenance, repairs, and parts storage. The desirable characteristics of a typical maintenance site were identified at the meeting. The maintenance facility site should be 15 acres or more in size to allow for future expansion, rectangular in shape, and be located near the light rail line track alignment. The latter criterian minimizes right-of-way acquisition costs, operating costs and maximizes accessibility to the maintenance facility. The meeting attendees were given an opportunity to identify their suggestions for a maintenance facility site. Aerial maps were displayed in the meeting room, and meeting attendees placed markers on the maps to identify sites that should be considered. The markers used represented the size of potential sites. A set of 16 sites was developed, including sites suggested by the public, reconfiguration of some of these suggested sites (to meet size and shape requirements), and a review of the project corridor by the technical team. These initial sites are listed in Table 2-1 and are shown in Figure 2-1.

Table 2-1. List of Initial Sites Identified for the Proposed Maintenance Facility

#	Site Name	Size (acres)	Jurisdiction	Nearest Street Boundaries (north, east, south, west)	Land Uses
1	King/Marlton	22.0	Los Angeles	Martin Luther King Jr Blvd., Marlton Ave., Rosalia Dr., Buckingham Rd.	Commercial Redevelopment
2	Florence/Prairie	20.2	Inglewood	Florence Ave., Prairie Ave, Grace Ave., Hillcrest Blvd.	Institutional
3	Florence/Cedar	24.1	Inglewood	Oak St., Eucalyptus Ave., Harbor Subdivision, Oak St.	Industrial/ Institutional
4	Florence/Oak	5.1	Inglewood	Industrial Ave., Oak St., Harbor Subdivision, Hyde Park Blvd	Industrial
5	Manchester/Portal	28.4	Los Angeles	Manchester Blvd., Harbor Subdivision, Arbor Vitae St., Bellanca Ave.	Industrial/ Commercial
6	Arbor Vitae/Bellanca	7.3	Los Angeles	Arbor Vitae St., Harbor Subdivision, 96th St., Bellanca Ave.	Industrial
7	Manchester/Aviation	14.9	Los Angeles	Manchester Blvd., Aviation Blvd., Arbor Vitae St., Harbor Subdivision	Industrial
8	Arbor Vitae/Aviation	9.9	Los Angeles	Arbor Vitae St., Aviation Blvd., 98th St., Harbor Subdivision	Industrial
9	Century/Aviation	16.2	Los Angeles	Arbor Vitae St., La Cienega Blvd., Century Blvd., Aviation Blvd.	Residential/ Commercial/ Vacant
10	111th/Aviation	58.7	Los Angeles	104th St., La Cienega Blvd., 111th St., Aviation Blvd.	Commercial/ Industrial
11	Imperial/Aviation	29.8	Los Angeles	111th St., Hindry Ave., Imperial Hwy., Aviation Blvd.	Vacant
12	116th/Aviation	16.5	Los Angeles	116th St., Harbor Subdivision, 118th St., Douglas St.	Industrial
13	Florence/Cedar (#3 reconfigured)	14.3	Inglewood	Oak St., Eucalyptus Ave., Harbor Subdivision, Oak St.	Industrial
14	Arbor Vitae/Bellanca (#6 extended west)	30.5	Los Angeles	Arbor Vitae St., Harbor Subdivision, 96th St., Airport Blvd.	Industrial/ Commercial/ Residential
15	Manchester/Aviation (#7 reconfigured)	24.7	Inglewood	Manchester Blvd., Aviation Blvd., Arbor Vitae St., Harbor Subdivision	Industrial/ Commercial/ Vacant
16	Marine/I-405	18.6	Los Angeles	Marine Ave., I-405, Inglewood Ave., Harbor Subdivision	Planned Commercial Development

Source: TAHA, 2010.

Figure 2-1. Location of Initial Sites Identified for the Proposed Maintenance Facility

2.1.2 Initial Screening

After the identification of initial sites, a screening process was initiated that considered the following evaluation criteria:

- Minimize Impacts to Residential Areas
- Minimize Potential Noise Impacts
- Compatible with Adjacent Land Uses and Adopted Plans
- Minimize Displacement
- Construction Cost Effectiveness
- Accessibility of Site to Workers
- Minimize Traffic Disruption
- Accessibility to LRT Tracks
- Adequate Size and Shape
- Minimize Impacts to Other Transportation Facilities
- Minimize Impacts to the LRT System
- Ease of Land Acquisition

These evaluation criteria were used to eliminate unacceptable sites. Table 2-2 identifies the evaluation criteria and resulting evaluation used to screen the 16 initial sites. During this screening, eight of the 16 sites were identified as having fatal flaws and were eliminated from further consideration. The eight maintenance facility sites that were advanced as a result of this screening included the following:

- Site #1 – King/Marlton
- Site #5 – Manchester/Portal
- Site #11 – Imperial/Aviation
- Site #12 – 116th/Aviation
- Site #13 – Florence/Cedar Reconfigured
- Site #14 – Arbor Vitae/Bellanca Reconfigured
- Site #15 – Manchester/Aviation Reconfigured
- Site #16 – Marine/I-405

2.1.3 Secondary Screening

The eight remaining maintenance facility sites underwent a secondary screening process to identify potential alternative sites to be evaluated in this SDEIS/RDEIR. The eight sites were evaluated based on their relative performance against the evaluation criteria identified in Table 2-2. The project team also considered additional engineering analysis and guidance from the Project's Technical Advisory Committee.

Table 2-2. Evaluation of Maintenance Facility Sites

Potential Site Name	Minimize Impacts to Residential Areas	Minimize Potential Noise Impacts	Compatible with Adjacent Land Uses and Adopted Plans	Minimize Displacement	Construction Cost Effectiveness	Accessibility of Site to Workers	Minimize Traffic Disruption	Accessibility to LRT Tracks	Adequate Size and Shape	Minimize Impacts to Other Transportation Facilities	Minimize Impact to the LRT System	Ease of Land Acquisition	Overall Average Rating /a/
1: King/Marlton	○	○	○	◑	○	●	●	○	●	●	◑	○	○
2: Florence/Prairie	○	○	○	○	●	●	●	○	●	◑	●	○	○
3: Florence/Cedar	●	●	○	○	◑	●	●	●	◑	●	●	○	◑
4: Florence/Oak	●	●	○	○	●	●	●	●	○	●	●	○	●
5: Manchester/Portal	◑	◑	◑	◑	●	●	●	●	●	●	●	◑	●
6: Arbor Vitae/Bellanca	●	●	●	◑	●	●	●	●	○	●	◑	◑	●
7: Manchester/Aviation	●	●	●	◑	◑	●	●	◑	○	◑	●	◑	●
8: Arbor Vitae/Aviation	◑	◑	○	◑	◑	●	●	◑	○	◑	●	◑	◑
9: Century/Aviation	◑	◑	○	●	◑	◑	●	○	●	◑	●	○	◑
10: 111th/Aviation	●	●	○	●	○	●	●	○	●	○	●	○	◑
11: Imperial/Aviation	●	●	◑	●	○	●	●	○	●	○	●	◑	●
12: 116th/Aviation	◑	◑	○	◑	◑	○	●	○	○	○	●	○	○
13: Florence/Cedar Reconfigured	●	●	●	◑	◑	●	●	●	◑	●	●	◑	●
14: Arbor Vitae/Bellanca Reconfigured	●	●	◑	◑	●	●	●	●	●	●	◑	◑	●
15: Manchester/Aviation Reconfigured	●	●	●	◑	◑	●	●	◑	●	◑	●	◑	●
16: Marine/I-405	●	●	●	●	◑	●	●	◑	●	◑	◑	◑	●

Key: ● Best ◑ Fair ○ Poor ○ Fatal Flaw

/a/Last column is average rating for all categories. A fatal flaw only has to occur in one category and results in a constraint so severe, that no matter how highly ranked the site is, it cannot advance forward as a feasible alternative. Refer to Section 2.1.4 for a discussion how the six sites with best overall rating and no fatal flaws were narrowed to four.

Sites #1 and #12 were removed based on their poor overall summary ranking, as shown in the evaluation matrix. Sites #13 and #16 were also removed based on engineering constraints relative to the remaining alternatives. As a result, the four sites advanced to detailed evaluation included: Site #5 – Manchester/Portal; Site #11 – Imperial/Aviation; Site #14 – Arbor Vitae/Bellanca; and Site #15 – Manchester/Aviation.

2.1.4 Advanced Screening and Design Refinement

The four remaining maintenance facility sites underwent an advanced screening process to identify the alternative sites to be evaluated in this SDEIS/RDEIR. The advanced screening on the four sites specifically looked at potential economic effects. Consideration of economic effects took into account the following factors:

- Right-of-way acquisition costs
- Connection Costs
- Displacement of jobs/residents and difficulty of relocating existing businesses

This screening process included individual meetings with key property owners and tenants to characterize the existing conditions and potential constraints that would be involved with relocation. The project team also conducted additional engineering analysis to compare the total costs of implementing each of the proposed alternatives.

Metro completed an update to the Rail Fleet Management Plan in 2010. The results of the advanced screening and the Rail Fleet Management Plan Update (*Rail Fleet Management Plan Revision 2*) determined that a maintenance facility site could operate with a base capacity of 45 LRVs based on a frequent two-car operation and eventually 70 LRVs based on three-car operation. Based on these revised capacity requirements, it was determined that smaller sites could be considered that were originally identified.

The sites that underwent advanced screening were reconfigured for smaller footprints to limit the extent of the initial calculated costs. The reconfiguration of Site #5 – Manchester/Portal did not provide significant cost reduction or lessen the number of jobs that would be displaced, so this site was removed from consideration. Metro Operations also determined that the location of Site #11 – Imperial/Aviation would severely impair the operational efficiency of both the Crenshaw/LAX Line and Metro Green Line because of its proximity to the Metro Green Line junction, since two lines are planned to operate along this segment. It would be difficult for trains to insert trains from this site to revenue service without a disruption to service. This site also required an underground tunnel connection to access the site at an estimated cost of 90-100 million dollars. For these reasons, Site #11 – Imperial/Aviation was also removed for consideration.

The reconfiguration of Site #14 – Arbor Vitae/Bellanca to a smaller footprint was able to substantially reduce right-of-way acquisition costs and employment loss. Therefore, this site was carried forward for full evaluation into the SDEIS/RDEIR.

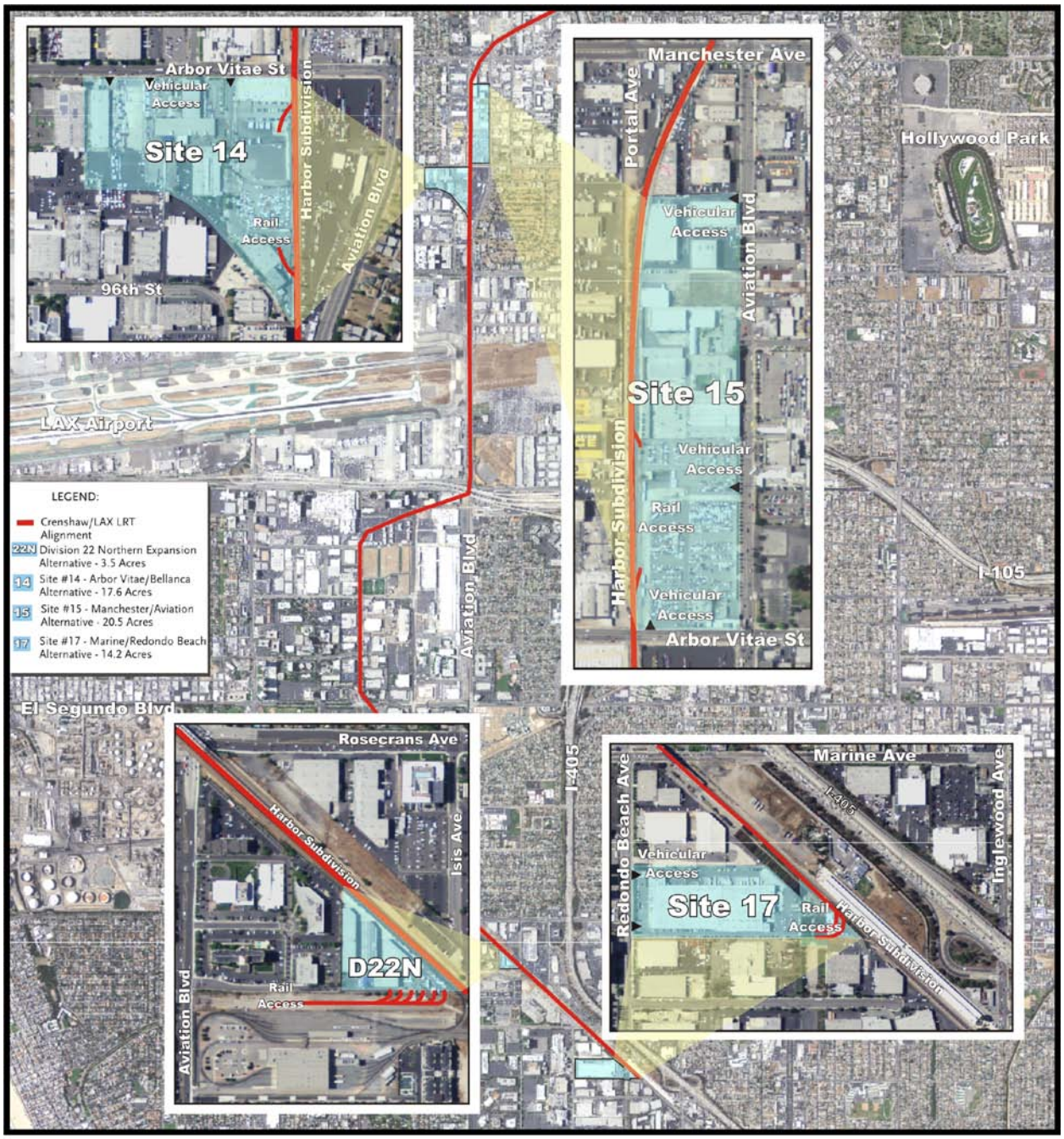
The reconfiguration of Site #15 – Manchester/Aviation to a smaller footprint was also able to reduce right-of-way costs and employment loss. Because this site initially had one of the lowest estimated right-of-way acquisition costs and employment loss, this site was also carried forward for full evaluation into the SDEIS/RDEIR.

The reduction in capacity requirements allowed Metro to revisit the initial sites that were eliminated related to size/engineering constraints. Based on the revised footprint, Metro concluded that Site #16 – Marine/I-405 could operate as a satellite facility with improvements made to the existing Metro Green Line Division 22 facility (Division 22). It would operate as a satellite because it would still not be large enough to contain all of the required routine maintenance services, office/shop space, and parking requirements. A satellite facility operates in conjunction with an existing facility with functions divided between the existing and new sites. For satellite facilities, the additional room needed for these services would be accommodated through onsite improvements to the existing Division 22. The two facilities would then work in tandem to meet the light rail maintenance requirements for the Metro Green Line and the Crenshaw/LAX Line. The improvements to the existing Division 22 would be included as part of the satellite alternative. The reconfiguration of Sites #14 – Arbor Vitae/Bellanca and #15 – Manchester/Aviation would still be large enough to operate all of the maintenance services required for the Crenshaw/LAX Line and could operate independently as a "standalone" facility, which would not require any additional improvements to the existing Division 22.

Subsequent meetings with the City of Redondo Beach revealed though, that Site #16 was planned for two hotels with construction to begin at the end of 2010 or the beginning of 2011. Preliminary cost estimates for right-of-way acquisition, impacts to construction and City of Redondo Beach sentiment that site acquisition would result in lengthy delay led Metro to remove this site from further consideration. However, an additional site, Site #17 – Marine/Redondo, was identified for consideration. Because of its smaller size and proximity to the existing Division 22, this site would also function as a satellite facility with improvements made to the Division 22 facility. This site underwent advanced screening and although two of the existing businesses have a substantial number of employees, it was anticipated that the acquisition costs and their relocation would be substantially less than the sites previously identified. As a result, Site #17– Marine/Redondo Beach was also included for full evaluation in the SDEIS/RDEIR.

Metro Operations determined that the expansion of services for existing Metro Green Line Division 22 maintenance facility (Division 22) on-site could result in an adjacent site that could provide additional storage tracks on the adjacent parcel to the north of the Division 22 Maintenance Facility, which is currently a public storage facility. These additional tracks would provide additional capacity to the existing Division 22. The additional tracks could provide enough storage to meet the opening day capacity needed for the Crenshaw/LAX Line, but there would not be enough room on the existing Division 22 for the expansion of facilities to support the additional maintenance services that would be required for the opening day requirements of the Crenshaw/LAX Line. The additional capacity that could be provided with expansion of maintenance services to the existing Division 22 could provide service for 16 additional LRVs to serve the Crenshaw/LAX Line. This would not meet the planned opening day requirements and would require a reconfiguration of the existing Metro Green Line operating plan to provide a service that could approach opening day requirements. While this site would not meet all of the objectives of the site selection process, its low cost, proximity, and ease of acquisition merited its inclusion as an alternative that provides the most maintenance service with the expansion of existing infrastructure. Figure 2-2 shows the locations of the four revised sites that emerged from the advanced screening process.

Figure 2-2. Location of Sites Identified for the Proposed Maintenance Facility



Source: TAHA 2010

2.2 Maintenance Site Alternatives Considered in this SDEIS/RDEIR

Four maintenance facility site alternatives were advanced from screening and are described below.

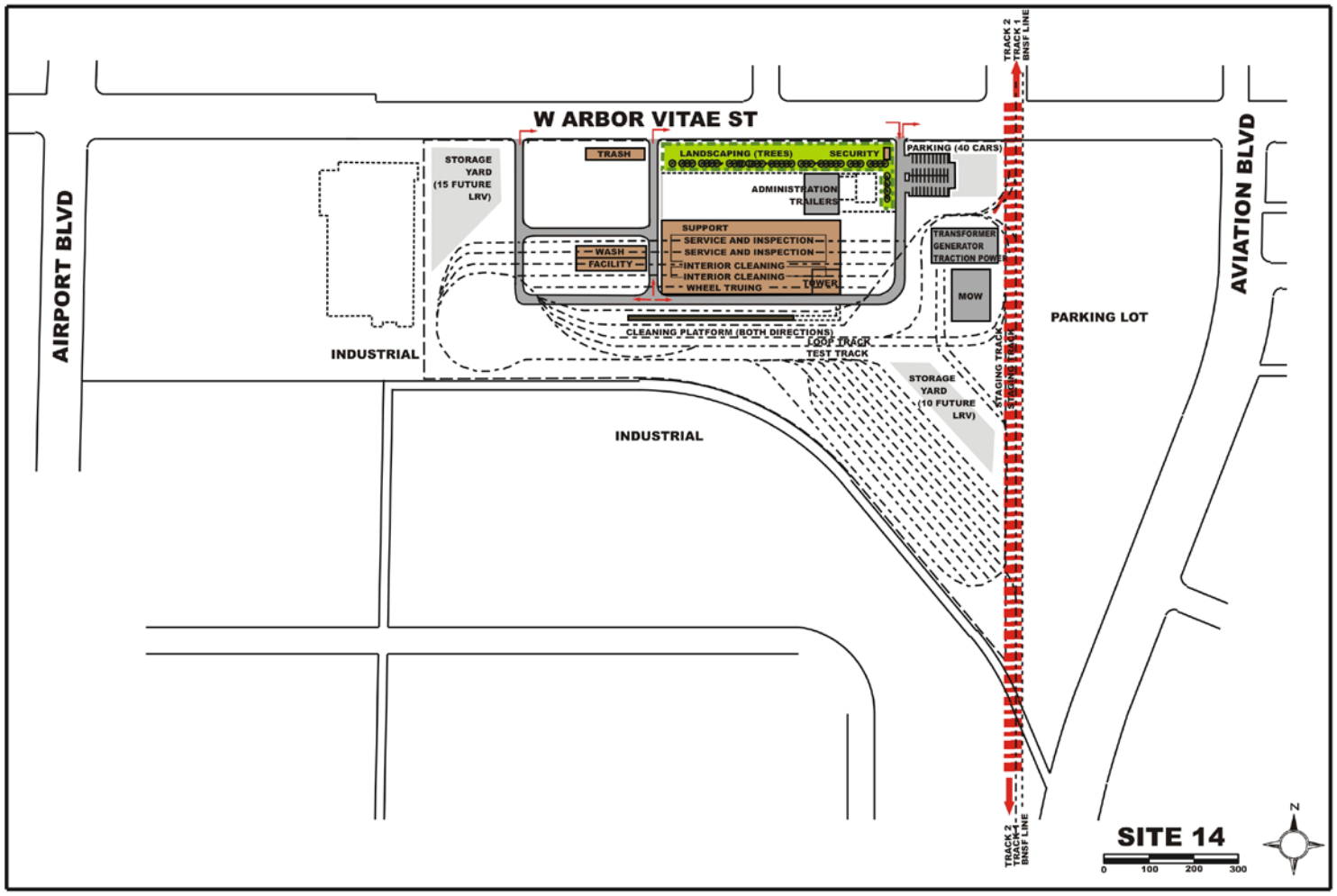
Figure 2-3. Aerial of Site #14 - Arbor Vitae/Bellanca

Site #14 – Arbor Vitae/Bellanca Alternative. This site is approximately 17.6 acres and is located in the City of Los Angeles. The site contains industrial uses, Dollar Car Rental, Avis Car Rental administrative offices, Barthco International, and Gourmet Trading Company. The site is bounded by Arbor Vitae Street to the north, Neutrogena Corporation to the west, and Bellanca Avenue to the east. The site would be accessed by rail through an at-grade connection at the southeastern end of the site and by vehicles at three entrances along Arbor Vitae Street. This site would service 45 LRVs, contain 40 parking spaces, and have an additional expansion capability of 25 LRVs. Figure 2-3 through Figure 2-6 show the aerial view, existing vacant land on the northwest corner of the site, existing rental car facility on site, and detailed site layout for the Site #14 - Arbor Vitae/Bellanca Alternative, respectively.

Figure 2-4. Existing Uses on NE Corner of Site #14

Figure 2-5. Existing Car Rental Facility on in the middle of Site #14

Figure 2-6. Site #14 - Arbor Vitae/Bellanca Alternative Site Plan



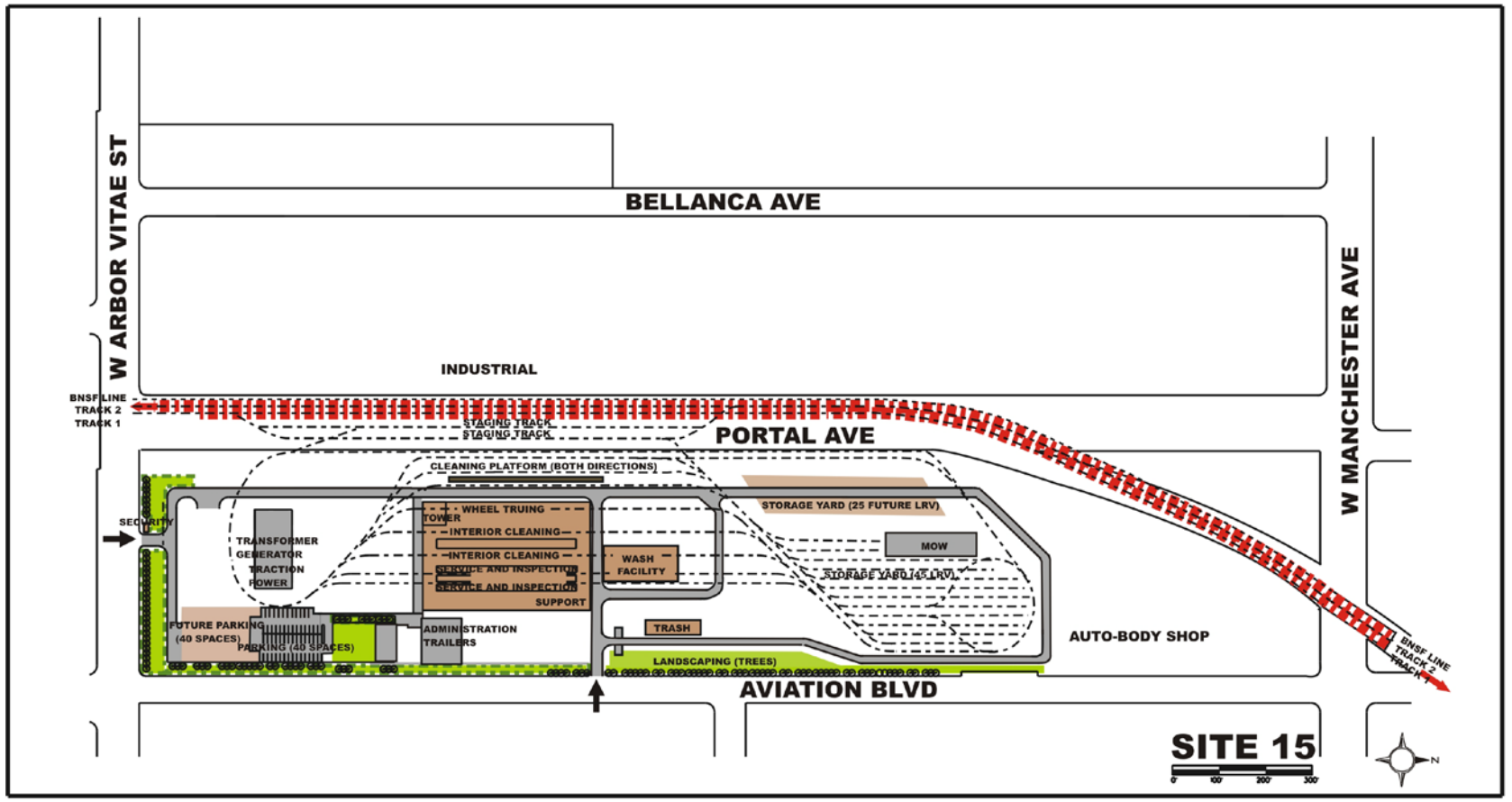
Site #15 – Manchester/Aviation Alternative. The Site #15 - Manchester/Aviation Alternative is approximately 20.5 acres and is located in the City of Inglewood. The site contains industrial uses, including National/Alamo Car Rental, Crimson Technical College, and an industrial park. There is a commercial use (gas station) located on the southern end of the project site. The site is bounded by Aviation Boulevard to the east, Portal Avenue to the west, Arbor Vitae Street to the south, and LA Car Guy to the north. The site would be accessed by rail through two at-grade connections on the southern end of the site and by vehicles at one entrance along Arbor Vitae Street and two entrances along Aviation Boulevard. This site would service 45 LRVs, contain 40 parking spaces, and have an additional expansion capability of 25 LRVs. Figure 2-7 through Figure 2-10 show the aerial view, existing uses on the southern end of the site, and the detailed site layout for the Site #15 - Manchester/Aviation Alternative, respectively.

Figure 2-7. Aerial of Site #15 - Manchester/Aviation

Figure 2-8. Existing auxiliary car rental parking on southern end of Site #15 -

Figure 2-9. View of Crimson Technical Aviation College in the middle of Site #15 -

Figure 2-10. Site #15 - Manchester/Aviation Alternative Site Plan



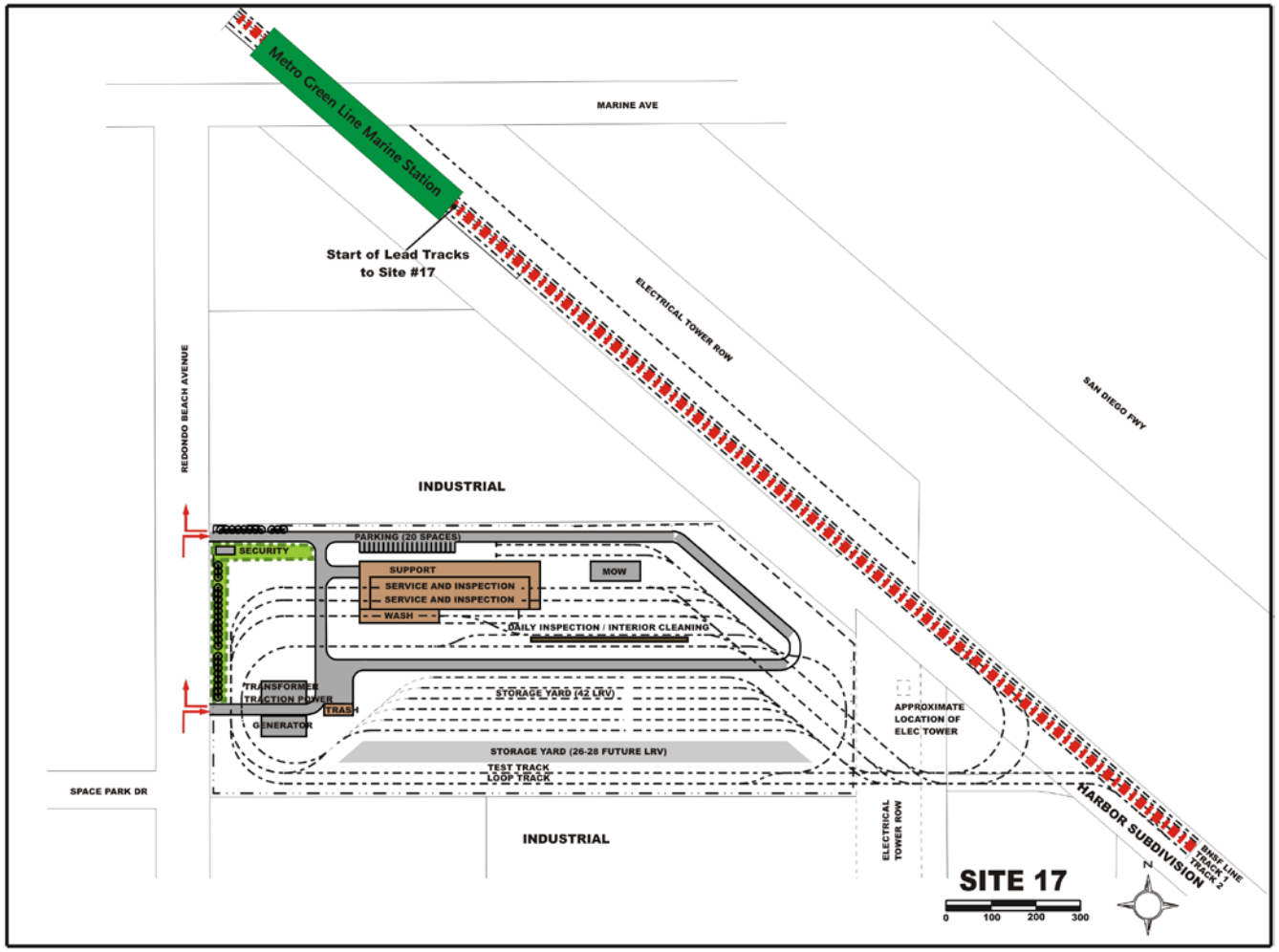
Site #17 – Marine/Redondo Beach Alternative. The Site #17 - Marine/Redondo Beach Alternative is approximately 14.2 acres and is located in the City of Redondo Beach. The site contains industrial uses including a large warehouse, a freight delivery company and a sports accessory business. There is also a nursery that operates underneath the utility lines. The site is bounded by Redondo Beach Avenue to the west, the Harbor Subdivision to the east, and industrial warehouses to the north and south. The site would be accessed by rail through two at-grade connections on the southeastern end of the site and by vehicles at two entrances along Redondo Beach Avenue. This alternative includes an access track that would make an aerial connection at the existing Metro Green Line Marine Station and would travel south along the railroad right-of-way and go beneath the existing utility lines. This site is not large enough to contain all of the required facilities and parking and would operate as a satellite facility to the existing Division 22. Consideration of this alternative would include the additional improvements to the existing Division 22. This site would service 42-45 LRVs, contain 20 parking spaces, and have an additional expansion capability of 26 LRVs. It can operate with 20 parking spaces since some functions are shared with Division 22. Figure 2-11 through Figure 2-14 show the aerial view, existing industrial uses on the western end of the site, view of on-site industrial uses, and the detailed site layout for the Site #17 – Marine/Redondo Beach Alternative, respectively.

Figure 2-11. Aerial of Site #17 - Marine/Redondo Beach

Figure 2-12. View of existing industrial uses along Redondo Beach Avenue

Figure 2-13. View of industrial warehouse on Site #17

Figure 2-14. Site #17 - Marine/Redondo Beach Alternative Site Plan

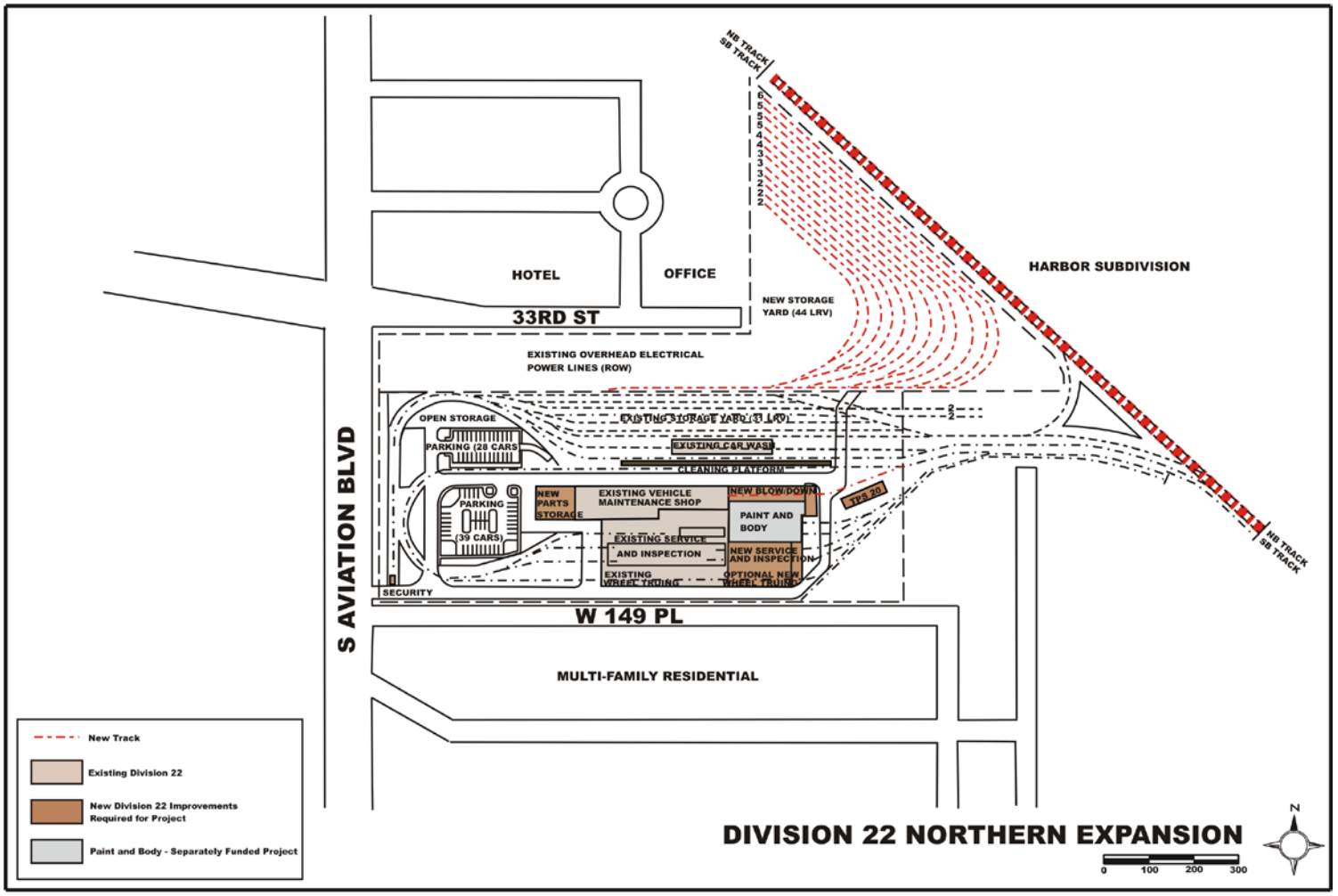


Division 22 Northern Expansion Alternative. The Division 22 Northern (D22N) Expansion Alternative is approximately 3.5 acres in size and is located in the City of Hawthorne. The existing land use is industrial, and contains a public storage facility. The site is bounded by the existing Division 22 Green Line Maintenance Facility to the south, the Harbor Subdivision to the east and north, and is adjacent to a professional office buildings to the west. This site is only large enough to contain storage tracks and the remaining facilities and parking would have to be located on the existing Division 22. Therefore, this site would have to operate as a satellite to the existing Division 22. The site would only be accessed by rail from the existing Division 22 Maintenance Facility to the south across the Southern California Edison utility lines (one of the primary power transmission trunk lines). Access to this site would require multiple crossings under the existing utility lines. Consideration of this alternative would include the additional improvements to the existing Division 22. This site would service 16 LRVs, contain no parking spaces, and have no additional expansion capability. Figure 2-15 through Figure 2-17 show an aerial view, existing use on-site, and the site layout for the D22N Expansion Alternative, respectively.

Figure 2-15. Aerial of D22N Expansion

Figure 2-16. Existing Use on D22N Expansion

Figure 2-17. D22N Expansion Alternative Site Plan



2.3 Comparison of Alternatives

To compare the sites, an analysis of the four alternatives was performed that included an assessment of operations, property acquisition needs, and a preliminary evaluation of relative costs. Table 2-3 presents a general comparison of the alternatives selected for further evaluation. This table compares each of the alternatives on a number of functional issues including: size, potential capacity, expansion potential, employee and visitor parking capacity, and connection to the light rail track alignment. Other comparison issues address land use compatibility including existing land uses and zoning. Land use impacts compare nearest noise-sensitive land use, displacement of existing businesses and employees, and displacement of existing residents. Acquisition, connection and construction costs for each of the alternative sites are also presented.

Table 2-3. Comparison of Proposed Alternatives

Characteristic	D22N Satellite Facility	Site #14 Stand-Alone Facility	Site #15 Stand-Alone Facility	Site #17 Satellite Facility
Size (acres)	3.5	17.6	20.5	14.2
Capacity (Base LRVs)	16	45	45	42-45
Expansion Potential (Additional LRVs)	0	25	25	26
Total Potential Capacity	16	70	70	70
Employee and Visitor Parking (cars)	0	40	40	20
Connection Type	Split (dual access in each direction)	Split(dual access in each direction)	Split with two way access aerial viaduct over existing rail track	Split (dual access in each direction) with connecting track south of Marine Ave
Existing Land Uses	Industrial	Industrial	Industrial/ Institutional/ Commercial	Industrial
Existing Zoning	M2-1(Light Industrial)	M2-1 (Light Industrial)	M-1(Industrial)	I-1 (Industrial)
Local Jurisdiction	Hawthorne	Los Angeles	Inglewood	Redondo Beach
Nearest Sensitive Land Use	Residential (150 ft)	Residences (280 ft)	School (250 ft)	School (1,000 ft)
Vehicular Access Points	Aviation Blvd (existing).	Arbor Vitae St (3)	Aviation Blvd (2) Arbor Vitae St (1)	Aviation Blvd (2)
Existing Employees/b/	5	390	158	400
Businesses Displaced	1	4	11	2
Residents Displaced	0	0	0	0
Special Right-of-Way Conditions	Requires several crossings underneath SCE trunk utility line	--	--	Requires one crossing underneath secondary utility lines
Total Cost	116.6M	302.9M	325.8M	222.1M

/a/D22N may accommodate additional storage, excluding maintenance capability) for 28 LRVs
/b/Employment estimates determined from interviews with property owners and tenants and industrial employee rates ranging from 300 to 1,000 square foot per employee depending on the type of use.
/c/Costs ($ millions) include the expansion of the on-site existing facilities at Division 22, which is required to operate as a satellite facility. On-site improvements to the existing Division 22 include additional track, building space for service and inspection, and additional ancillary facilities including utility lines, TPPS, and parking.
Source: TAHA, 2010.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section summarizes the impacts that would occur from the selection of a maintenance facility site for the Crenshaw/ Los Angeles International Airport (LAX) Light Rail Transit (LRT) Project. The information in this chapter supplements the content of the Draft Environmental Impact Statement/Draft Environmental Impact Report (EIS/EIR), providing additional description of the environment that would be affected by each of the maintenance site options and the impacts associated with each alternative. For the two alternatives that would operate as a satellite facility (Site #17 – Marine/Redondo Beach and Division 22 Northern Expansion Alternatives), the additional improvements to the existing Division 22 facility were taken into consideration when evaluating the impacts.

For a complete discussion of regulatory framework, and CEQA thresholds used to evaluate impacts refer to Appendix D of this document, Regulatory Framework and CEQA Thresholds.

The No Build Alternative for the Crenshaw/LAX Transit Corridor Project was evaluated in the Draft Environmental Impact Statement (DEIS)/Draft Environmental Impact Report (DEIR). Because the selection and operation of a maintenance facility and the Crenshaw/LAX Transit Corridor Project cannot function independently, the No Build Alternative for the Maintenance Facility Project would be the same as the No Build Alternative evaluated in the DEIS/DEIR. For a complete description of the impacts of the No Build Alternative, refer to Chapter 4 of the DEIS/DEIR for the Crenshaw/LAX Transit Corridor Project.

3.1 Transportation

3.1.1 Affected Environment/Existing Conditions

3.1.1.1 Bicycle and Pedestrian Circulation

The areas surrounding the four maintenance site alternatives are located in industrial areas and are not in close proximity to any activity centers, such as commercial/retail or entertainment centers. The areas surrounding the maintenance site alternatives do not contain any designated bicycle lanes or high levels of pedestrian activity.

3.1.1.2 Existing Traffic Volumes

A total of 15 separate intersections surrounding the four maintenance site alternatives were evaluated in order to assess current traffic operations. Traffic volumes at intersections are defined by a level of service (LOS) which ranges from A (free flow) to F (severely congested). The LOS is based on the volume of traffic and the capacity of a given intersection (V/C). For a more detailed description of traffic methodology refer to the Traffic Technical Report contained in Appendix C. The intersections are shown in Figure 3-1 and Figure 3-2. The existing weekday morning and afternoon peak hour conditions at the study area intersections are summarized in Table 3-1.

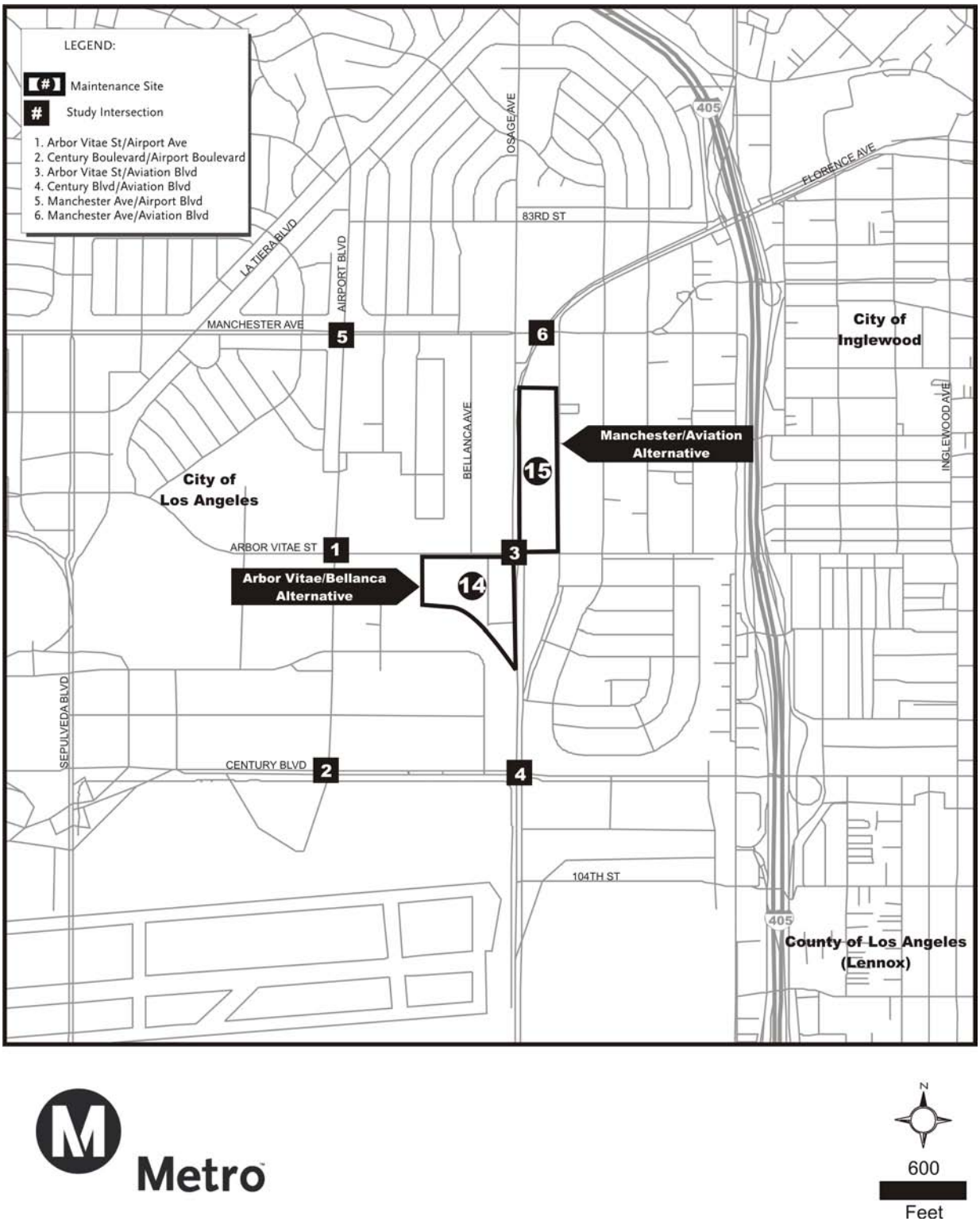
3.1.2 Environmental Consequences

3.1.2.1 Project Trip Generation

The maintenance services provided by the proposed alternatives would be similar to the services provided by the existing Division 22 Metro Green Line Facility serving the Metro at 14724 Aviation Boulevard in Hawthorne. The proposed site alternatives are located in close proximity and have similar surrounding uses to the existing facility. Therefore, the trip generation estimates for the Project were prepared using empirical data collected at the Division 22 facility. Division 22 serves a total of 39 light rail vehicles (LRVs). The proposed Project is expected to serve a total of 70 LRVs. Trip generation for the proposed facility was estimated by applying a factor proportional to the size of the facility in terms of number of LRVs served. The proposed project is estimated to generate a total of 21 trips during the morning peak hour (9 inbound/12 outbound) and 23 trips during the evening peak hours (13 inbound/10 outbound)

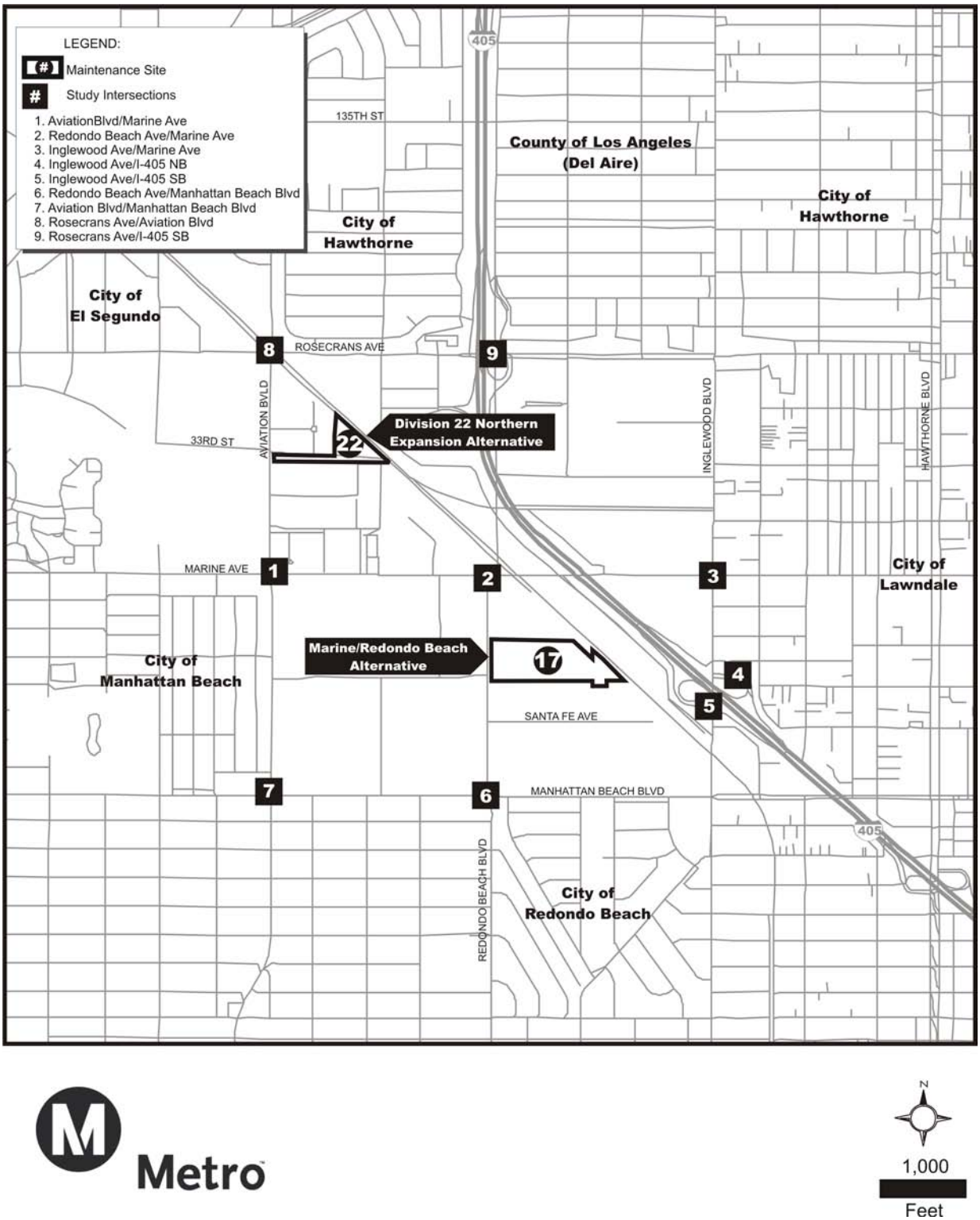
To evaluate the potential future impacts for the maintenance site alternatives, estimates of traffic growth were developed for the study area to forecast future conditions without the Project. These forecasts included traffic increases due to general regional ambient traffic growth. These projected traffic volumes, the cumulative base conditions, represent the future study year conditions without the proposed Project. The traffic generated by the proposed Project was then estimated and assigned to the surrounding street system. The project traffic was added to the cumulative base to form the cumulative plus project traffic conditions, which were analyzed to determine the incremental traffic impacts attributable to the Project itself. It was assumed that the existing uses on the analyzed sites will most likely relocate within the same sub-region. Therefore, to be conservative, no trip credit was taken for existing uses as part of project trip generation estimates. If

Figure 3-1. Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Study Intersections



Source: Fehr & Peers, 2010.

Figure 3-2. Site #17 – Marine/Redondo Beach and D22N Expansion Study Intersections



Source: Fehr & Peers, 2010.

Table 3-1. Existing Base Year (2010) Intersection Level of Service

Intersection	LOS	
	AM	PM
Site #14 – Arbor Vitae/Bellanca		
Arbor Vitae St/Airport Blvd	A	A
Century Blvd/Airport Blvd	A	A
Arbor Vitae St/Aviation Blvd	A	B
Century Blvd/Aviation Blvd	C	B
Manchester Ave/Airport Blvd	B	**E**
Manchester Ave/Aviation Blvd	C	B
Site #15 – Manchester/Aviation		
Manchester Ave/Airport Blvd	B	**E**
Arbor Vitae St/Airport Blvd	A	A
Manchester Ave/Aviation Blvd	C	B
Arbor Vitae St/Aviation Blvd	A	B
Site #17 – Marine/Redondo Beach		
Aviation Blvd/Marine Ave	D	D
Redondo Beach Ave/Marine Ave	A	D
Inglewood Ave/Marine Ave	D	D
Inglewood Ave/I-405 NB	C	C
Inglewood Ave/I-405 SB	C	D
Redondo Beach Ave/Manhattan Beach Blvd	**E**	D
Aviation Blvd/Manhattan Beach Blvd	**D**	**F**
Division 22 Northern Expansion		
Aviation Blvd/Marine Ave	D	D
Redondo Beach Ave/Marine Ave	A	D
Rosecrans Ave/Aviation Blvd	C	**F**
Rosecrans Ave/I-405 SB	C	D

Source: Fehr & Peers, 2010.

the existing uses did relocate to outside the area, the traffic effects would be further reduced.

3.1.2.2 Level of Service Intersection Analysis

The proposed Project traffic volumes were added to future (Year 2018) base traffic projections, resulting in a future (Year 2018) plus project morning and evening peak hour traffic volumes. The results of the analysis of future (Year 2018) base weekday morning and afternoon peak hour conditions at the study intersections for the proposed alternatives are summarized in Table 3-2. The proposed project would not create adverse traffic effects at any of the study intersections during the morning or the evening peak hours for any of maintenance site alternatives.

Table 3-2. Future (Year 2018) Intersection Level of Service and Significant Impact Analysis

Intersection	Peak Hour	Future Base Without Project		Future Base With Project		Change in V/C	Adverse Effect?
		V/C or Delay	LOS	V/C or Delay	LOS		
Site #14 – Arbor Vitae/Bellanca Alternative							
Arbor Vitae St/Airport Blvd	AM	0.496	A	0.497	A	0.001	
	PM	0.656	B	0.657	B	0.001	No
Century Blvd/Airport Blvd	AM	0.587	A	0.587	A	0.000	
	PM	0.509	A	0.509	A	0.000	No
Arbor Vitae St/Aviation Blvd	AM	0.567	A	0.569	A	0.002	
	PM	0.675	B	0.679	B	0.004	No
Century Blvd/Aviation Blvd	AM	0.819	D	0.820	D	0.001	
	PM	0.704	C	0.704	C	0.000	No
Site #15 – Manchester/Aviation Alternative							
Manchester Ave/Airport Blvd	AM	0.743	C	0.743	C	0.000	
	PM	**1.003**	**F**	**1.003**	**F**	0.000	No
Arbor Vitae St/Airport Blvd	AM	0.496	A	0.497	A	0.001	
	PM	0.656	B	0.656	B	0.000	No
Manchester Ave/Aviation Blvd	AM	0.788	C	0.789	C	0.001	
	PM	0.710	C	0.715	C	0.005	No
Arbor Vitae St/Aviation Blvd	AM	0.657	A	0.658	A	0.001	
	PM	0.675	B	0.676	B	0.001	No
Site #17 – Marine/Redondo Beach							
Aviation Blvd/Marine Ave	AM	0.942	E	0.943	E	0.001	
	PM	0.953	E	0.953	E	0.000	No
Redondo Beach Ave/Marine Ave	AM	0.567	A	0.569	A	0.002	
	PM	0.879	D	0.883	D	0.004	No
Inglewood Ave/Marine Ave	AM	0.935	E	0.935	E	0.000	
	PM	0.929	E	0.929	E	0.000	No
Inglewood Ave/I-405 NB	AM	0.772	C	0.773	C	0.001	
	PM	0.800	C	0.801	D	0.001	No
Inglewood Ave/I-405 SB	AM	0.801	D	0.801	D	0.000	
	PM	0.911	E	0.911	E	0.000	No
Redondo Beach Ave/Manhattan Beach Blvd	AM	0.980	E	0.983	E	0.003	
	PM	0.895	D	0.896	D	0.001	No
Aviation Blvd/Manhattan Beach Blvd	AM	0.928	E	0.928	E	0.000	
	PM	1.151	F	1.151	F	0.000	No
Division 22 Northern Expansion							
Aviation Blvd/Marine Ave	AM	0.942	E	0.943	E	0.001	
	PM	0.953	E	0.953	E	0.000	No
Redondo Beach Ave/Marine Ave	AM	0.567	A	0.567	A	0.000	
	PM	0.879	D	0.879	D	0.000	No
Rosecrans Ave/Aviation Blvd	AM	0.801	D	0.805	D	0.004	
	PM	1.085	F	1.088	F	0.003	No
Rosecrans Ave/I-405 SB	AM	0.828	D	0.831	D	0.003	
	PM	0.907	E	0.910	E	0.003	No

Note: The v/c calculations are based on 60 LRVs. A 70-LRV build-out of the Project would result in a maximum three additional vehicle trips during the peak hour. The increase in v/c would be negligible and would not change the effect determination.
Source: Fehr & Peers, 2010

3.1.2.1 CMP Traffic Impact Analysis

Based on the project trip generation estimates previously presented and a review of the project traffic volumes, the proposed Project is not expected to add more than 50 vehicles per hour (vph) at either of the two closest congestion management program (CMP) monitoring intersections at Manchester Avenue/Sepulveda Boulevard and Manchester Avenue/La Brea Avenue during the morning or afternoon peak hours. As a result, no further CMP arterial monitoring analysis is required. Based on the incremental project trip generation estimates and the project trip assignment, the proposed Project would not add sufficient new traffic to exceed the freeway analysis criteria at these locations. Because incremental project-related traffic in any direction during either weekday peak hour is projected to be below the minimum criterion of 150 vph, no further CMP freeway analysis is required. Therefore, no adverse effects on CMP arterials and freeways would occur for any of the maintenance site alternatives.

3.1.2.2 Pedestrian and Bicycle Facilities

The maintenance facility site alternatives are all located in industrial areas which do not have designated bicycle lanes or generate significant pedestrian activities. Therefore, no adverse effects to pedestrian and bicycle facilities would occur for any of the maintenance site alternatives.

3.1.3 Mitigation Measures

None required.

3.1.4 CEQA Determination

Under CEQA, the impact is explained as being the project contribution to a cumulative impact as compared to existing conditions. Therefore, less-than-significant traffic impacts would occur under all of the maintenance site alternatives.

3.2 Land Use and Development

This section examines the affected environment related to land use and development. Local policies for land use and development regulate the types of uses allowed, as well as the intensity of development permitted on public and private property. As new development results in changes to land use patterns, the character of an area can be affected and adverse physical effects to the environment may potentially occur.

The proposed maintenance facility sites include parcels that are in or in close proximity (0.25 miles) of six local jurisdictions: the Cities of Los Angeles, Inglewood, Hawthorne, Redondo Beach, Manhattan Beach and El Segundo. The Los Angeles County unincorporated communities of Lennox and Del Aire are also located within close proximity to the alternatives. The local jurisdictions are shown in Figure 3-3. Local Jurisdictions.

3.2.1 Affected Environment/Existing Conditions

3.2.1.1 Existing Land Uses

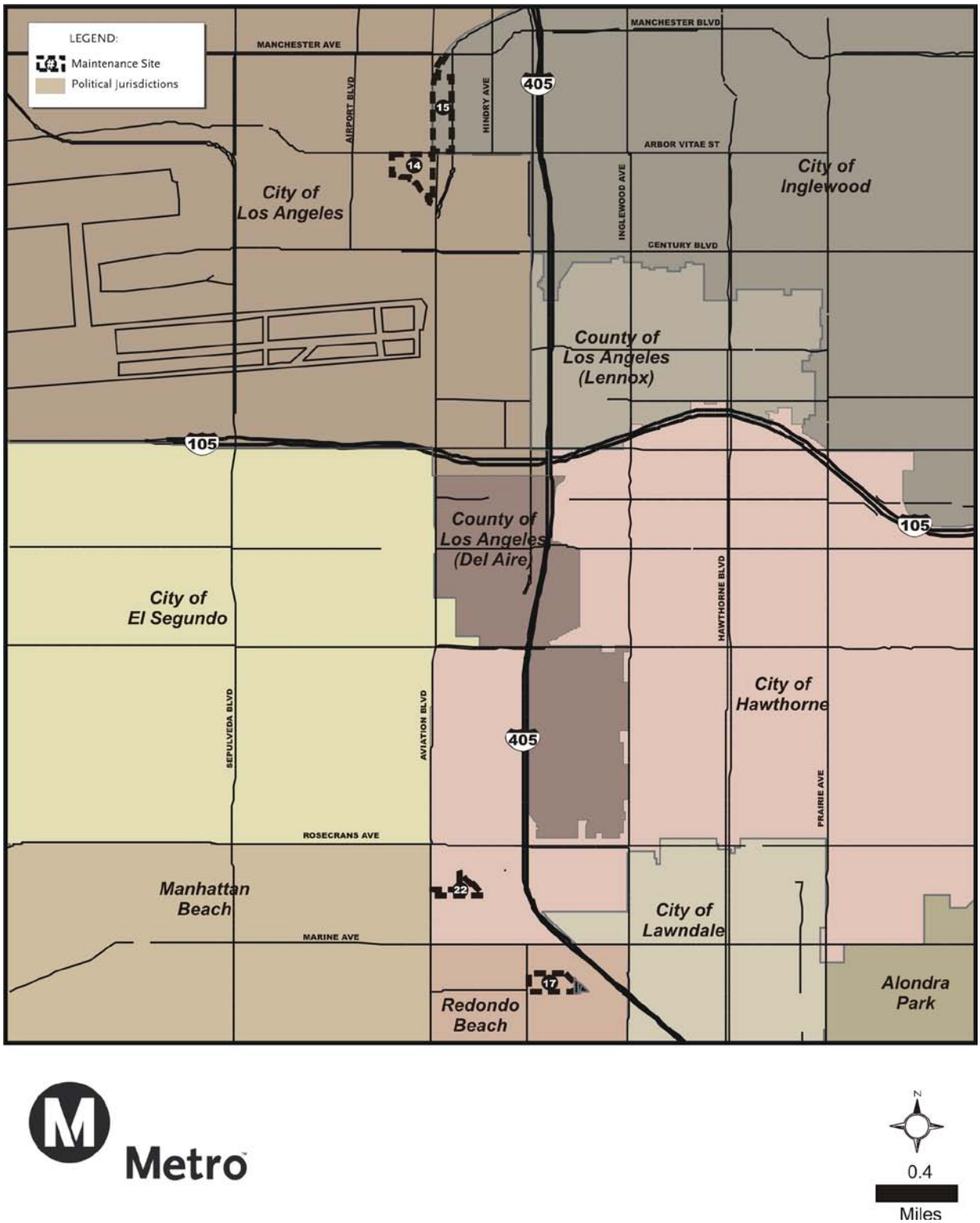
All of the alternative maintenance facility sites are located within industrial areas adjacent to the Harbor Subdivision railroad right-of-way. Figure 3-4 and Figure 3-5 show the existing land uses and zoning on and surrounding the maintenance site alternatives. Table 3-3 summarizes the existing conditions of the maintenance site alternatives.

Table 3-3. Existing Land Uses and Zoning for the Maintenance Facility Site Alternatives

Existing Conditions	Size (acres)/a/	Planning Jurisdiction	Land Uses	Zoning	Nearby Uses
Site #14	17.6	City of Los Angeles Westchester-Playa Del Rey	Industrial;	M2-1, Light Industrial zoning	Limited industrial uses to the east and south; commercial adjacent to the north and airport parking uses adjacent to the west
Site #15	20.5	City of Inglewood	Industrial; institutional; Public Facilities	M-1, Industrial	Bordered by light industrial uses to the east of the site; commercial uses to the north along Manchester Boulevard; parking and industrial uses to the south
Site #17	14.2	City of Redondo Beach	Industrial	I-1, Industrial	Industrial uses surround the site in all directions
D22N	3.5	City of Hawthorne	Industrial; Public Facilities	M2-1, Heavy Industrial	Office and hotel uses to the west, public facilities and residential to the south, and industrial uses to the north and east

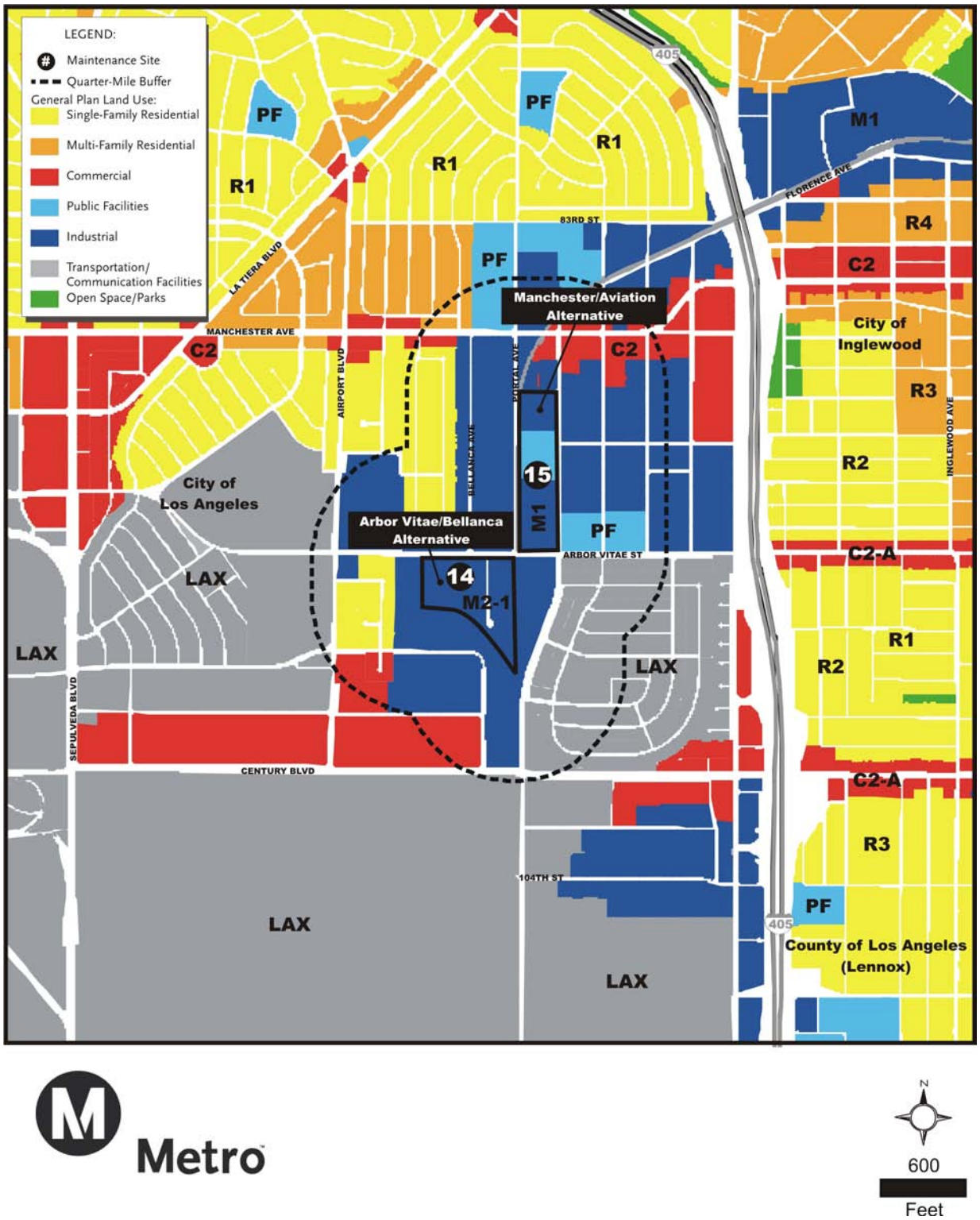
Source: TAHA, 2010.

Figure 3-3. Local Jurisdictions



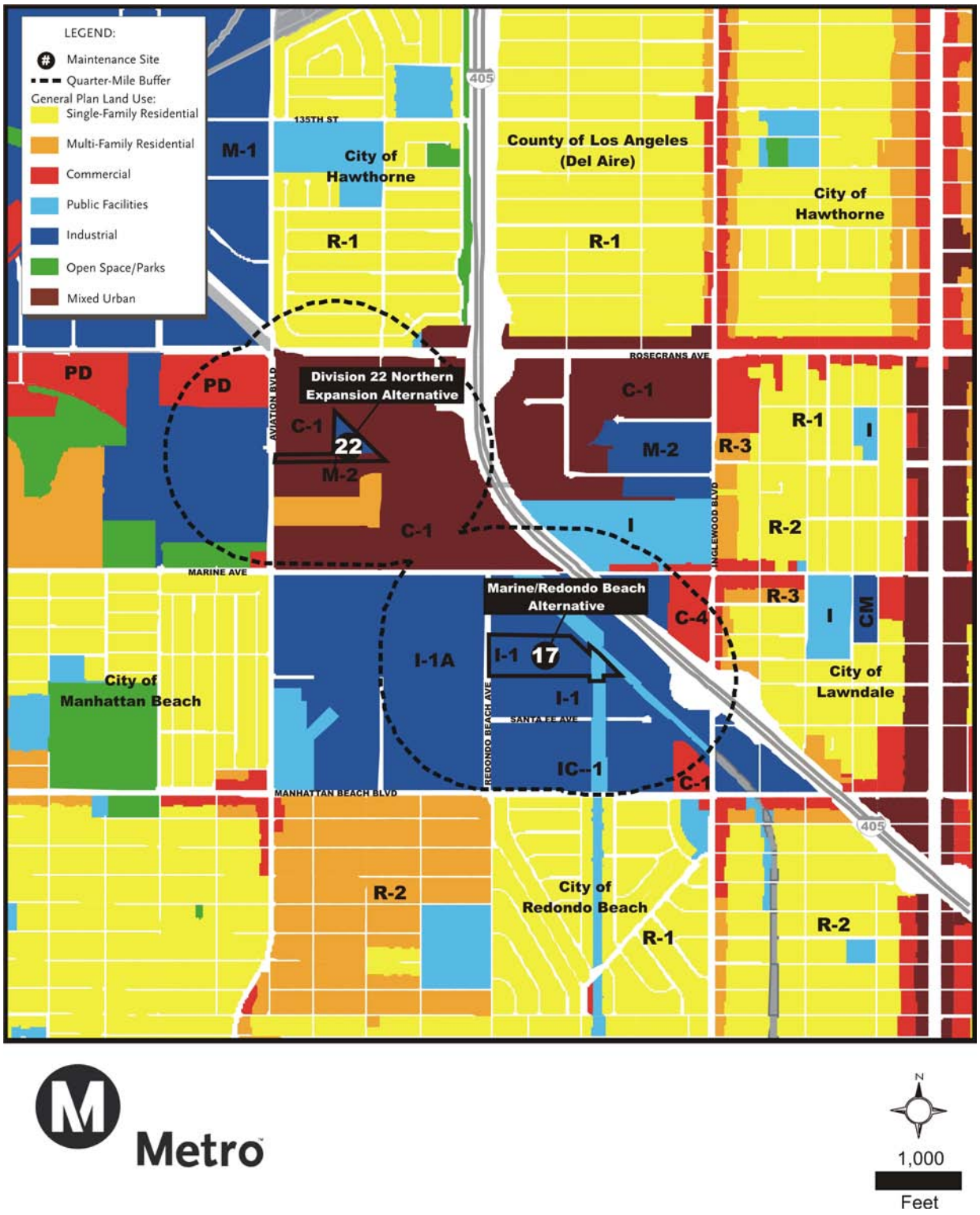
Source: Terry A. Hayes Associates LLC (TAHA) 2010.

Figure 3-4. Existing Land Uses and Zoning - Sites #14 and #15



Source: SCAG, 2010.

Figure 3-5. Existing Land Uses and Zoning – Site #17 and D22N



Source: SCAG, 2010

3.2.1.2 Sensitive Land Uses

Sensitive land uses located within 0.25 miles of maintenance site alternatives are shown in Table 3-4. Sensitive land uses generally include residences, schools, churches, and parks. The populations that are most sensitive to land use effects include the elderly and children.

Table 3-4. Sensitive Land Uses Within 0.25 Miles of the Maintenance Site Alternatives

Name	Location	Proximity to Site (feet)
Site #14 – Arbor Vitae/Bellanca Alternative		
Single- and Multi-family Residential Uses in Manchester Square		230
Single- and Multi-family Residential Uses in Westchester		280
Single- and Multi-family Residential Uses in Airport Noise Abatement Zone		320
Bright Star Secondary Charter Academy	5431 W 98th St, Los Angeles	600
Animo Leadership Charter High School	1155 W Arbor Vitae St, Inglewood	750
Crimson Technical College	9015 Aviation Blvd, Inglewood	925
Site #15 – Manchester/Aviation Alternative		
Crimson Technical College	9015 Aviation Blvd, Inglewood	On-site
Animo Leadership Charter High School	1155 W Arbor Vitae St, Inglewood	200
Airport Urgent Care	1117 W Manchester Blvd, Inglewood	850
Single- and Multi-family Residential Uses in Manchester Square		450
Single- and Multi-family Residential Uses in Westchester		750
Site #17 – Marine/Redondo Beach Alternative		
R.K. Llyode High School	14901 Inglewood Ave, Lawndale	900
Division 22 Northern Expansion Alternative		
Multi-family Residential Uses to the south		150
Single-family Residential Uses to the north		775

Source: TAHA, 2010

3.2.2 Environmental Impacts/Environmental Consequences

3.2.2.1 Direct Impacts

The selection and operation of a maintenance facility site is not likely to generate new regional growth, nor is it likely to significantly change land use and development patterns at a regional scale because it would be located near similar land uses and would not alter the composition of existing land uses. No substantial physical change to the regional environment would occur with the development of a maintenance facility. Therefore, no adverse effects associated with regional land use are anticipated.

Division of an Established Community

Each of the maintenance facility site alternatives is located within an industrial area and does not contain residences or other uses that are characteristic of a community (neighborhood retail, etc.). The planned development of a maintenance facility at any of

the four maintenance site alternatives would not alter or divide any existing communities. These sites would be compatible with surrounding land uses and would not restrict pedestrian and vehicular access. Surrounding residential communities would not be disrupted during operation at any of the maintenance site alternatives. Therefore, no adverse effects to the division of an established community are anticipated for any of the maintenance facility site alternatives.

Applicable Land Use Policies

Regional plans general plans, community plans, and specific land use policies for the maintenance site alternatives are described in Appendix D, Regulatory Framework and CEQA Thresholds. The maintenance site alternatives are located adjacent to a transit corridor with compatible land uses that minimize the cost of access. The maintenance site alternatives are part of the infrastructure for an improvement to the regional transportation system and supports regional growth policies.

SCAG Regional Transportation Plan and Regional Comprehensive Plan. The maintenance site alternatives are part of the infrastructure for an improvement to the regional transportation system and supports SCAG's regional growth policies. The maintenance site alternatives are located adjacent to a transit corridor with compatible land uses that minimize the cost of access. These maintenance site alternatives also support the light rail system, which promotes increased development near mass transit, thus, reducing adverse environmental effects normally associated with growth. The maintenance site alternatives are part of the planned regional transportation system, which contains provisions to ensure safety in design and operation. The maintenance site alternatives are consistent with the Cities of Los Angeles, Hawthorne, Inglewood, Redondo Beach, and LAWA plans which support infill development. The proposed alternatives are consistent with the policies and goals of the RTP and RCP that focus on the need to coordinate land use and transportation decisions to manage travel demand within the region.

City of Los Angeles General Plan. Development of an LRT maintenance facility on the Site #14 – Arbor Vitae/Bellanca Alternative site would be consistent with the City of Los Angeles Framework Element transportation policies which seek to develop maintenance facilities that maximize transit service to activity centers. A maintenance facility at this site would improve transit linkages along Crenshaw Boulevard and establish a southern connection to the Metro Green Line, thereby facilitating regional access from activity centers to LAX. A maintenance facility at this site also would be consistent with the City's land use element policy of developing a public transit system that improves mobility with convenient alternatives to automobile travel, as it would support the Crenshaw/LAX Transit Corridor Project.

City of Hawthorne General Plan. The northern expansion of the Division 22 Maintenance Facility would provide additional capacity for the Crenshaw/LAX LRT line to operate in combination with the existing Metro Green Line. This would be consistent with the City of Hawthorne's land use policies which encourage the expansion of the LRT system.

City of Inglewood General Plan. The Site #15 – Manchester/Aviation Alternative would enhance the transportation system of the community, by providing vital light rail infrastructure, while providing stable employment in an area that has a significant amount of unoccupied and/or underutilized land. As such, the Site #15 – Manchester/Aviation Alternative would be consistent with the City of Inglewood General Plan.

City of Redondo Beach General Plan. The Site #17 – Marine/Redondo Beach Alternative would provide transportation infrastructure to support the Crenshaw/LAX Transit Corridor Project. This provision of transit infrastructure is consistent with the policies of the Redondo Beach General Plan to expand public infrastructure to maintain City services and accommodate future development.

Inglewood La Cienega Redevelopment Plan. The La Cienega Redevelopment Plan focuses on the area of Inglewood west of I-405. It aims to replace the residential neighborhoods in the area with industrial development. Many of the existing uses on this site are vacant or underutilized. The Site #15 – Manchester/Aviation Alternative would not replace residential neighborhoods but would result in industrial development The Site #15 – Manchester/Aviation Alternative would not be inconsistent with the La Cienega Redevelopment Plan.

LAX Master Plan. The LAX Master Plan contains policies that seek to develop a connection point from the airport to the Metro Green Line and other mass transportation facilities, providing facilities that encourage transit ridership. All of the maintenance site alternatives are part of the Crenshaw/LAX Transit Corridor Project which would encourage transit ridership and support these policies.

Westchester-Playa Del Rey Community Plan. One of the goals of the Westchester-Playa Del Rey Community Plan is to provide sufficient land for limited and light industrial land uses, with employment opportunities that are safe for the environment and workers, with minimal adverse impacts on adjacent land uses. The Site #14 – Arbor Vitae/Bellanca Alternative would provide the community with approximately 200 jobs that would be compatible with surrounding land uses. The Site #14 – Arbor Vitae/Bellanca Alternative would be consistent with the Westchester-Playa Del Rey Community Plan.

The maintenance site alternatives are consistent with the plans and policies which support infill development. No adverse effects to consistency with land use policies would result under any of the four maintenance site alternatives.

Adjacent or Surrounding Land Uses

The Site #14 – Arbor Vitae/Bellanca Alternative would be consistent with the existing M2-1 industrial zoning and land uses. The Site #15 – Manchester/Aviation Alternative is consistent with existing M1 zoning and land use designations. The Site #17 – Marine/Redondo Beach Alternative would be consistent with the I-1 Industrial zoning and land uses. The Division 22 Northern Expansion Alternative would be consistent with the M2-1 industrial zoning and land uses. Therefore, no adverse effects related to land use designation would occur under any of the four sites. Although there are residential

neighborhoods within ¼-mile of the maintenance facility site alternatives, there is a buffer of industrial and/or commercial uses between the maintenance site alternatives and residential neighborhoods. Therefore, no adverse effects related to land use compatibility would occur under any of the four maintenance site alternatives.

3.2.2.2 Indirect Impacts

The maintenance site alternatives would occur on primarily industrial land and would not indirectly alter or change the future use of any of the sites or surrounding land uses. Therefore, no adverse indirect effects related to land use and development would result under any of the four maintenance site alternatives.

3.2.3 Mitigation Measures

None required.

3.2.4 CEQA Determination

The maintenance site alternatives would be compatible with surrounding land uses and would not restrict pedestrian and vehicular access. Therefore, no significant impact would occur related to the physical division of an established community, under any of the maintenance site alternatives. The maintenance site alternatives would all be consistent with the applicable plans and policies. All the maintenance site alternatives would occur in industrial areas on primarily industrial zoned parcels. The operation of a maintenance facility would be compatible with the adjacent and surrounding land uses for all of the maintenance site alternatives. Therefore, no significant impacts to land use and development would occur for any of the maintenance site alternatives.

The maintenance site alternatives would occur on primarily industrial land uses and would not indirectly alter or change the future use of the sites or surrounding land uses. Therefore, no adverse indirect effects related to land use and development would result for the maintenance site alternatives.

3.3 Displacement and Relocation of Existing Uses

This section addresses the potential for land acquisition and the displacement and relocation of existing uses for each alternative site. Land acquisition usually takes the form of either a partial or full parcel take. Land required for the facility site, off-site access connections and improvements, as well as spoil and staging areas are typically the basis for a take.

A partial take would occur if only a portion of the parcel was required to accommodate the Project. This would occur if, for example, a portion of a property fronting the access to the site were required but would not affect the functional use of the property.

Easements are often required and constitute a partial take of property. Generally, they are required during construction for staging and access, called a temporary construction easement (TCE); or underground, for example in relocating utilities, called a permanent underground easement (PUE).

A full take could occur under two circumstances: (1) when the majority or pivotal piece of the property is required for the construction of the facilities, or (2) when a severe loss of access reduces the useful operation (e.g., driveway access or property parking that is eliminated or reduced due to construction) such that it affects the successful operation of the property or business).

3.3.1 Affected Environment/Existing Conditions

For purposes of the discussion of potential land acquisition impacts, the affected environment is limited to parcels encompassed by the boundaries of each of the alternative maintenance facility sites. Within the maintenance facility site boundaries, industrial properties are the predominant use, however there are instances of commercial and residential use as discussed below.

3.3.2 Environmental Impacts/Environmental Consequences

A comparative summary of potential displacements for each of the maintenance site alternatives is shown in Table 3-5. Table 3-6 provides information regarding the affected properties for each alternative site.

Table 3-5. Summary of Displacements Associated with Each Alternative Site

Alternative Maintenance Facility Sites	Affected Parcels				
	FT	PT	TCE	PUE	Total Parcels
Site #14 – Arbor Vitae/Bellanca	12	0	0	0	12
Site #15 – Manchester/Aviation	39	0	0	0	39
Site #17 – Marine/Redondo Beach	3	1	0	0	4
Division 22 Northern Expansion	4	0	0	0	4

FT - Full Take; PT - Partial Take; TCE - Temporary Construction Easement
PUE - Permanent Underground Easement

Table 3-6. Type of Land Uses Affected by Full Displacement at Each Alternative Site

Property Use	Site #14 – Arbor Vitae/Bellanca	Site #15 – Manchester/Aviation	Site #17 – Marine/Redondo Beach	D22N
Residential	0	0	0	0
Commercial/Office	0	2	0	0
Government/Institutional	0	2	0	0
Industrial	2	15	2	1
Vacant	0	4	0	0
Parking Lot	8	13	0	0
Rental Car	2	0	0	0
Utility	0	3	2	3
Total Number of Parcels	**12**	**39**	**4**	**4**

Source: TAHA, 2010.

3.3.2.1 Direct Impacts

Table 3-7 through Table 3-10 and Figure 3-6 through Figure 3-9 show the acquisitions required to accommodate the physical maintenance facility buildings, access, and track for the Crenshaw/LAX Transit Corridor Project. Interviews with owners and tenants located on these sites revealed that many have long term leases, were seeking to sublet property, or had either completed recent improvements or had plans for investments to expand or improve the properties.

Site #14: Arbor Vitae/Bellanca Alternative

A trading company on the site has a unique refrigeration system that would not be able to be relocated. There are two car rental facilities, one of which has acquired adjacent property for added capacity. Depending upon the update to the *LAX Master Plan*, the proposed consolidated rental car facility may be able to accommodate any displaced car rental facilities. The displacement of businesses within this site could result in loss of approximately 390 employees which would be an adverse effect without the implementation of mitigation measures.

Site #15: Manchester/Aviation Alternative

The gas station at the corner of Arbor Vitae Street and Aviation Boulevard has plans for a conversion to natural gas. An auto body repair shop just completed a renovation of its facility that services six car dealerships from Long Beach to Santa Monica. There is a car rental facility containing spillover and employee parking for the main facility that extends across Aviation Boulevard. A technical college is also located on the site and has approximately 400 students that require a large hanger space for instruction. The displacement of businesses within this site may result in loss of approximately 159 employees which would be an adverse effect to displacement and relocation without the implementation of mitigation measures.

Site #17: Marine/Redondo Beach Alternative

There are two industrial tenants located in the warehouse, a freight distribution company and a sporting apparel business. In addition, a take of another industrial parcel would result in the loss of 10 parking spaces for the business adjacent to the south. The displacement of businesses and parking within this site could result in loss of approximately 400 employees which would be an adverse effect without the implementation of mitigation measures.

Division 22 Northern Expansion Alternative

One public storage facility containing five buildings currently occupies this potential site. In addition, three Southern California Edison-owned parcels would require acquisitions for surface easements to access the site. These surface easements would run underneath the existing power transmission lines and would result in full takes. The displacement of the public storage business within this site could result an estimated loss of approximately five employees.[1] Adverse effects are anticipated without the implementation of mitigation measures.

3.3.2.2 Indirect Impacts

Indirect impacts are not applicable to displacement, as displacement is a physical and direct impact on a particular structure on a site. However, relocation of an existing use to another location can have indirect impacts to either the business or residence that is relocated and/or to the community in which the business or residence is relocated.

Indirect Relocation Impacts to the Displaced

Typically displacement is considered a direct environmental impact of a proposed project. The process dictates the property owners will be fairly compensated and tenants will be relocated to comparable facilities. In the case of the maintenance site alternatives, however, there are unique circumstances that may have indirect impact implications.

As discussed above, the maintenance site alternatives under consideration are in close proximity to LAX. Over the years, specific businesses have located around LAX, including rental car agencies, freight forwarders, warehousing, aircraft mechanics training, etc. A number of these airport related businesses are located on and considered as part of the maintenance site alternatives. The success of many of these potentially affected businesses depends on their proximity to the airport. However, the airport vicinity is highly urbanized and developed. As a result, relocation sites with proximity to the airport are scarce. The displacement of businesses from the maintenance sites could be disruptive to the airport business environment and create competitive pressures for land in the airport vicinity or land use change in immediately adjacent areas. These circumstances could suggest some role for Metro to facilitate replacement facilities and to coordinate with Los Angeles World Airports (LAWA) regarding its plan for facilities within its Master Plan, particularly the LAWA proposed consolidated rental car facility.

[1]Manta estimated employees at 1 to 4; number was rounded up to five for conservative estimation.

Table 3-7. Site #14 – Arbor Vitae/Bellanca Alternative: Parcels Potentially Displaced

Figure 3-6#	APN	Address	Owner	Tenant	Year Built	Parcel Size (Sq.ft.)	Total Size of Structures (Sq.ft).	Current Use
1	4125-020-001	5740 Arbor Vitae St	Weiner Investment Properties	Avis Rent A Car	1954	68,136	30,960	Industrial
2	4125-020-002	5730 Arbor Vitae St	Arbor Vitae Industrial Development	Avis Rent A Car	---	102,019	N/A	Parking Lot
3	4125-020-012	5630 Arbor Vitae St	9323 Bellanca Associates Lp	Barthco	1987	182,071	43,160	Commercial-Automotive
4	4125-020-016	9323 Bellanca Ave	Socal Partners I	Dollar Rent A Car	1958	82,320	36,157	Commercial-Office Building
5	4125-021-029	N/A	Blitzer,Nathan Co Tr Et Al Blitzer Family Trust And	None	N/A	10,512	N/A	Vacant
6	4125-020-015	N/A	9323 Bellanca Associates	None	N/A	8,308	N/A	Vacant
7	4125-020-005	5600 Arbor Vitae St	5600 Arbor Vitae LLC	Dollar Rent A Car	N/A	36,239	N/A	Parking Lot
8	4125-020-006	9320 Bellanca Ave	Nshe Lebanon LLC	Dollar Rent A Car	N/A	127,814	N/A	Parking Lot
9	4125-020-007	9400 Bellanca Ave	Nshe Lebanon LLC	Dollar Rent A Car	N/A	36,366	N/A	Parking Lot
10	4125-020-008	9430 Bellanca Ave	Nshe Lebanon LLC	Dollar Rent A Car	N/A	26,591	N/A	Parking Lot
11	4125-021-007	9432 Bellanca Ave	Weinstein,Tessie Tr Weinstein Trust	Gourmet Logistics CO	1969	70,095	33,120	Industrial
12	4125-021-023	N/A	Goeske,Freddy	None	N/A	11,971	N/A	Vacant
Totals						**762,442**	**143,397**	

Source: Los Angeles County Assessor, 2010, Metro Real Estate, and TAHA, 2010.

Figure 3-6. Site #14 – Arbor Vitae/Bellanca Alternative Parcels Potentially Displaced

Source: Los Angeles County Assessor, 2010, Metro Real Estate, and TAHA, 2010.

Table 3-8. Site #15 – Manchester/Aviation Alternative: Parcels Potentially Displaced

Figure 3-7#	APN	Address	Owner	Tenant	Year Built	Parcel Size (Sq.ft.)	Size of Structures (Sq.ft).	Current Use
1	4126-002-900	N/A	LACMTA	None		21,423	N/A	Vacant
2	4126-002-012	8701 Aviation Blvd	Aviation Properties LLC	VTRAC Automotive	2005	100,547[1]	4,060	Industrial
2	4126-002-013	8703 Aviation Blvd	Aviation Properties LLC	None	2005	100,547[1]	4,100	Vacant
2	4126-002-014	8705 Aviation Blvd	8705 Aviation LLC	A List Limousine Service	2005	100,547[1]	4,100	Industrial
2	4126-002-015	8709 Aviation Blvd	Ivey,Kevin S And Heather L Ivey Family Trust And	Unknown Tenant	2005	100,547[1]	4,060	Industrial
2	4126-002-016	8711 Aviation Blvd	Pollywog Investments LLC	JE Components Computer Hardware	2005	100,547[1]	4,820	Industrial
2	4126-002-017	8713 Aviation Blvd	8711 Aviation Blvd LLC	Action 8711 Training Gym	2005	100,547[1]	5,170	Industrial
2	4126-002-018	8715 Aviation Blvd	Pmk Holdings Viii LLC	None	2005	100,547[1]	5,430	Vacant
2	4126-002-019	8717 Aviation Blvd	8715 South Aviation Blvd LLC	None	2005	100,547[1]	5,650	Vacant
2	4126-002-020	8719 Aviation Blvd	Lee,Roger C And Diana N	Upswing Logistics Inc.	2005	100,547[1]	5,830	Industrial
2	4126-002-021	8721 Aviation Blvd	Euro Entertainment LLC	Multimusic Inc	2005	100,547[1]	5,910	Industrial
2	4126-002-022	8721 Aviation Blvd	Euro Entertainment LLC	Multimusic Inc	2005	100,547[1]	5,910	Industrial
3	4126-002-003	8729 Aviation Blvd	Kirshner Slauson LLC	None	1971	36,461	17,465	Vacant
4	4126-002-005	8821 Aviation Blvd	Soka Gakkai International-Usa America	None	---	32,323	9,380	Vacant
5	4126-002-803	N/A	Princeland Properties Inc	National/Alamo	---	3,295	N/A	Parking Lot
6	4126-002-004	8821 Aviation Blvd	Soka Gakkai International-Usa America	None	2005	36,415	N/A	Vacant
7	4126-002-006	8831 Aviation Blvd	Soka Gakkai International-Usa America	Improved with small older industrial bldg; tenant occupied	1959	34,992	26,269	Industrial

Table 3-8. Site #15 – Manchester/Aviation Alternative: Parcels Potentially Displaced (continued)

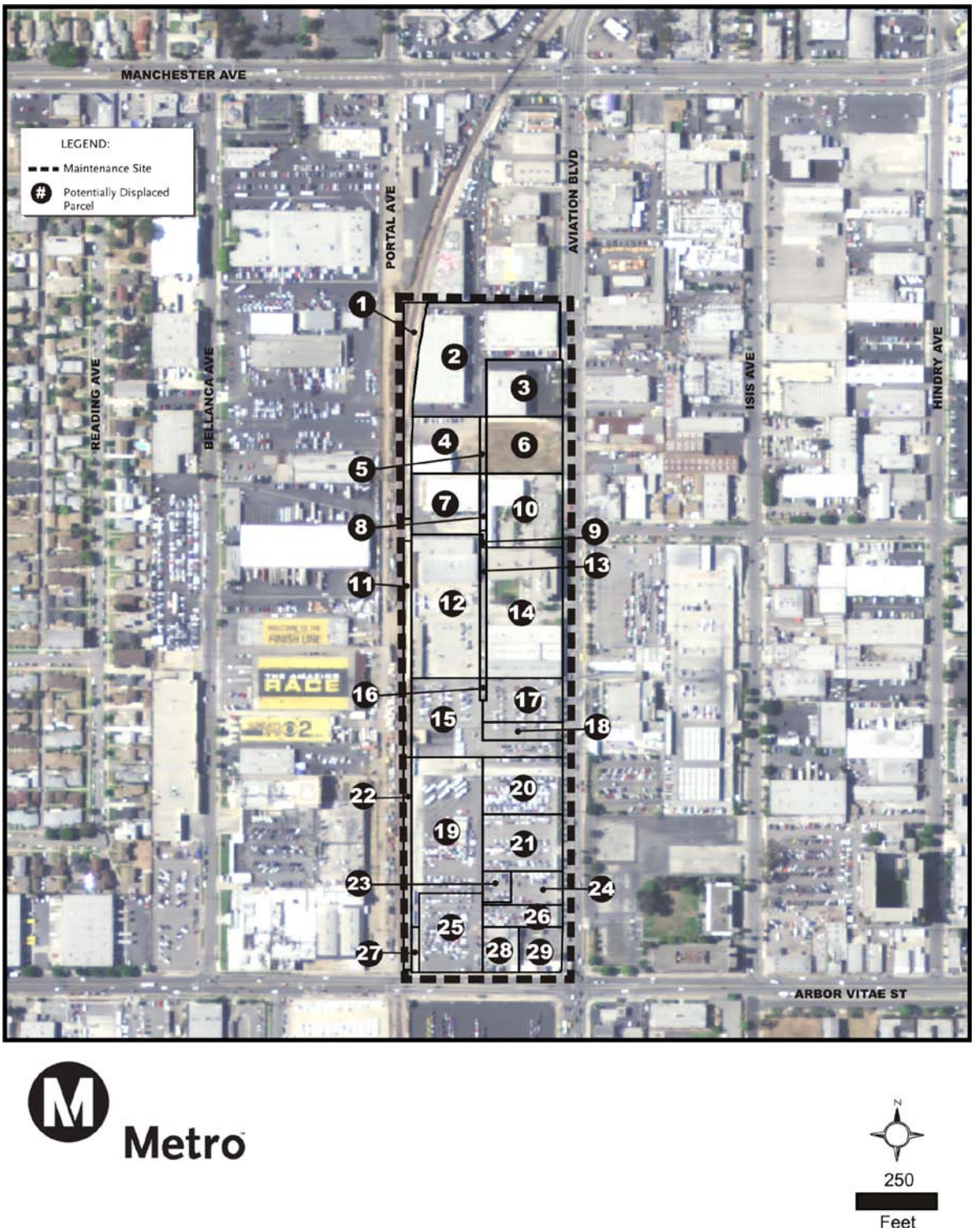
Figure 3-7#	APN	Address	Owner	Tenant	Year Built	Parcel Size (Sq.ft.)	Size of Structures (Sq.ft).	Current Use
8	4126-002-008	N/A	Aviation Inglewood LLC	National/Alamo	---	3,303	N/A	Parking Lot
9	4126-002-009	N/A	Princeland Properties Inc	National/Alamo	---	614	N/A	Parking Lot
10	4126-002-007	8831 Aviation Blvd	Dupuis,Frank J Tr Dupuis Family Trust	None	1959	47,226	46,425	Vacant
11	4126-019-900	N/A	LACMTA	BNSF		15,335	N/A	Utility
12	4126-019-009	8911 Aviation Blvd	Aviation Inglewood LLC	Crimson Technical College	---	81,836	74,913	Technical College
13	4126-019-013	N/A	LACMTA	BNSF		7,962	N/A-	Utility
14	4126-019-010	8911 Aviation Blvd	Aviation Inglewood LLC	Crimson Technical College	---	84,220	84,576	Technical College
15	4126-019-006	9015 Aviation Blvd	Dupuis,Frank J Tr Dupuis Family Trust	None	1957	58,165	N/A	Vacant
16	4126-019-011	N/A	LACMTA	BNSF		1,284	N/A	Utility
17	4126-019-007	8907 Aviation Blvd	Dupuis,Frank J Tr Dupuis Family Trust	Vacant	---	29,134	N/A	Vacant
18	4126-019-008	9009 Aviation Blvd	Dupuis,Frank J Tr Dupuis Family Trust	Vacant	---	11,548	N/A-	Vacant
19	4126-020-013	9021 Aviation Blvd	BSB Blue LLC	Crimson Technical College	1971	84,043	N/A	Parking Lot
20	4126-020-014	9021 Aviation Blvd	BSB Blue LLC	Crimson Technical College	1971	38,066	N/A	Parking Lot
21	4126-020-001	9107 Aviation Blvd	Aviation Inglewood LLC	None	---	38,054	N/A	Vacant
22	4126-020-900	N/A	LACMTA	BNSF		15,243	N/A	Utility
23	4126-020-005	N/A	Aviation Inglewood LLC	None	---	7,272	N/A	Vacant
24	4126-020-016	9117 Aviation Blvd	Aviation Inglewood LLC	National/Alamo	---	15,772	N/A	Parking Lot
25	4126-020-007	1237 W Arbor Vitae St	Princeland Properties Inc	National/Alamo	---	42,314	N/A	Parking Lot
26	4126-020-004	9121 Aviation Blvd	Aviation Inglewood LLC	National/Alamo	---	15,014	N/A	Parking Lot

Table 3-8. Site #15 – Manchester/Aviation Alternative: Parcels Potentially Displaced (continued)

Figure 3-7#	APN	Address	Owner	Tenant	Year Built	Parcel Size (Sq.ft.)	Size of Structures (Sq.ft).	Current Use
27	4126-020-008	1237 W Arbor Vitae St	Aviation Inglewood LLC	National/Alamo	---	2,956	N/A	Parking Lot
28	4126-020-015	1213 W Arbor Vitae St	BSB Blue LLC	None	---	13,955	7,200	Vacant
29	4126-020-012	9131 Aviation Blvd	Hunan Financial Ltd	National/Alamo	1956	16,409	1,633-	Commercial-Service Station
Totals						**895,181**	**319,458**	

[1] These parcels are located in the same physical 100,547-square-foot lot. This lot size was only counted once in the grand total
Source: Los Angeles County Assessor, Metro Real Estate, and TAHA, 2010.

Figure 3-7. Site #15 – Manchester/Aviation Alternative Parcels Potentially Displaced



Source: Los Angeles County Assessor, 2010, Metro Real Estate, and TAHA, 2010.

Table 3-9. Site #17 – Marine/Redondo Beach Alternative: Parcels Potentially Displaced

Figure 3-9#	APN	Address	Owner	Tenant	Year Built	Parcel Size (Sq.ft.)	Total Size of Structures (Sq.ft).	Current Use
1	4149-007-030	4000 Redondo Beach Avenue	AMB AMS Spinnaker LLC	Eni-JR286 DHL	1979	549,269	316,111	Industrial-freight distribution and manufacturing
2	4149-006-803	N/A	So. Calif Edison Co Ltd	Unknown	N/A	44,051	N/A	Industrial-nursery
3	4149-006-805	N/A	So. Calif Edison Co Ltd	Unknown	N/A	14,445	N/A	Industrial-nursery
4	4149-006-033	N/A	Lawrence M. Vandling	Map Cargo Intl	1979	220,003		Industrial-shipping and logistics
Totals						**827,768**	**316,111**	

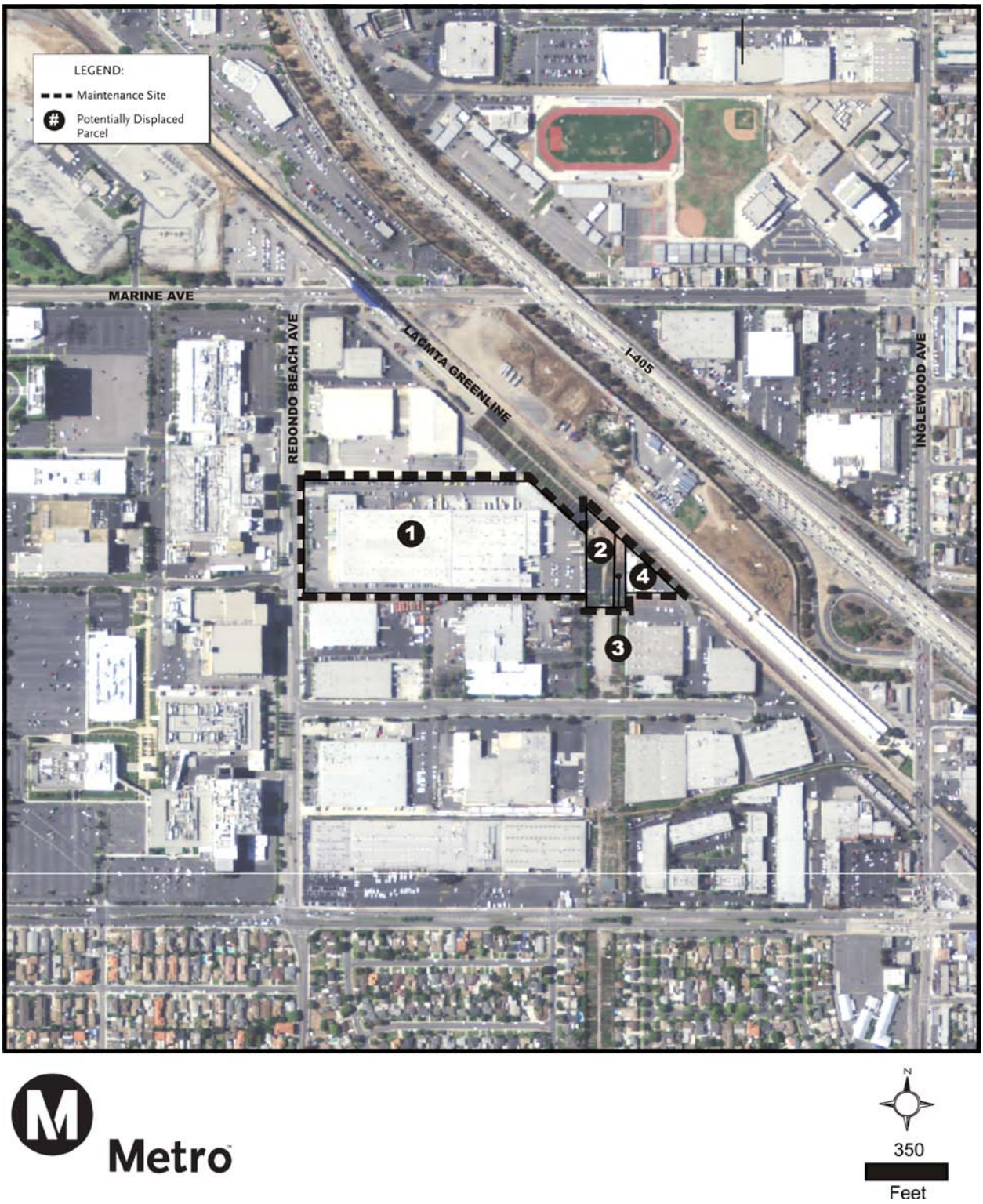
Source: Los Angeles County Assessor, 2010, Metro Real Estate, and TAHA, 2010

Table 3-10. Division 22 Northern Expansion Alternative: Parcels Potentially Displaced

Figure 3-10#	Assessor's Parcel Number (APN)	Address	Owner	Tenant	Year Built	Parcel Size (Sq.ft.)	Size of Structures (Sq.ft).	Current Use
1	4149-012-042	14680 Aviation Boulevard	Hawthorne Mini Venture LLC	US Storage	2000	151,563	39,219, 32,112, 31,090, 83,000, 2,410	Industrial (storage)
2	4149-012-800	N/A	So. Calif Edison Co Ltd	None	N/A	101,922	N/A	Electricity Distribution Infrastructure Right-of-Way
3	4149-012-801	N/A	So. Calif Edison Co Ltd	None	N/A	13,501	N/A	Electricity Distribution Infrastructure Right-of-Way
4	4149-012-807	N/A	So. Calif Edison Co Ltd	None	N/A	4,323	N/A	Electricity Distribution Infrastructure Right-of-Way
Totals						**271,309**	**187,831**	

Source: Los Angeles County Assessor, 2010; Metro Real Estate; and TAHA, 2010.

Figure 3-8. Site #17 – Marine/Redondo Beach Alternative Parcels Potentially Displaced



Source: Los Angeles County Assessor, 2010, Metro Real Estate, and TAHA, 2010.

Figure 3-9. Division 22 Northern Expansion Alternative Parcels Potentially Displaced

Source: Los Angeles County Assessor, 2010, Metro Real Estate, and TAHA, 2010.

3.3.3 Mitigation Measures

DR1 Metro shall provide relocation assistance and compensation, per the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act, to those who are displaced or whose property is acquired as a result of a maintenance facility for the Crenshaw/LAX Transit Corridor Project located on Sites #14, #15, #17, or the Division 22 Northern Expansion site.

DR2 Metro shall set up a business relocation committee to oversee the relocation needs of the businesses that would be displaced as a result of a maintenance facility for the Crenshaw/LAX Transit Corridor Project located on Sites #14, #15, #17, or the Division 22 Northern Expansion site. In addition, Metro shall attempt to minimize disruption to overall production of businesses that are connected with airport activities by relocating in as close proximity to LAX as possible.

DR3 For a maintenance facility located on Site #14 or Site # 15, Metro shall work with LAWA to ensure that potential displacement and relocation of rental car businesses are compatible with the long term implementation of the LAX Master Plan consolidated rental car center.

Impacts Remaining After Mitigation

While adherence to the provisions of the Uniform Act and coordination with LAWA regarding the *LAX Master Plan* (Mitigation Measures **DR1**through **DR3**) may lessen acquisition and relocation impacts for all of the maintenance site alternatives. There is no certainty that all displaced businesses can be relocated in areas that ensure that there is no adverse effect on their competitive position. Nor is there certainty that the time frames for the Crenshaw/LAX Transit Project and implementation of the *LAX Master Plan* will be in sync to facilitate a seamless relocation of affected businesses in comparable facilities. With implementation of Mitigation **DR1** through **DR3**, impacts to displacement and relocation would be reduced to less than adverse for the Division 22 Northern Expansion Alternative. However, under these circumstances a significant and unavoidable effect would remain for the Site #14 – Arbor Vitae/Bellanca, Site #15 Manchester/Aviation, and Site #17 Marine/Redondo Beach Alternatives.

3.3.4 CEQA Determination

According to California Environmental Quality Act (CEQA), displacement and relocation impacts would be considered significant if the maintenance site alternatives would:

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

None of the maintenance site alternatives would result in the displacement of any housing or populations. No significant direct impacts to residential displacement are anticipated with these alternatives. However, the displacement of businesses may result

in the loss of five to 390 employees and therefore a potential significant impact would occur under these alternatives without the implementation of mitigation measures.

As discussed in the NEPA analysis, there is the potential for indirect significant impacts to the businesses that are airport-related or dependent if they are relocated at a substantial distance from LAX.

3.4 Community and Neighborhood Impacts

3.4.1 Affected Environment/Existing Conditions

Figure 3-10 and Figure 3-11 illustrate the existing neighborhoods and community facilities in the vicinity of the maintenance site alternatives.

3.4.2 Study Area Communities and Neighborhoods

City of Los Angeles. The largest residential area is the Westchester Community Planning Area located within the City of Los Angeles and approximately 0.2 miles northwest of the Site #15 – Manchester/ Aviation Alternative site. Westchester has a population density consistent with a highly populated urban area and is comprised of mostly owner-occupied single-family homes, with some complexes and high rise apartment buildings. There are two schools located within the community of Westchester: Cowan Avenue Elementary and Orville Wright Middle School. The bulk of the housing as well as community facilities, parks, shopping areas are located north of Manchester Avenue. Community shopping areas are located at:

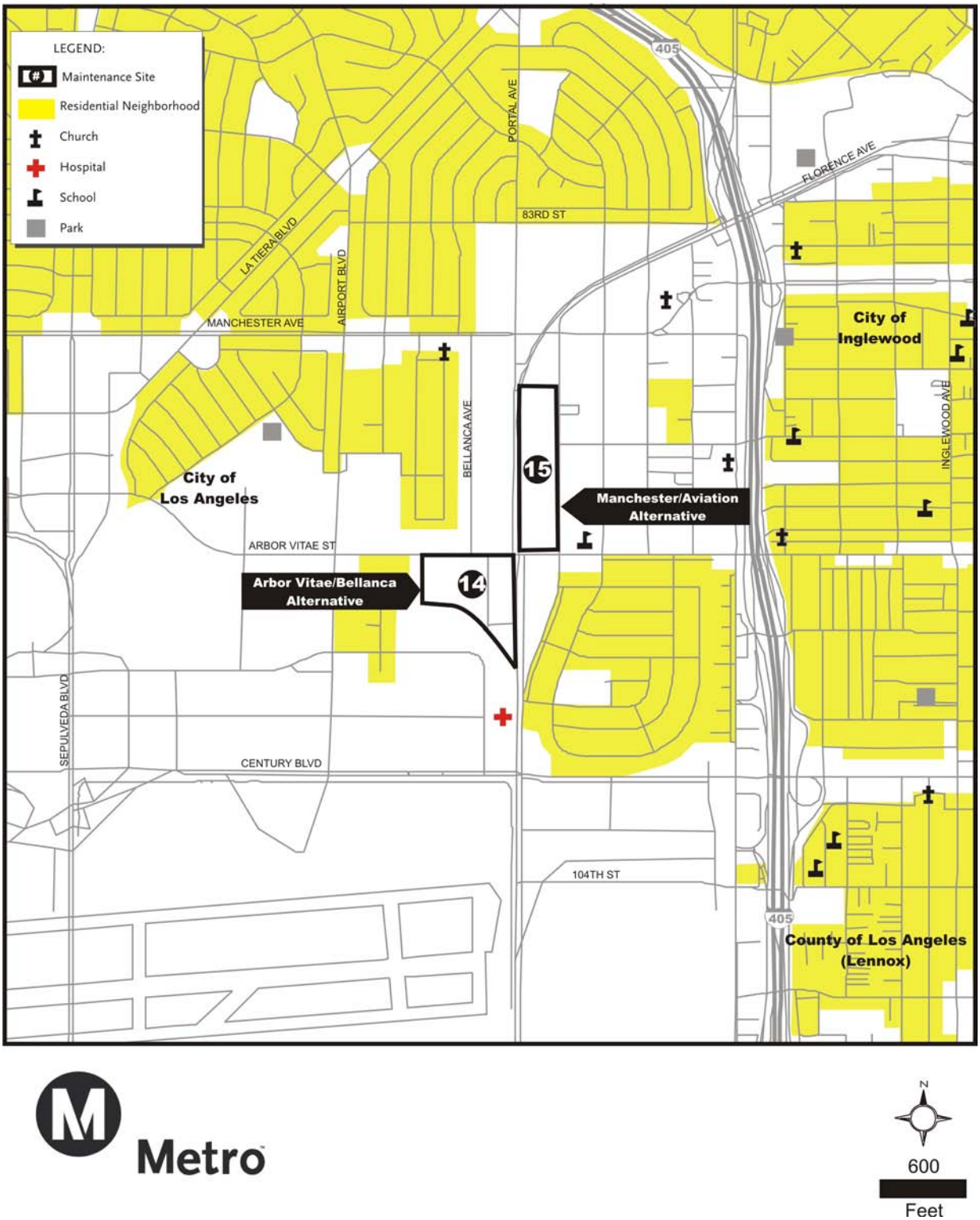
- Howard Hughes Center (Sepulveda Boulevard and Centinela Avenue)
- Sepulveda Boulevard between Manchester and Westchester Parkway
- Manchester Avenue between Airport Boulevard and Aviation Boulevard
- Lincoln Boulevard between Loyola Avenue and West 83rd Street

The residences of Westchester extend south of Manchester Avenue and represent the nearest residential areas to the maintenance site alternatives. These southern-most single family neighborhoods are located in the area generally bounded by Reading Avenue on the east, Morely Street, Interceptor Street, Yorktown Avenue, Wiley Post Avenue, Westchester Parkway on the south, La Tijera Boulevard on the west and Manchester Avenue on the north (Figure 3-10). No schools serving the neighborhood are located south of Manchester Avenue. The primary community facility in the area is the Carl Nielson Youth Park located west of Airport Boulevard.

In addition, there is an isolated Westchester residential neighborhood located in the area bounded by Arbor Vitae on the north, La Cienega Boulevard on the east, Century Boulevard on the south and Aviation Boulevard on the west. This area is densely urban in population and is comprised of mostly renter- occupied complexes and apartments as well as small single-family homes. This neighborhood over the past ten plus years has been undergoing significant change due to land acquisition as part of the LAX land use compatibility and noise abatement program for over ten years. As part of this program, LAWA has been completing voluntary purchases of residences within the airport runway zone to eliminate the noise incompatibility that exists for residences within this zone.

Most of the neighborhood lies directly under the flight path to the LAX northern runway and falls within the loudest noise impact area for airport operations. Although Bright Star Secondary Charter Academy continues to operate in the neighborhood, about 75 percent of land in the neighborhood has been cleared of homes and apartments. As discussed in the Land Use section of this report, this area is not part of the

Figure 3-10. Neighborhoods and Community Facilities – Site #14 and #15



Source: TAHA, 2010.

Westchester/Playa Del Rey Community Plan and is shown on the LAX Master Plan as an airport-related use.

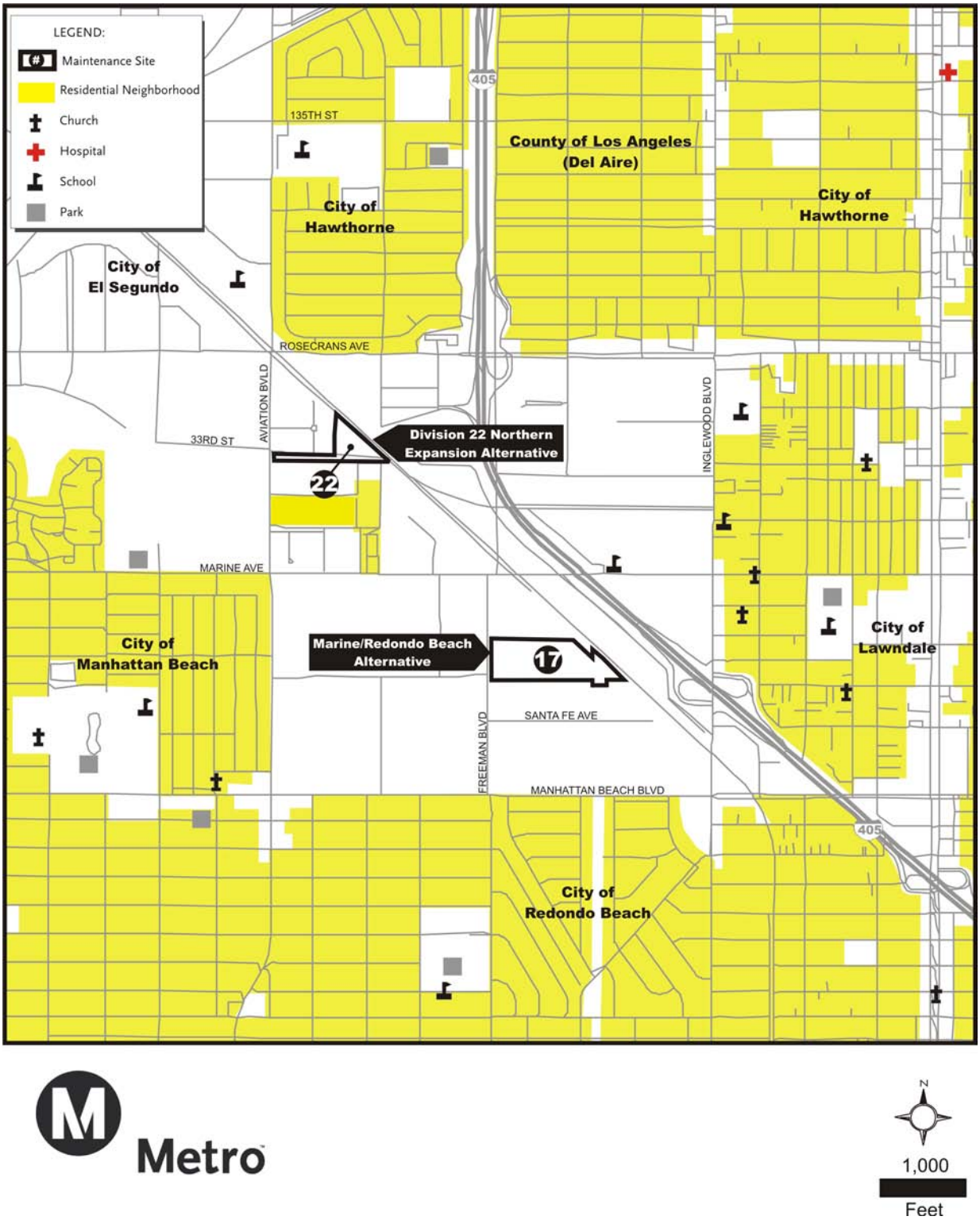
City of Hawthorne. The City of Hawthorne has a population over 90,000 residents and is made up of approximately eight residential neighborhoods. The Hollyglen community of Hawthorne is the nearest residential neighborhood to the Division 22 Northern Expansion Alternative and is located approximately 0.15 miles to the north across Rosecrans Avenue. This neighborhood has no direct physical connection to the maintenance site alternatives. There is an approximately 280-unit multi-family residential development located adjacent to the south of the existing Division 22 Maintenance facility. This development comprises the Willow Glen Specific Plan area, which redeveloped an existing federal-owned property with multi-family residences. The immediate area surrounding the Division 22 Northern Expansion Alternative is primarily industrial/commercial and the City of Hawthorne has designated the surrounding area as Freeway Commercial/Mixed Use.

City of Inglewood. The City of Inglewood has a population of over 112,000 residents and is made up of 28 constituent neighborhoods. As shown in Figure 3-10, there are no residential areas in the City of Inglewood that extend west of I-405. Thus, there are no neighborhoods within the City that are proximate to maintenance site alternatives. As discussed in the Land Use section of this report, the City of Inglewood has designated the area west of I-405 as the La Cienega Redevelopment Area and the primary emphasis in the area is airport-related industrial development.

City of Redondo Beach. The City of Redondo Beach has a population over 68,000 residents and is largely a residential community with four areas of concentrated commercial/industrial development. Only two established communities within the City have been designated by the General Plan with specific development standards and both are located in the southwestern portion of the City, "The Avenues" and "Beryl Heights." As shown in Figure 3-11, the Site #17 Marine/Redondo Beach Alternative is located in the northern end of Redondo Beach, in the industrial complex. The nearest residential neighborhood is located approximately 0.27 miles to the south of the Site #17 – Marine/Redondo Beach Alternative site, across Manhattan Beach Boulevard. The residential neighborhood has no direct physical connection to the Project site alternatives.

County of Los Angeles. The Los Angeles County residential community of Lennox is located within a mile of the Sites #14 and #15, south of Century Boulevard and west of the I-405. The Lennox neighborhood is dense in population and consists predominantly of small renter-occupied single-family homes mixed with complexes and apartments. The focal points of the neighborhood are Inglewood Avenue and Lennox Boulevard. The area is located east of the elevated I-405 structure and has no direct physical connection to the Project sites. The Los Angeles County residential community of Del Aire is located within a mile of the Sites #17 and Division 22 Northern Expansion, north of Rosecrans Avenue and east of the I-405. The Del Aire neighborhood is also dense in population and consists of small renter-occupied single-family homes mixed with complexes and apartments. These residential neighborhoods have no direct physical connection to the Project sites.

Figure 3-11. Neighborhoods and Community Facilities – D22N and Site #17



Source: TAHA, 2010.

3.4.2.1 Neighborhood Councils

The Site #14 - Arbor Vitae/Bellanca Alternative and is located within the Westchester-Playa del Rey Neighborhood Council (NC). The Site #15 - Manchester/Aviation Alternative and Manchester Aerial Crossing are not located within a neighborhood council.

3.4.3 Environmental Impacts/Environmental Consequences

Table 3-11. Summary Comparison of Impacts to Communities and Neighborhoods

Impact Criteria	Site #14	Site #15	Site #17	D22N
Distance to Nearest Residential Area	0.05 miles	0.14 miles	0.27 miles	0.15 miles
Adjacent to Community Facility	No	Yes	No	No
Affects access or Operation of a Community Facility	No	No	No	No
Pre-empts or Disrupts a Community Designated Land-Use	No	No	No	No

Source: TAHA, 2010

3.4.3.1 Direct Impacts

The maintenance site alternatives are located on industrial parcels and are not located within an established community where community cohesion could be disrupted. The sites are located in isolated areas that do not represent a significant change from the existing uses. A maintenance facility would not result in changes to the existing population since it is located in a fully developed area and does not include any housing. Therefore, no adverse effects to communities and neighborhoods are anticipated to result from the site alternatives.

3.4.3.2 Indirect Impacts

The land required for the maintenance facility would replace existing industrial land and would not affect the surrounding neighborhoods. No indirect effects to communities and neighborhoods would result for the maintenance site alternatives.

3.4.4 Mitigation Measures

None required.

3.4.5 CEQA Determination

The maintenance site alternatives are located on industrial parcels adjacent to the Harbor Subdivision, an existing physical barrier. These sites are not located within an established community or neighborhood and would not alter or divide the existing communities. All of these alternatives would result in a less-than-significant impact to neighborhoods and communities.

The maintenance site alternatives are located adjacent to the Harbor Subdivision, an existing physical barrier. These sites would not indirectly contribute to altering or dividing any existing communities. The sites would not spur new growth in the surrounding residential neighborhoods. All of these alternatives would result in a less-than-significant indirect impact to neighborhoods and communities.

3.5 Visual Quality

3.5.1 Affected Environment /Existing Conditions

3.5.1.1 Visual Character

Land uses along this portion of the Crenshaw/LAX LRT alignment include airport and industrial uses, with a few residential neighborhoods located primarily east of Aviation Boulevard and south of Manhattan Beach Boulevard. Views along Aviation Boulevard are primarily restricted to the roadway with the exception of north-facing views, which extend to the Santa Monica Mountains on clear days, and south-facing views, which include views of airplanes taking off and landing at LAX.

Site #14: Arbor Vitae/Bellanca Alternative

This 17.5-acre alternative is occupied by four large-scale industrial buildings, which including car rental uses, a customs brokerage facility and a gourmet food distributor. There is a Neutrogena manufacturing facility located adjacent to the west and a primarily vacant area which is located in the airport noise abatement zone that extends west until Airport Boulevard.

Figure 3-12. View of Dollar Rent-A-Car in the northeast portion of the site

Figure 3-13. View of isolated residences west of Aviation Boulevard

Figure 3-14. View of industrial food company in the southeast portion of the site

Figure 3-15. View of the Neutrogena Corporation located to east and south of the site

There are additional parking related uses, including Lot C, further west of the site. Car rental facilities, a post office, and a cosmetics facility are located to the north of the site. A large parking area and Manchester Square, a residential neighborhood that is also part of the airport noise abatement zone, are located to the east of the site. Additional large-scale industrial buildings are located to the west and south of the site, including additional Neutrogena cosmetic manufacturing facilities.

Site #15: Manchester/Aviation Alternative

This 20.5-acre alternative site is occupied by approximately 11 principal buildings. Generally, the buildings on the site are medium one-story buildings. There is a Crimson Technical College that contains approximately 61,000 sq ft of hangar and shop space and 40,000 sq ft of office/classroom space for an airframe and power plant program for approximately 400 students. There is a one-story concrete tilt up industrial office park containing 11, approximately 5,000 sq ft, units as well as several industrial uses. National/Alamo rent-a-car has employee and overflow parking and a small two story service related facility on the southern third of the site. The uses located across the Harbor Subdivision railroad right-of-way to the west are industrial, and include a cosmetics manufacturing headquarters, a car rental facility, and several freight distribution warehouses. There are auto related uses and fast food restaurants located to the north of the site, several small-scale industrial uses, a charter school and the main facility for the National/Alamo car rental company located to the east of the site and car rental, parking lots, and an Arco gas station are located to the south.

Figure 3-16. Aviation Boulevard facing the northeast

Figure 3-17. View of on-site industrial uses along Arbor Vitae Street

Figure 3-18. View of Aviation Business Center on the northern end of the site

Figure 3-19. View of National/Alamo Rent-A-Car facility on the site

Site #17: Marine/Redondo Beach Alternative

This 14.2-acre site is occupied by approximately one principal building, a 361,000 square-foot industrial warehouse that contains two industrial tenants, a freight distribution company, and a manufacturing business. In addition, there are utility transmission lines that travel through the site, and a nursery located underneath the power lines. The eastern end of the site contains a parking area leased by an industrial freight distribution company located to the south. There are similar large-scale industrial uses located to the north, west, and south of the site. The Harbor Subdivision railroad right-of-way, additional transmission lines, a vacant lot planned for a hotel and RV parking development, and the I-405 are located to the east.

Figure 3-20. View of industrial warehouse on the site

Figure 3-21. View of industrial uses to the south of the site

Figure 3-22. View of industrial uses to the west of the site

Figure 3-23. View of utility easement with nursery on the east end of the site

Division 22 Northern Expansion Alternative

This 3.5-acre alternative site is occupied by a public storage facility containing five 1 to 2-story buildings ranging in size from 2,400 to 83,000 square feet. The Project site also includes property containing utility transmission lines and is used for parking. The Harbor Subdivision railroad right-of-way and large industrial uses are located to the north and east of the site. There are two multi-story office buildings and two hotels located to the west of the site. The existing Metro Green Line Maintenance facility and the Fusion South Bay multi-family residential development containing 18 two-story buildings are located to the south of the site.

Figure 3-24. View of public storage facility on the site.

Figure 3-25. View of office building to the west of the site.

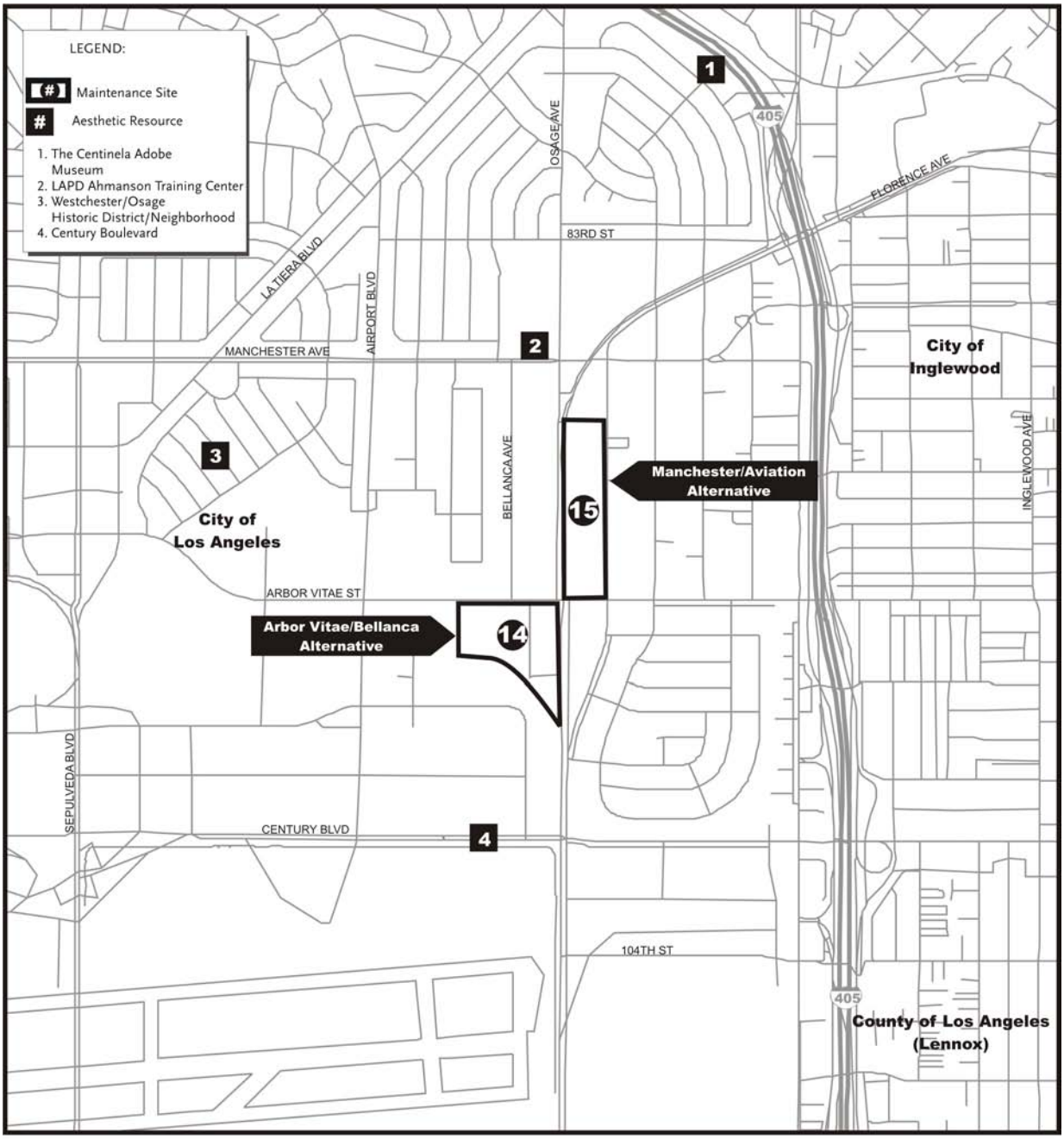
Figure 3-26. View of multi-family residences to the south of the site.

Figure 3-27. View of utility easement to the south of the public storage facility.

3.5.1.2 Aesthetic Resources

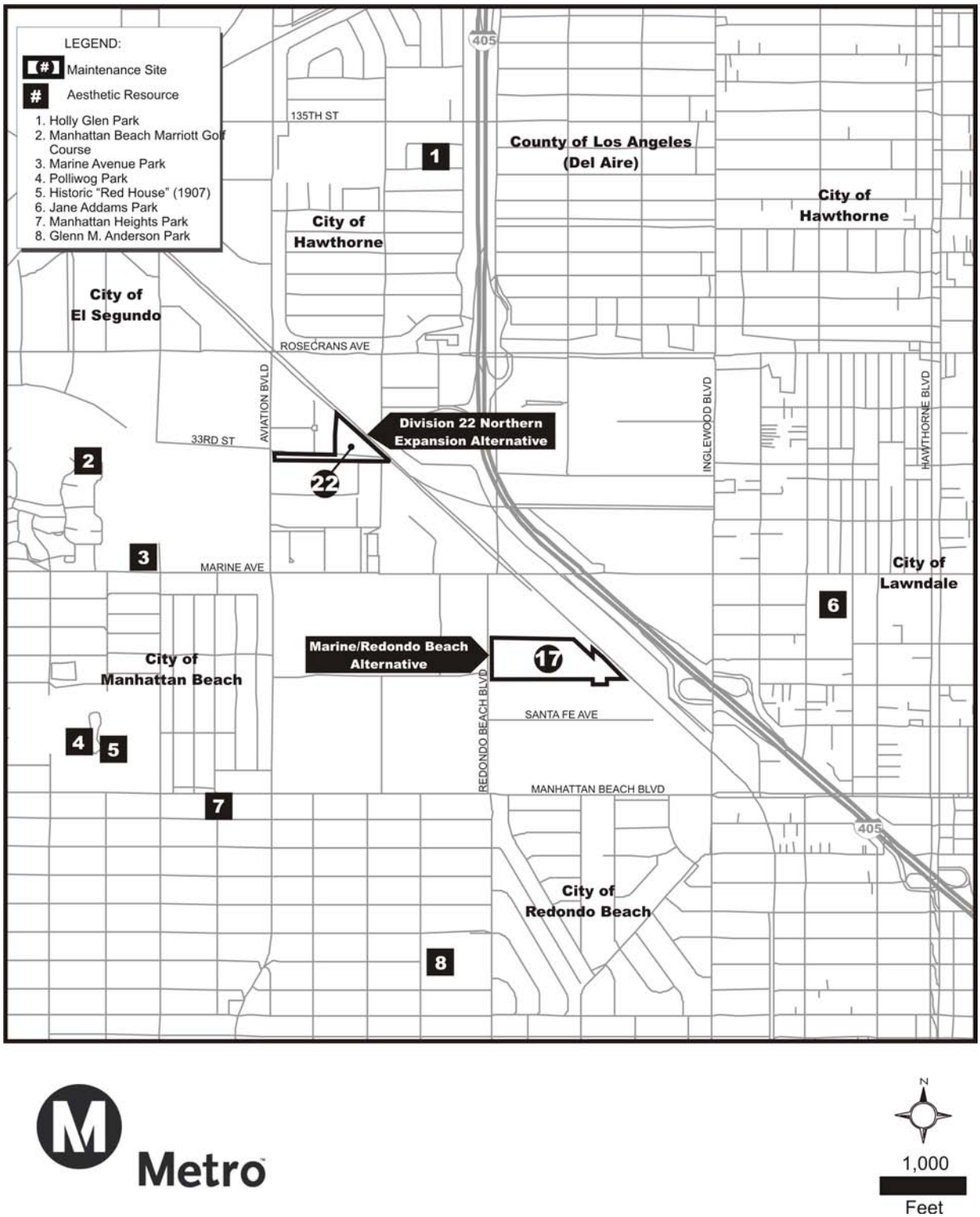
Figure 3-28 and Figure 3-29 show the surrounding aesthetic resources and their relationship to the maintenance site alternatives.

Figure 3-28. Aesthetic Resources – Sites #14 and #15



Source: TAHA, 2010.

Figure 3-29. Aesthetic Resources – Site #17 and D22N



Source: TAHA, 2010.

3.5.2 Environmental Impacts / Environmental Consequences

Table 3-12. Summary Comparison of Impacts to Aesthetic Resources

Impact Criteria	Site #14	Site #15	Site #17	D22N
Incompatibility with existing visual character	No	No	No	No
Creates inconsistent scale and massing	No	No	No	No
Contrast in height and setback	No	No	No	No
Change in major street view or corridor	No	No	No	No
Affect views and vistas	No	No	No	No
Substantial new source of light, shadow, or glare	No	No	No	No
Adverse effect after mitigation	No	No	No	No

Source: TAHA, 2010.

3.5.2.1 Direct Impacts

The Crenshaw/LAX Transit Corridor Project would require a new maintenance facility that would store vehicles and serve as a service and maintenance location. A maintenance facility would generally represent the same or less intense use as the existing industrial uses. The site plans for the maintenance site alternatives locates the main service building in the middle of the site with ancillary facilities, such as security, parking areas, and storage buildings, on the periphery of the sites. The contrast in scale, massing and open space would be consistent with the existing buildings and open space surrounding each of the four maintenance site alternatives. There are no historic buildings or designated scenic highways that are near any of the maintenance site alternatives. No particularly unique visual elements, landforms, or topographic features exist on or immediately surrounding any of the maintenance site alternatives.

The Project would include security lighting for all buildings and facilities. Additional ornamental lighting may also be installed to accent buildings. Lighting fixtures would typically be mounted on low scale poles or on the facades of buildings. It is expected that this lighting (which typically is at the level of one to two foot-candles) would not spillover outside the site boundaries nor would it create glare that could adversely affect any adjacent residences. The maintenance facility buildings would be up to two stories or an estimated 35 feet in height. The longest shadows cast by a 35-foot building would occur during the Winter Solstice at 9:00 a.m. and 3:00 p.m. This shadow length would not affect residences near any of the four sites.

Utility poles exist along all the arterials adjacent to the maintenance site alternatives and transmission lines are adjacent to the Site #17 Marine/Redondo and Division 22 Northern Expansion Alternatives. Overhead wires would be present as part of the maintenance facility; they would generally be consistent with the surrounding utility poles and transmission lines. Development of a maintenance facility at any of these maintenance site alternatives would not have a negative effect on the visual environment as it would fit within the context of the existing uses, would not obstruct views or vistas, or any of the aesthetic resources shown in Figure 3-28 and Figure 3-29. All of the maintenance site alternatives would result in no adverse effects to visual resources.

3.5.2.2 Indirect Impacts

The maintenance facility would occur in a generally industrial area and would not indirectly alter the character or development of land in the surrounding area. Therefore, no indirect visual impacts are anticipated to result for any of the alternatives sites.

3.5.3 Mitigation Measures

None required.

3.5.4 CEQA Determination

Visual impacts from a maintenance facility on each of the maintenance site alternatives would be as described in the NEPA analysis. No additional significant visual impacts would occur to the visual environment and/or resources from the maintenance site alternatives.

3.6 Air Quality

This section examines the affected environment related to air quality. A complete discussion of criteria air pollutants with established federal and State standards, relevant regulatory framework is provided in Appendix D.

3.6.1 Affected Environment/ Existing Conditions

The maintenance site alternatives are located within the Los Angeles County portion of the South Coast Air Basin (SCAB). Ambient pollution concentrations recorded in Los Angeles County are among the highest in the four counties comprising SCAB. SCAB is an area of high air pollution potential due to its climate and topography. SCAB experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. In addition, the mountains and hills within the area contribute to the variation of rainfall, temperature, and winds throughout the region. The region experiences frequent temperature inversions. Under inversion conditions, temperature increases as altitude increases and prevents air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and lower layer of the atmosphere, which creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward.

In addition, hydrocarbons and NO_2 react under strong sunlight creating pollution, commonly referred to as "smog." Light, daytime winds predominantly from the west further aggravate the condition by driving the air pollutants inland toward the mountains.

During the fall and winter, air quality problems are created due to CO and NO_2 emissions. High NO_2 levels usually occur during autumn or winter on days with summer-like conditions. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the SCAB are associated with heavy traffic.

The South Coast Air Quality Management District (SCAQMD) monitors air quality conditions at 38 locations throughout SCAB. The maintenance site alternatives are all located within the Southwest Coastal Source Receptor Area (Figure 3-30), which is served by the LAX-Hastings Monitoring Station located at 7201 West Westchester Parkway in the City of Los Angeles. Historical data from the LAX-Hastings Monitoring Station were used to characterize existing conditions. Criteria pollutants monitored at the LAX-Hastings Monitoring Station include ozone (O_3), carbon monoxide (CO), particulate matter ten microns or less in diameter (PM_{10}), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). The next most representative monitoring station for $PM_{2.5}$ is the Long Beach Monitoring Station. A summary of the data recorded at these stations is presented in Table 3-13. SCAQMD-approved 2009 data was not available when this analysis was completed.

Figure 3-30. Air Monitoring Areas

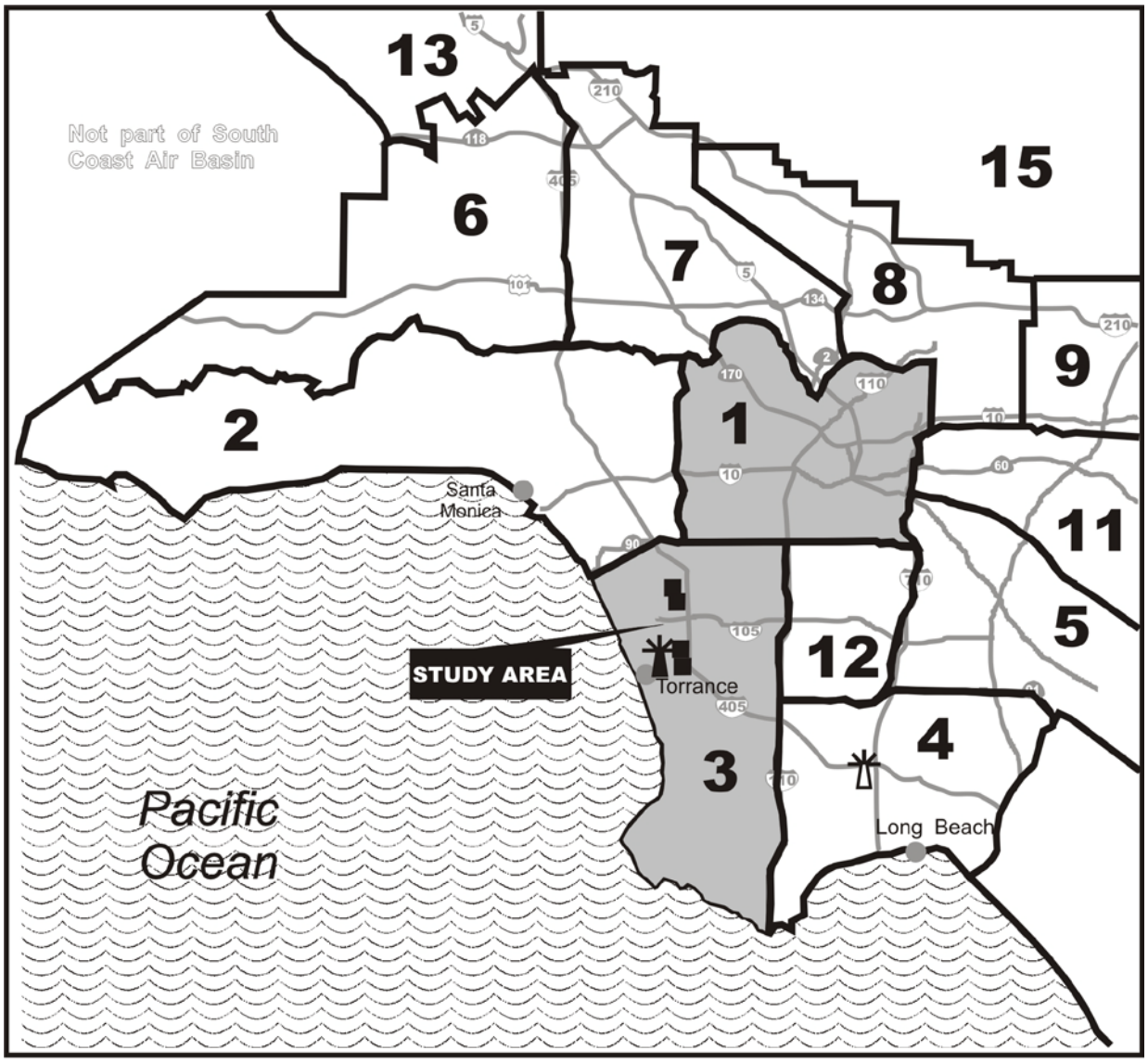


Table 3-13. 2006 to 2008 Ambient Air Quality Data

Air Pollutant	Federal Standard	2006	2007	2008
Carbon Monoxide (CO)	Maximum 1-hr concentration (ppm)	3	3	4
	Maximum 8-hr concentration (ppm)	2.3	2.4	2.5
	Days > 35 ppm (1-hr standard)	0	0	0
	Days > 9 ppm (8-hr standard)	0	0	0
Ozone (O_3)	Maximum 8-hr Concentration (ppm)	0.066	0.074	0.075
	Days > 0.075 ppm (8-hr standard)	0	0	0
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean (ppm)	0.016	0.014	0.014
	Maximum 24-hr Concentration (ppm)	0.05	0.08	0.09
	Exceed Annual Standard (0.053 ppm)	No	No	No
	Days > 0.100 ppm (1-hr standard)	0	0	0
Sulfur Dioxide (SO_2)	Maximum 24-hr Concentration (ppm)	0.01	0.01	0.01
	Days > 0.14 ppm (24-hr standard)	0	0	0
Suspended Particulate (PM_{10})	Maximum 24-hr Concentration ($\mu g/m^3$)	45	96	50
	Days > 150 $\mu g/m^3$ (24-hr standard)	0	2	0
Suspended Particulate ($PM_{2.5}$)	Annual Arithmetic Mean ($\mu g/m^3$)	14.5	14.6	14.2
	Maximum 24-hr Concentration ($\mu g/m^3$)	54	83	57
	Exceed Annual Standard (15 $\mu g/m^3$)	No	No	No
	Days > 35 $\mu g/m^3$ (24-hr standard)	6	12	8

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter
Source: SCAQMD, http://www.aqmd.gov/smog/historicaldata.htm, 2010.

3.6.2 Environmental Impacts/Environmental Consequences

Table 3-14. Summary Comparison of Impacts to Air Quality

Impact Criteria	Site #14	Site #15	Site #17	D22N
Produce Localized CO Concentrations exceeding Federal Standards	No	No	No	No
Produce Substantial Amounts of Toxic Air Contaminants	No	No	No	No
Result in Adverse Odors	No	No	No	No
Adversely Affect Global Climate Change	No	No	No	No
Inconsistent with CAAA Regional Conformity Guidance	No	No	No	No
Inconsistent with CAAA Project-level Conformity Guidance	No	No	No	No

Source: TAHA, 2010.

3.6.2.1 Localized Operational Concentrations

Direct Impacts

The operation of a maintenance facility for any of the site alternatives would not be a substantial source of on-site criteria pollutant emissions. Off-site criteria pollutant emissions would result from truck trips and employee commute trips. Substantial particulate matter emissions would be generated by truck trips and not employee trips. Operation of the maintenance facility for any of the site alternatives would result in approximately seven truck trips per day. Seven trips would not generate enough emissions to adversely affect localized particulate matter concentrations.

None of the analyzed intersections under each alternative would exceed the SCAQMD screening thresholds for CO concentrations. In addition, the Project is listed in a conforming Regional Transportation Plan. A detailed localized CO analysis is not necessary. Localized CO concentrations would not exceed federal standards. Therefore, the operation of the maintenance facility would not result in an adverse impact related to localized CO concentrations for any of the site alternatives.

Indirect Impacts

No indirect impacts related to localized concentrations are anticipated to result from the operation of the maintenance facility for any of the site alternatives.

3.6.2.2 Toxic Air Contaminants

Direct Impacts

The greatest source of transit-related toxic air contaminant emissions is diesel vehicles. The maintenance facility would service electrically powered LRT vehicles and would result in approximately seven truck trips per day. Therefore, the proposed Project would not generate substantial particulate matter or mobile source air toxic emissions. Therefore, operation of the maintenance facility would not result in an adverse impact related to toxic air contaminants for any of the site alternatives.

Indirect Impacts

No indirect impacts related to toxic air contaminants are anticipated to result from the operation of the maintenance facility for any of the site alternatives.

3.6.2.3 Odors

Direct Impacts

The Project would not include any land use or activity that typically generates adverse odors. Therefore, the operation of the maintenance facility would not result in an adverse impact related to odors for any of the site alternatives.

Indirect Impacts

No indirect impacts related to odors are anticipated to result from the operation of the maintenance facility for any of the site alternatives.

3.6.2.4 Global Warming and Greenhouse Gases

Direct Impacts

Greenhouse Gas (GHG) emissions were estimated for construction and operational activity. Construction activity would generate 1,754 metric tons per year of GHG emissions for up to two years. Operational activity would generate a maximum of 4,529 metric tons per year of GHG emissions, including 2,755 metric tons per year from electricity use. The SCAQMD recommends that construction emissions be annualized over a 30-year project lifetime to estimate total project emissions. Therefore, the maintenance facility would generate a maximum of 4,587 metric tons per year of GHG emissions. The 4,587 metric tons per year of GHG emissions generated by the

maintenance facility would not exceed the 10,000 metric tons per year threshold.[2] Therefore, the maintenance site alternatives would not result in an adverse impact related to GHG emissions.

Indirect Impacts

No indirect impacts related to GHG emissions and climate change are anticipated to result from any of the maintenance site alternatives.

3.6.2.5 Transportation Conformity

The Project is included in Metro's current Long Range Transportation Plan (LRTP) and in the SCAG's 2008 *Regional Transportation Plan* (RTP). The same design concept and scope that was used for the regional conformity analysis is not substantially changed. The Project would be consistent with regional conformity guidance.

Project level conformity is demonstrated by showing that it will not cause localized exceedances of CO, $PM_{2.5}$, and/or PM_{10} standards. Based on the analysis contained in the Localized Operational Concentrations analysis, none of the alternatives would result in a CO hotspot associated with on-road vehicles (i.e., employee vehicles and truck trips). The maintenance facility would service electrically-powered light rail cars. These vehicles would not be a substantial source of particulate emissions. In addition, similar to the on-road analysis, employee vehicles and truck trips would not generate substantial localized emissions at the facility. The maintenance facility would not result in a PM_{10} or $PM_{2.5}$ hotspot. The operation of the maintenance facility would be consistent with project-level conformity guidance for all of the site alternatives.

3.6.3 Mitigation Measures

Impacts associated with operational air quality would not be adverse. No mitigation measures are required.

3.6.4 CEQA Determination

The above analysis demonstrated compliance with National Environmental Policy Act (NEPA). The following analysis demonstrates compliance with CEQA. The analysis is based on guidance provided by the SCAQMD.

3.6.4.1 Regional Emissions

The main source of regional pollutant emissions associated with the operation of the maintenance facility would be mobile sources. Each site alternative would generate a maximum of 442 employee trips and seven truck trips per day. It was assumed that the maintenance site alternatives would operate three pieces of construction-type equipment simultaneously each day. The Division 22 Northern Expansion would likely require fewer new employees. However, this conservative analysis assumed that the Division 22 North Expansion would also require 60 new employees. The new facility would potentially be a satellite to Division 22. It was assumed that new trips associated with the

[2]California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, January 2008.

project site and additional trips added to the Division 22 facility would combine to generate 60 average daily trips. As shown in Table 3-15, regional emissions would not exceed the SCAQMD significance thresholds.

Table 3-15. Regional Operational Emissions

	Pounds per Day				
	VOC (volatile organic compounds)	NO_x	CO	$PM_{2.5}$	PM_{10}
Regional Emissions	5	36	62	2	2
Significance Thresholds	55	55	550	55	150
Exceed Threshold?	No	No	No	No	No

Air quality calculations are provided in Appendix C of this report
Source: TAHA, 2010.

Therefore, the maintenance site alternatives would result in a less-than-significant impact related to regional emissions. No indirect impacts related to regional emissions are anticipated to result from the maintenance site alternatives.

3.6.4.2 Localized Carbon Monoxide Concentrations

According to the traffic study, all analyzed intersections under each alternative would operate at an acceptable level of service according to the SCAQMD screening guidance, and further analysis is not necessary. Therefore, the maintenance site alternatives would result in a less-than-significant impact related to localized CO concentrations.

No indirect impacts related to localized CO concentrations are anticipated to result from the maintenance site alternatives.

3.6.4.3 Toxic Air Contaminants

The main source of toxic air contaminant (TAC) emissions would be a spray booth used for maintaining the rail cars. Similar to the Division 11 Blue Line Maintenance Facility, the maintenance site alternatives would be required by the SCAQMD to install an air pollution control system to reduce exhaust emissions. The control system would potentially include six blowers for venting grinding, sanding, and painting rooms and a baghouse for collecting dust. The air pollution control system would substantially reduce emissions. Therefore, the maintenance site alternatives would result in a less-than-significant impact related to TAC emissions.

No indirect impacts related to toxic air contaminants are anticipated to result from the maintenance site alternatives.

3.6.4.4 Odors

The maintenance facility would not include any land use or activity. Therefore, maintenance site alternatives would result in a less-than-significant impact related to odors.

No indirect impacts related to odors are anticipated to result from the maintenance site alternatives.

3.6.4.5 Air Quality Management Plan

The Crenshaw/LAX Transit Corridor Project would support a transit project designed to facilitate regional access. It would link unconnected areas of the Crenshaw/LAX Transit Corridor to the regional transportation system. This would increase transit ridership and result in reduced growth in vehicle miles of travel (VMT) along with associated criteria pollutant emissions. Therefore, the maintenance site alternatives would be consistent with the Air Quality Management Plan (AQMP).

No indirect impacts related to consistency with the AQMP are anticipated to result from the maintenance site alternatives.

3.6.4.6 Global Warming and Greenhouse Gases

GHG emissions were estimated for construction and operational activity. Construction activity would generate 1,754 tons per year of GHG emissions.[3] Operational activity would generate 5,798 tons per of GHG emissions, including 2,755 tons from electricity use. The SCAQMD recommends that construction emissions be annualized over a 30-year project lifetime to estimate total project emissions. As shown in Table 3-16, the maintenance facility would generate 5,856 tons of GHG emissions.

Table 3-16. Estimated GHG Emissions

Source	Carbon Dioxide Equivalent (Tons per Year)
Construction /a/	58
Operations	5,798
Total	**5,856**
Significance Threshold	10,000
Exceed Threshold?	No

/a/ Total construction emissions amortized over 30 years.
Source: TAHA, 2010.

This conservative analysis did not account for the removal of existing land uses. Because many of these uses rely on their proximity to the airport, it is assumed these uses would most likely relocate within the same sub-region and would continue to generate GHG emissions. Based on the Metro standards and the above analysis, the impact of the maintenance site alternatives on the cumulative effect of global climate change is not cumulatively considerable and considered to be less than significant.

No indirect impacts related to GHG emissions and climate change are anticipated to result from maintenance site alternatives.

[3]This number is averaged over a 30-year period to provide a yearly total 58 metric tons per year.

3.7 Noise and Vibration

This section examines the affected environment related to noise. The ambient noise conditions are defined, as well as potential impacts resulting from operations of the maintenance facility.

3.7.1 Affected Environment/Existing Conditions

3.7.1.1 General Noise Setting

The Federal Transit Administration (FTA) screening guidance is designed to identify locations where a project may cause a noise impact. If no sensitive land uses are present within a defined area of project influence, then no further assessment is necessary. The screening guidance for rail yards and shops requires analysis for land uses with an obstructed view of the project site and within 650 feet of the property line. The distance is 1,000 feet for land uses with an unobstructed view of the project site. Figure 3-31 and Figure 3-32 show the identified sensitive land uses. No sensitive receptors were identified within the FTA screening distances for Site #17 – Marine/Redondo Beach Alternative. Table 3-17 shows the existing noise levels at identified sensitive land uses. The existing noise levels were characterized using a combination of short-term (15-minute) measurements and 24-hour noise levels obtained from the Los Angeles World Airports (LAWA) monitoring network. Short-term sound measurements were taken using a SoundPro DL Sound Level Meter on July 7, 2010 and October 28, 2010. The latest LAX noise contour map is shown in Figure 3-33 and was used to characterize existing 24-hour noise levels. The 24-hour data is published as Community Noise Equivalent Levels (CNEL). The CNEL and L_{dn} are similar, generally within 1 dBA of each other, and were assumed to be identical in this analysis.

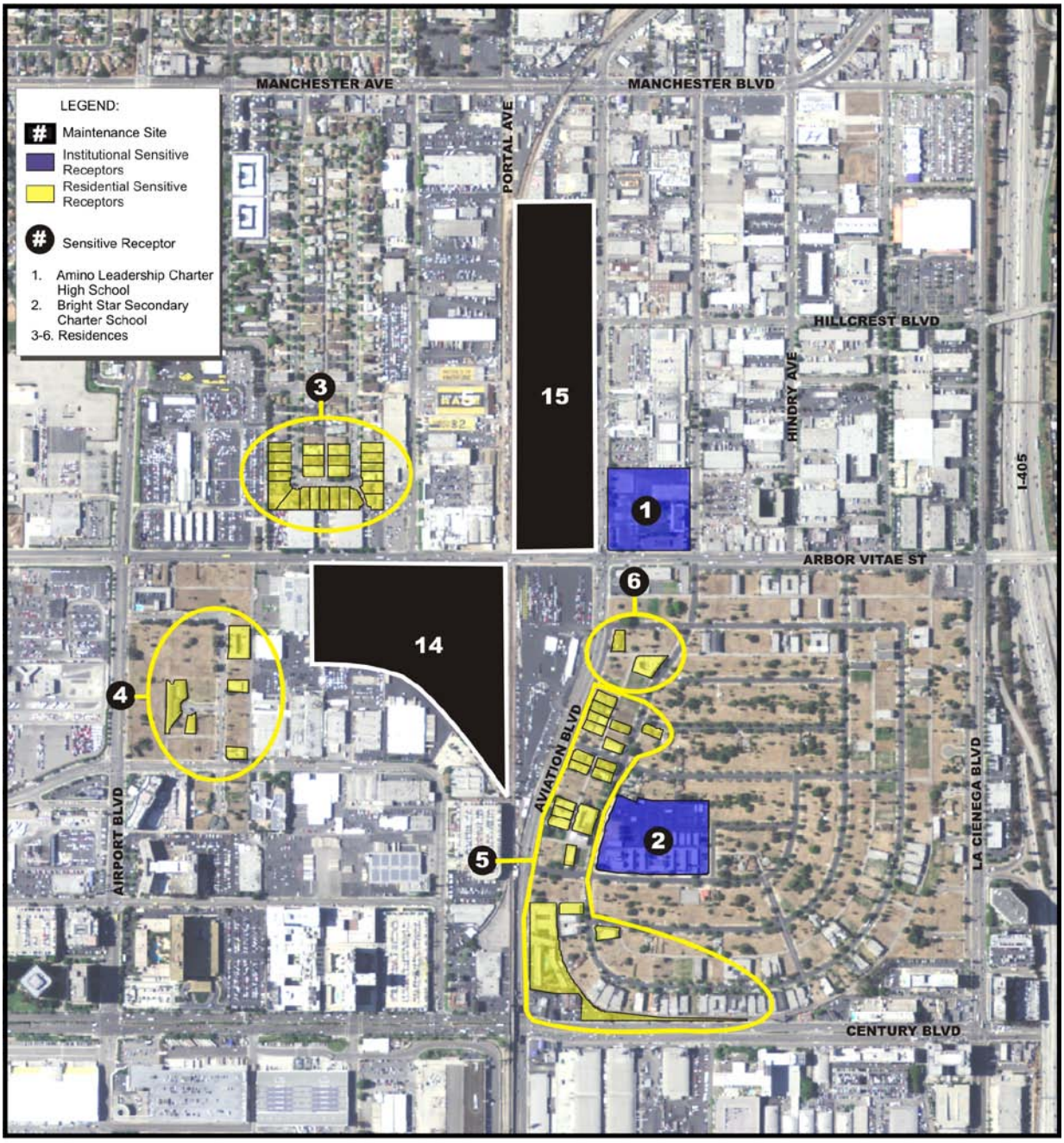
In addition, a 24-hour noise measurement was taken at the existing Division 22 Maintenance Facility on October 28, 2010. The 24-hour noise level was 61.1 dBA L_{dn} with a maximum 15-minute L_{eq} of 59 dBA.

3.7.1.2 General Vibration Setting

Ambient vibration levels were not measured as part of this study. FTA Vibration Impact Criteria were used to identify locations where potential impacts may occur based on existing land use activities.

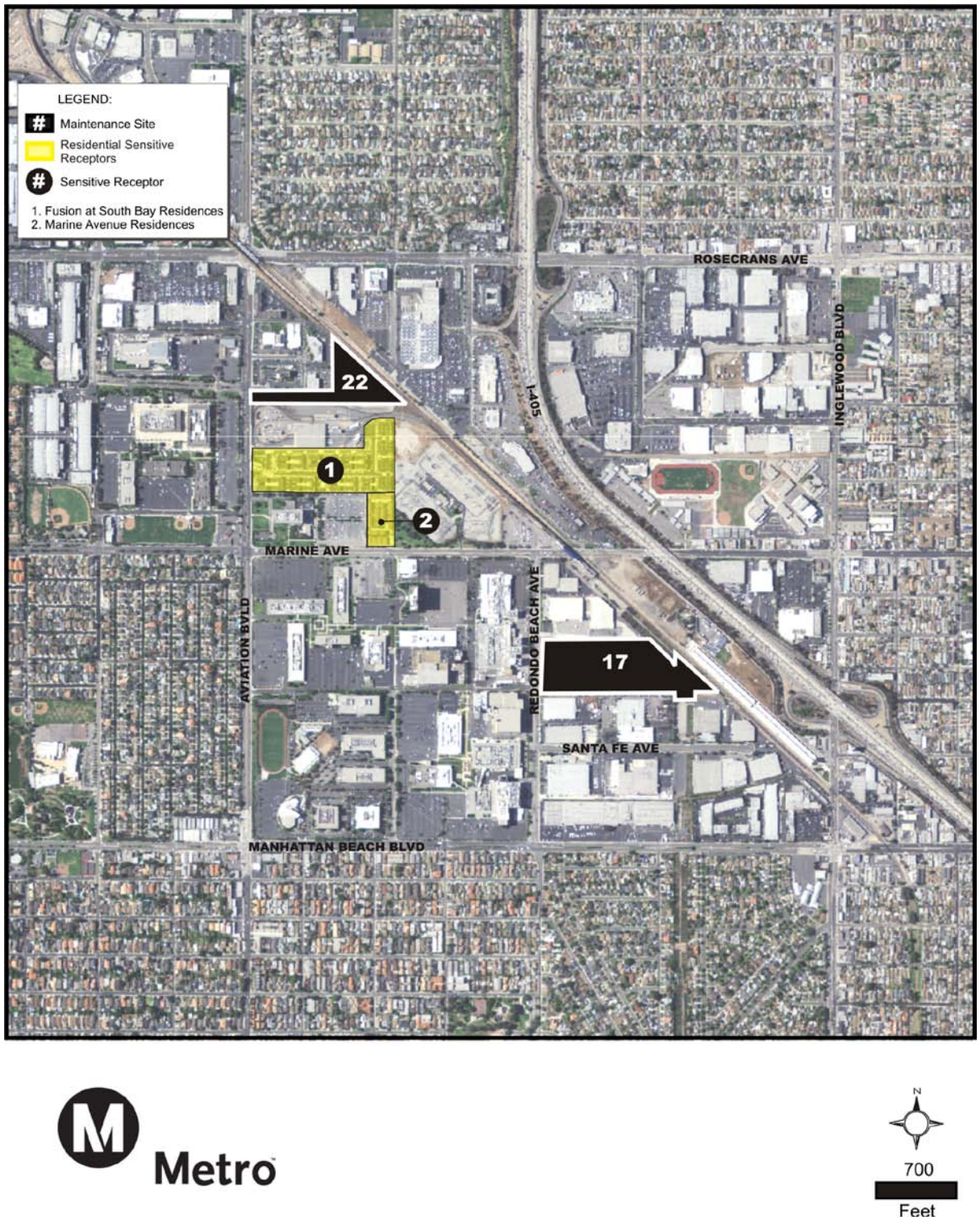
The FTA screening guidance is designed to identify locations where a project may cause a vibration impact. The screening distances are 150 feet for Category 2 land uses such as residences and buildings where people sleep and 100 feet for Category 3 land use such as institutional land uses with primarily daytime and evening use. There are no Category 1 land uses near the project sites (e.g., recording studios). The only land use for any of the proposed project sites that requires further analysis is the multi-family residential complex adjacent and to the south of the Division 22 Maintenance Facility.

Figure 3-31. Noise-Sensitive Receptors within 0.25 miles of Sites #14 and #15



Source: TAHA 2010.

Figure 3-32. Noise-Sensitive Receptors within 0.25 miles of Site #17 and D22N



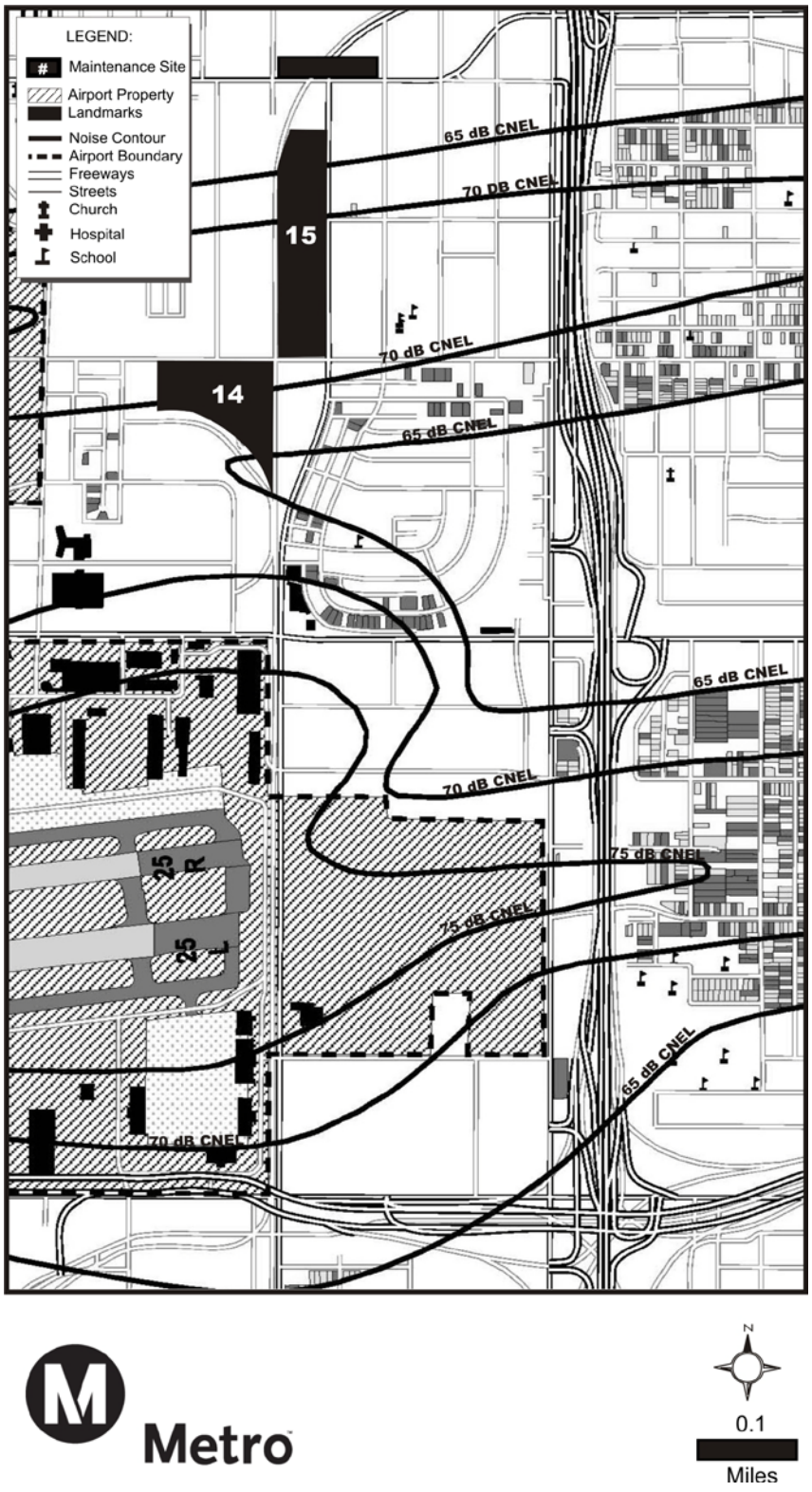
Source: TAHA 2010.

Table 3-17. Existing Noise Levels at Sensitive Receptors

Receptor ID	Receptor Description	Number of Buildings	FTA Land Use Category	Distance from Sensitive Receptor to Nearest Maintenance Facility Noise Source (Feet)	Existing Noise Level, L_{dn} or L_{eq}
Site #14 – Arbor Vitae/Bellanca Alternative					
Figure 3-31 ID No. 3	Residences North of Project Site	22	2	300 – 650 (obstructed view)	70[1]
Figure 3-31 ID No. 4	Residences West of Project Site	4	2	350 – 730 (unobstructed and obstructed views)	65[1]
Figure 3-31 ID No. 5	Residences East of Project Site	26	2	400 – 1,000 (unobstructed and obstructed views)	65[1]
Figure 3-31 ID No. 2	Bright Star Secondary Charter Academy	1	3	750 (unobstructed view)	55[2]
Figure 3-31 ID No. 1	Animo Leadership Charter High School	1	3	800 (unobstructed view)	69[1]
Site #15 – Manchester/Aviation Alternative					
Figure 3-31 ID No. 1	Animo Leadership Charter High School	1	3	250 (unobstructed view)	69[2]
Figure 3-31 ID No. 6	Residences South of Project Site	7	2	500 – 1,000 (unobstructed and obstructed views)	65[1]
Division 22 Northern Expansion					
Figure 3-32 ID No. 1	Fusion at South Bay Residences	17	2	Adjacent – 650 (obstructed view)	61[2]
Figure 3-32 ID No. 2	Marine Avenue Residences	7	2	500 – 650 (obstructed view)	65[1]

Source: TAHA, 2010.
Notes: [1] Based on LAX noise contour.
[2] Based on monitored noise level.

Figure 3-33. LAX Noise Contours



Source: LAWA, 2010.

3.7.2 Environmental Impacts/Environmental Consequences

Table 3-18. Summary Comparison of Impacts to Noise and Vibration

Impact Criteria	Site #14	Site #15	Site #17	D22N
Exceeds operational noise (NEPA) thresholds	No	No	No	No
Exceeds operational on-site noise (CEQA) thresholds	No	No	No	No
Exceeds operational on-road mobile noise (CEQA) thresholds	No	No	No	No
Exceeds operational vibration (CEQA and NEPA) thresholds	No	No	No	No
Adverse effect after mitigation	No	No	No	No

Source: TAHA, 2010.

3.7.2.1 Operational Noise

Direct Impacts

The majority of noise sources would be located within the maintenance and storage facility buildings. The main building would house the wheel truing machine, and the service and inspection area. Additional sources of noise include safety alarms for heavy equipment, such as hoists and cranes. The blow down/exterior cleaning building would house the car wash. The painting shop/body repair shop would house the paint compressors and the body repair work equipment. If openings are necessary, building shell and openings would be designed and oriented to control noise at nearby noise sensitive land uses. The remaining exterior noise sources at the maintenance and storage facility include outdoor inspections (e.g., train horn tests), special track work (e.g., noise generated from wheel contact with rail), and crossovers and switches.

Table 3-19 presents the operational noise levels associated with the maintenance site alternatives.

The noise levels presented below are based on the distance from the center of the work area to the sensitive receptors. The estimated noise levels were calculated from the monitored maintenance facility noise level of 61 dBA L_{dn} at 100 feet and maximum 15-minute L_{eq} of 59 dBA at 100 feet. As shown in Table 3-19, operational activity associated with all of the proposed maintenance site alternatives would not substantially increase noise levels at the identified receptors. Therefore, no adverse effects related to operational noise would occur for any of the proposed maintenance site alternatives.

Indirect Impacts

No indirect impacts related to operational noise are anticipated to result from the selection of the maintenance facility for the Crenshaw/LAX Transit Corridor Project.

Table 3-19. Noise Levels at Sensitive Receptors

Receptor ID[1]	Type of Building	Number of Buildings	FTA Land Use Category[2]	Distance from Center of Activity to Receptor (Feet)[3]	Existing Noise Level (dBA)	Noise Exposure With Project (dBA)[4]	FTA Level of Noise Impact
Site #14 – Arbor Vitae/Bellanca Alternative							
Figure 3-31 ID No. 3	Single-Family Residences	22	2	750	70	70	No Impact
Figure 3-31 ID No. 4	Single-and Multi-Family Residences	4	2	1,000	65	65	No Impact
Figure 3-31 ID No. 5	Single-and Multi-Family Residences	26	2	950	65	65	No Impact
Figure 3-31 ID No. 2	Bright Star Secondary Charter Academy	1	3	1,350	55	55	No Impact
Figure 3-31 ID No. 1	Animo Leadership Charter High School	1	3	1,250	69	69	No Impact
Site #15 – Manchester/Aviation Alternative							
Figure 3-31 ID No. 1	Animo Leadership Charter High School	1	3	700	69	69	No Impact
Figure 3-31 ID No. 6	Single-and Multi-Family Residences	7	2	1,100	65	65	No Impact
Division 22 Northern Expansion							
Figure 3-32 ID No. 1	Multi-Family Residential Complex	17	2	275	61	61	No Impact
Figure 3-32 ID No. 2	Multi-Family Residential Complex	10	2	690	65	65	No Impact

Source: TAHA, 2010.
Notes: [1] Refer to Figure 3-31 and Figure 3-32 for receptor locations.
[2] Land Use Category 2 includes residences and buildings where people sleep. Land Use Category 3 includes institutional land uses with primarily daytime and evening use.
[3] The screening distances discussed earlier are based on the distance from the property line of the maintenance facility to the receptor. The analysis is based on the distance from the center of noise-generating activity to the receptor. Therefore, some of this distances presented in the table are outside of the screening distance but still analyzed in this detailed assessment.
[4] Project noise levels were based on the monitored maintenance facility noise level of 61 dBA L_{dn} or 59 dBA L_{eq}.

3.7.2.2 Operational Vibration

Direct Impacts

Light Rail movements would be the greatest source of operational vibration. Based on the FTA *Transit Noise and Vibration Impact Assessment* (May 2006), the vibration level was estimated to be 67.0 VdB at 40 feet. This assumed that trains would not travel faster than 20 miles per hour within the maintenance facility. .

Site #14 – Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives

The screening analysis completed per FTA guidance did not identify receptors that require a detailed vibration analysis for the Site #14 - Arbor Vitae/Bellanca, Site #15 -

Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives. No adverse impact related to operational vibration would result for these maintenance site alternatives.

Division 22 Northern Expansion Alternative

New rail tracks on the expansion site would be at least 150 feet from multi-family land use south of the project site. The rail vibration level associated with this distance would be 43.7 VdB, which is less than the most stringent threshold of 65 VdB. Increased rail activity on the existing Division 22 Maintenance Facility would also generate vibration. However, increased rail activity would use the existing tracks and rail activity on these tracks does not currently generate a vibration impact at the adjacent residential land use. Therefore, the Division 22 Northern Expansion Alternative would not result in an adverse impact related to operational vibration.

No indirect impacts related to operational vibration are anticipated to result from the selection of the maintenance facility for the Crenshaw/LAX Transit Corridor Project.

3.7.3 Mitigation Measures

Impacts associated with operational noise would not be adverse. No mitigation measures are required.

3.7.4 CEQA Determination

3.7.4.1 Operational Noise – On-Site

On-site operational noise was calculated using the same methodology used for the NEPA analysis that was previously presented. The operational noise levels presented for the NEPA analysis also apply to this CEQA analysis. Operational noise associated with the maintenance site alternatives would not exceed the 3-dBA significance threshold. Therefore, the maintenance site alternatives would result in a less-than-significant impact related to operational noise.

No indirect impacts related to on-site operational noise are anticipated to result from the maintenance site alternatives.

3.7.4.2 Operational Noise – On-Road Mobile Source Noise

The maintenance site alternatives are estimated to generate a total of 18 trips during the morning peak hour (8 inbound/10 outbound) and 20 trips during the evening peak hours (11 inbound/9 outbound). A doubling of traffic volumes is typically required to increase noise levels by audible 3 dbA. The roadway network surrounding each of the Project sites supports hundreds to thousands of vehicles during the peak hour traffic periods. The estimated 18 AM and 20 PM peak hour trips would not double the traffic volumes along any of the studied roadway segments. On-road mobile source noise would result in a less-than-significant impact for all of the maintenance site alternatives.

No indirect impacts related to off-site operational noise are anticipated to result from maintenance site alternatives.

3.7.4.3 Operational Vibration

Based on the FTA *Transit Noise and Vibration Impact Assessment* (May 2006), it was estimated that maintenance facility light rail activity would generate a vibration level of 67.0 VdB at 40 feet.

Maintenance Site #14 – Arbor Vitae/Bellanca Alternative

The nearest sensitive receptor would be 275 feet east of the Project, and would experience a vibration level of 49.9 VdB. This would be less than the most stringent threshold of 65 VdB. Therefore, the Site #14 - Arbor Vitae/Bellanca Alternative would result in a less-than-significant impact related to operational vibration.

Site #15 – Manchester/Aviation Alternative

The nearest sensitive receptor would be 200 feet east of the Project, and would experience a vibration level of 54.0 VdB. This would be less than the most stringent threshold of 65 VdB. Therefore, the Site #15 - Manchester/Aviation Alternative would result in a less-than-significant impact related to operational vibration.

Site #17 – Marine/Redondo Beach Alternative

The nearest sensitive receptor would be 1,000 feet north of the Project, and would experience a vibration level of 34.0 VdB. This would be less than the most stringent threshold of 65 VdB. Therefore, the Site #17 – Marine/Redondo Beach Alternative would result in a less-than-significant impact related to operational vibration.

Division 22 Northern Expansion Alternative

New rail tracks on the expansion site would be at least 150 feet from the nearest sensitive receptor. The rail vibration level associated with this distance would be 57.8 VdB, which is less than the most stringent threshold of 65 VdB. Increased rail activity on the existing Division 22 Maintenance Facility would also generate vibration. However, increased rail activity would use the existing tracks and current rail activity on these tracks does not generate a vibration impact at the adjacent residential land use. Therefore, the Division 22 Northern Expansion Alternative would result in a less-than-significant impact related to operational vibration.

No indirect impacts related to operational vibration are anticipated to result from maintenance site alternatives.

3.8 Ecosystems/Biological Resources

3.8.1 Affected Environment/Existing Conditions

Table 3-20 presents rare wildlife and plant species and ecosystems (plant communities) listed on the California Natural Diversity Database (CNDDB) as having the potential to occur within the three 7.5-minute quadrants associated with the Project alternatives. Sensitive animal and plant species and vegetation communities identified by the CNDDB as having the potential to occur within 0.25 miles of either side of maintenance site alternatives are largely absent.[4] Due to their mobility, some sensitive bird species may utilize existing mature trees during migration, but would not be supported as residents within this urbanized setting. There are no wetland areas within 0.25 miles of either side of the maintenance site alternatives.

There are no significant ecological areas (SEA) located within 0.25 miles of either side of the maintenance site alternatives. There are no parks and open space areas within 0.25 miles of either side of the maintenance site alternatives. There are no designated or sensitive biological resources located within 0.25 miles of the maintenance site alternatives.

East of Aviation Boulevard, between approximately Century Boulevard and Arbor Vitae Street, is an area known as Manchester Square. This area includes several parcels that LAWA has purchased over the years as part of a voluntary residential relocation program (in lieu of sound-proofing) associated with the operation of LAX. Although no buildings remain on these vacant parcels, which vary in size from one lot to multiple lots, they have grassy vegetation and trees. Although these lots could provide food and cover for urban wildlife, no vegetation exists that would support sensitive biological resources.

Table 3-20. Ecosystems and Special Status Wildlife and Plant Species within the Biological Maintenance Site Alternatives

Common Name	Scientific Name	Status
Ecosystems (Vegetation Communities)		
Southern Dune Scrub	Southern Dune Scrub	None
Southern Coastal Salt Marsh	Southern Coastal Salt Marsh	None
Birds		
California Brown Pelican	Pelecanus Occidentalis Californicus	FE[1]/CE[2]
California Black Rail	Laterallus jamaicensis coturniculus	CE[2]
Western Snowy Plover	Charadrius AlexanDrinus Nivosus	FT[3]/SC[4]
California Least Tern	Sternula Antillarum Browni	FE[1]/CE[2]
Burrowing Owl	Athene Cunicularia	SC[4]
Southwestern Willow Flycatcher	Empidonax Traillii Extimus	CE
Coastal California Gnatcatcher	Polioptila Californica	FT[3]/SC[4]
Belding's Savannah Sparrow	Passerculus Sandwichensis Beldingi	CE[2]

[4]Based on field observations conducted between summer and fall of 2010.

Table 3-20. Ecosystems and Special Status Wildlife and Plant Species within the Biological Maintenance Site Alternatives (continued)

Common Name	Scientific Name	Status
Mammals		
Western Mastiff Bat	Eumops Perotis Californicus	SC[4]
Pocketed Free-tailed Bat	Nyctinomops Femorosaccus	SC[4]
Southern California Saltmarsh Shrew	Sorex Ornatus Salicornicus	SC[4]
Pacific Pocket Mouse	Perognathus Longimembris Pacificus	FE[1]/SC[4]
South Coast Marsh Vole	Microtus Californicus Stephensi	SC[4]
American Badger	Taxidea Taxus	SC[4]
Reptiles		
Western Pond Turtle	Actinemys Marmorata	SC[4]
Coast (San Diego) Horned Lizard	Phrynosoma Coronatum (Blainvillii Population)	SC[4]
Invertebrates		
Sandy Beach Tiger Beetle	Cicindela Hirticollis Gravida	None
Senile Tiger Beetle	Cicindela Senilis Frosti	None
Globose Dune Beetle	Coelus Globosus	None
Lange's El Segundo Dune Weevil	Onychobaris Langei	None
Dorothy's El Segundo Dune Weevil	Trigonoscuta Dorothea	None
Belkin's Dune Tabanid Fly	Brennania Belkini	None
Henne's Eucosman Moth	Eucosma Hennei	None
Busck's Gallmoth	Carolella Busckana	None
Wandering Skipper	Panoquina Errans	None
El Segundo Blue Butterfly	Euphilotes Battoides Allyni	FE[1]
Monarch Butterfly	Danaus Plexippus	None
Mimic Tryonia	Tryonia Imitator	None
Orcutt's Pincushion	Chaenactis Glabriuscula Var. Orcuttiana	SEC[6]
Southern Tarplant	Centromadia Parryi Ssp. Australis	SEC[6]
Coulter's Goldfields	Lasthenia Glabrata Ssp. Coulteri	SEC[6]
Beach Spectaclepod	Dithyrea Maritima	CT[5]/SEC[6]
Ventura Marsh Milk-Vetch	Astragalus Pycnostachyus Var. Lanosissimus	FE[1]/CE[2]/SEC[6]
Coastal Dunes Milk-Vetch	Astragalus Tener Var. Titi	FE[1]/CE[2]/SEC[6]
Brand's Star Phacelia	Phacelia Stellaris	FC[7]/SEC[6]
San Fernando Valley Spineflower	Chorizanthe Parryi Var. Fernandina	FC[7]/CE[2]/SEC[6]
Prostrate Navarretia	Navarretia Prostrata	SEC[6]
Navarretia fossalis	Moran's Nosegay	FT[3]
California Orcutt Grass	Orcuttia Californica	FE[1]/CE[2]/SEC[6]
Ballona Cinquefoil	Potentilla Multijuga	PEC[8]

Source: California Natural Diversity Database, April 26, 2010
[1]FE - Federally Endangered (U.S. Fish and Wildlife Service).
[2]CE - California Endangered (California Department of Fish and Game).
[3]FT - Federally Threatened (U.S. Fish and Wildlife Service).
[4]SC - Species of Concern in California (California Department of Fish and Game).
[5]CT - California Threatened (California Department of Fish and Game).
[6]SEC - Seriously Endangered in California (California Native Plant Society).
[7]FC - Candidate for Federal Listing (U.S. Fish and Wildlife Service).
[8]PEC - Presumed Extinct in California (California Native Plant Society).

3.8.2 Environmental Impacts/Environmental Consequences

Table 3-21. Summary Comparison of Impacts to Ecosystems and Biological Resources

Impact Criteria	Site #14	Site #15	Site #17	D22N
Contains or adjacent to an SEA	No	No	No	No
Jurisdictional wetland	No	No	No	No
Forested	No	No	No	No
Vacant or undeveloped with vegetation	No	No	No	No
Contains endangered or Sensitive Species	No	No	No	No
Adverse effect after mitigation	No	No	No	No

Source: TAHA, 2010.

3.8.2.1 Direct Impacts

All of the maintenance site alternatives are located in industrial areas that do not contain wetlands, rivers, coastal zones, native and non-native shrubs, grasses, mature trees. No removal or disturbance of native shrubs, grasses, or mature trees would be required. In addition, operation of the facility would be constructed within a developed site located in an urbanized area. Therefore, the maintenance site alternatives would not result in adverse effects to biological resources.

3.8.2.2 Indirect Impacts

Any indirect effect would occur from the overall loss of habitat or creation of a deterrent to the movement or existence of a sensitive species. Therefore, no indirect impacts to ecological or biological resources are anticipated to result from the selection of the maintenance site alternatives.

3.8.3 Mitigation Measures

None required.

3.8.4 CEQA Determination

There are no wildlife corridors or wetlands that exist within the maintenance site alternatives. However, because species of concern have the potential to occur within 0.25 miles of the maintenance site alternatives, potential impacts to these biological resources were evaluated for each of the maintenance site alternatives.

The maintenance site alternatives would be within fully developed sites in an urbanized area and are not anticipated to have a significant impact on biological resources.

No indirect impacts to ecological or biological resources are anticipated to result for any of the maintenance site alternatives.

3.9 Geotechnical/Subsurface/Seismic/Hazardous Materials

3.9.1 Affected Environment/Existing Conditions

3.9.1.1 Regional Setting

The study area has an elevation of approximately 100 feet above mean sea level (amsl). A review of the Hollywood and Inglewood, California 7.5 Minute Quadrangle Topographic Maps indicates that local surface-water sheet flow is generally toward the south-southeast along the portion of the alignment north of Florence Avenue. South of Florence Avenue, sheet flow is generally toward the south, as indicated on the Venice, California 7.5 Minute Quadrangle Topographic Map (U.S. Geological Survey [USGS], 1964).

3.9.1.2 Geology

The maintenance site alternatives are within the Los Angeles Basin. The Los Angeles Basin, a structural trough, is a northwest-trending, alluvium lowland plain that is approximately 50 miles long and 20 miles wide. Mountains and hills that generally expose Late Cretaceous to Late Pleistocene-age sedimentary and igneous rocks bound the basin along the north, northeast, east, and southeast. The Los Angeles Basin is part of the Peninsular Ranges geomorphic province of California, which is characterized primarily by four sub-parallel structural blocks: the Northeastern, Northwestern, Southwestern, and Central Blocks, and is sliced longitudinally by young, steeply dipping northwest-trending fault zones. The Los Angeles Basin, located at the northerly terminus of the Peninsular Ranges, is the site of active sedimentation and the strata is interpreted to be as much as 31,000 feet thick in the center of the synclinal trough of the Central Block of the Los Angeles Basin. The maintenance site alternatives are located within the southern portion of the Central Block of the Los Angeles Basin. The geologic materials in the area of the four maintenance site alternatives generally consists of artificial fill derived from local geologic units, pre-development landslides, and colluvium and alluvium overlying mainly unconsolidated bedded sand, gravel, clay, and silt. Floodplain deposits bordering the west sides of the Baldwin Hills were mostly deposited by the ancestral Los Angeles river system and its recent descendant, Ballona Creek, and generally consist of alluvium comprised of varying proportions of gravel, sand, silt, and clay. The area immediately west of the Baldwin Hills, overlain by floodplain deposits, was named the Ballona Plain by Tieje (1926), who described deposits of peat, clayey sand, and boulder gravel overlying tilted Pleistocene beds. The peat is a component of marshy areas observed in older aerial photographs and maps, including early soil maps of the area.

3.9.1.3 Subsurface Gases

The maintenance site alternatives are not located within an oil field. However, there are three oil fields in the surrounding area, La Cienega, El Segundo, and Inglewood. The Petrerol oil field (in Inglewood) is the closest oil field to the maintenance site alternatives and is located approximately one mile to the northeast. Common problems associated with oil field properties include the release of methane and hydrogen sulfide soil gas, oil seepage, contaminated soils, leaking wells, and wells not plugged and abandoned to current standards. The location of the maintenance site alternatives in relation to oil fields and the City of Los Angeles Methane and Methane Buffer Zones is presented in Figure 3-34, Oil Field Hazard Map.

Figure 3-34. Oil Fields Map

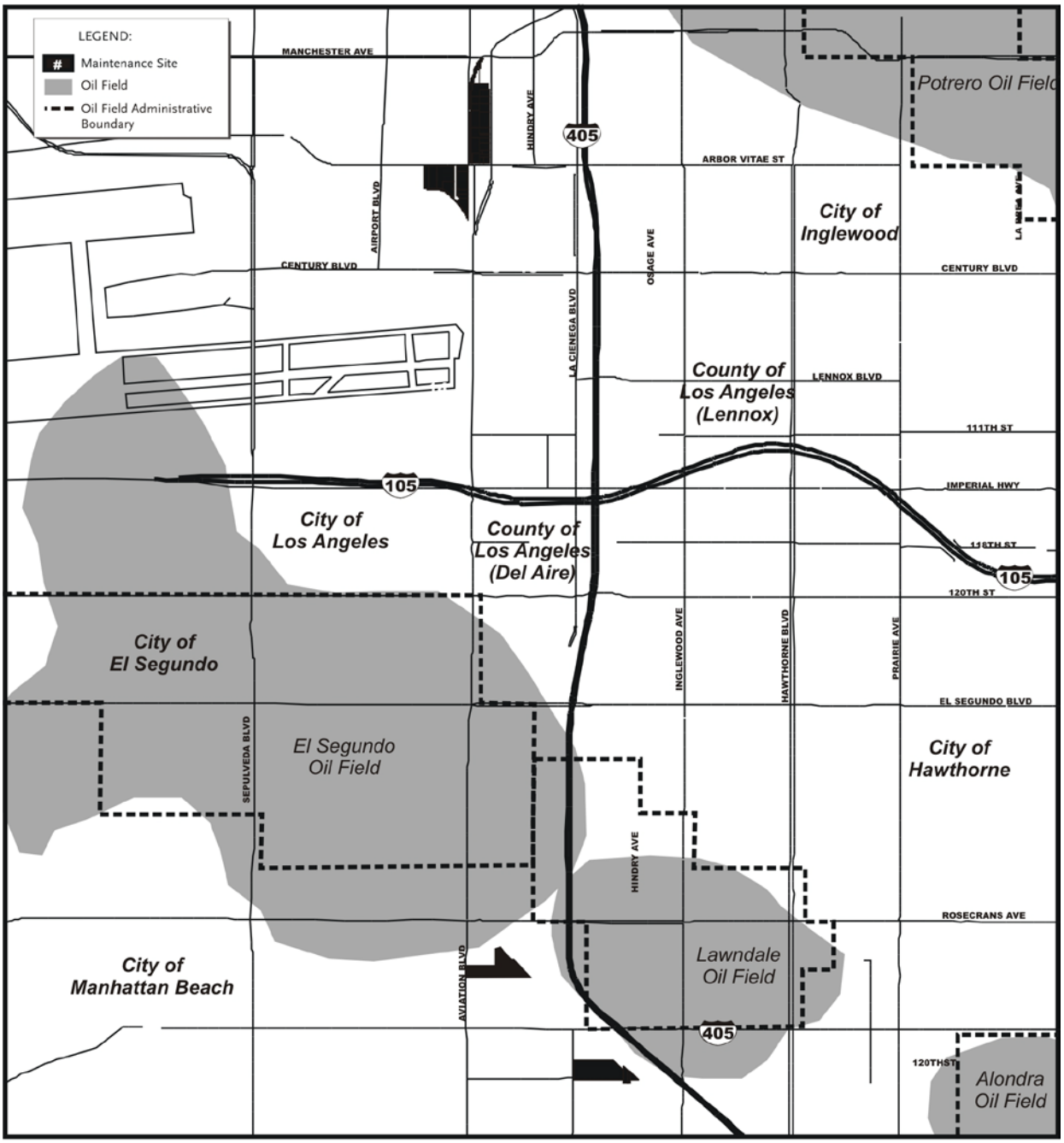
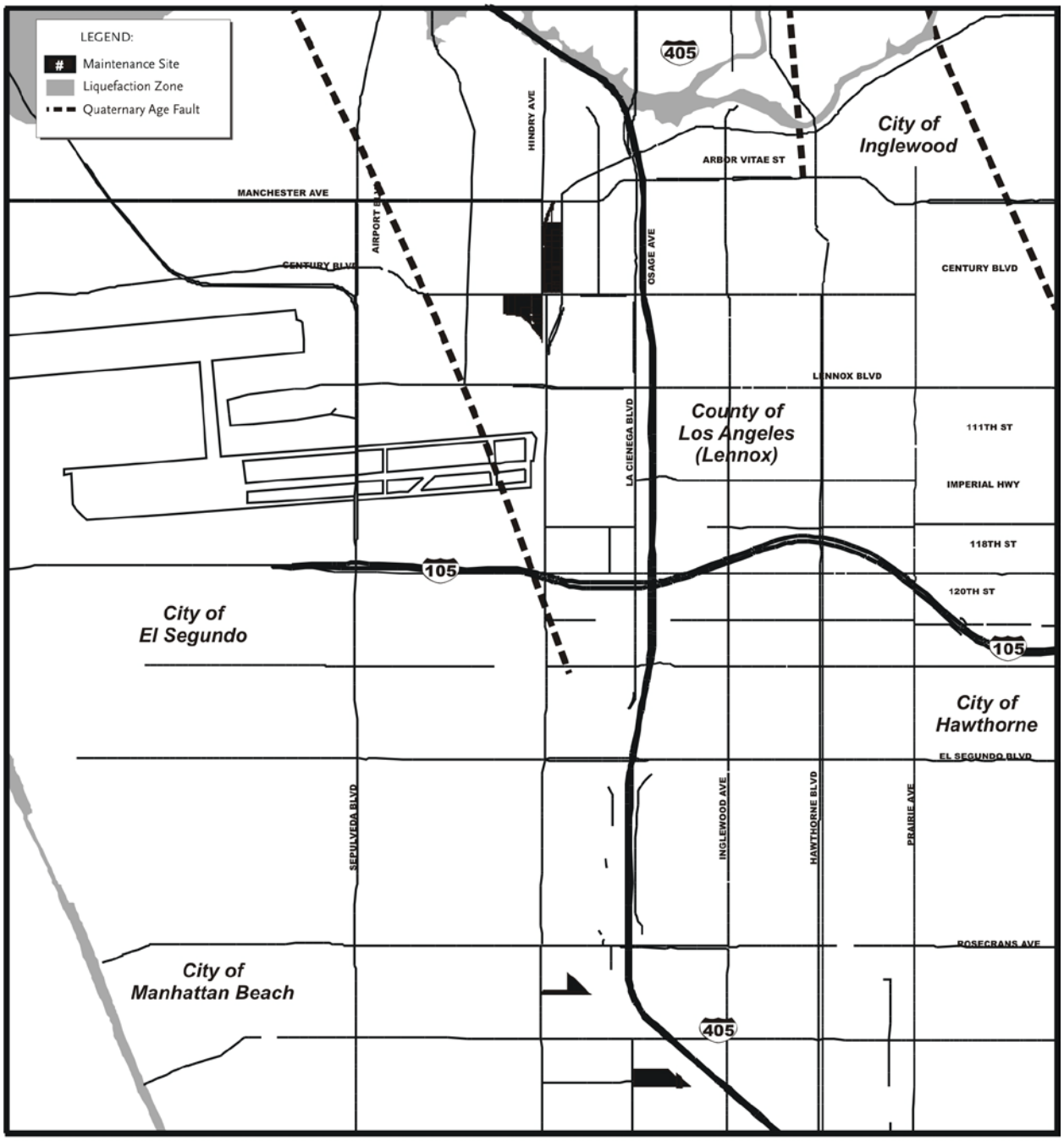


Figure 3-35. Geologic and Seismic Hazards Map



3.9.1.4 Faults and Seismicity

The nearest known regional active faults that could produce significant ground shaking near the maintenance site alternatives is the Newport-Inglewood fault, with a surface projection of potential rupture area located approximately 1.4 miles to the northeast of the Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation alternative sites. The location of the maintenance site alternatives in relation to known faults is shown in Figure 3-35. A mapped trace of the Charnock fault is located near the intersection of Aviation Boulevard and Imperial Highway, southwest of the Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation alternative sites. The Charnock fault is Pre-Holocene and does not meet the State's definition of an active fault based on currently available information. As shown in Figure 3-35, there are no faults in the vicinity of the Site #17 – Marine/Redondo Beach and Division 22 Northern Expansion Alternative sites.

3.9.1.5 Liquefaction

A review of the Seismic Hazard Zones Map for the Inglewood, Hollywood, and Venice 7.5 Minute Quadrangles (California Division of Mines and Geology [CDMG], 1999) indicates that the maintenance site alternatives are not located within an area mapped as being susceptible to liquefaction (Figure 3-35).

3.9.1.6 Landslides

According to the Los Angeles County Seismic Safety Element (1990) and the City of Los Angeles Safety Element (1996), the maintenance site alternatives are not within an area identified as having a potential for slope instability. Additionally, the study area is not located within an area identified as having a potential for seismic slope instability (CDMG, 1999). There are no known landslides near the maintenance site alternatives, nor are they in the path of any known or potential landslides. The topography of the maintenance site alternatives is relatively flat; therefore, the potential of landslides is considered low.

3.9.1.7 Flooding

Earthquake-induced flooding can be caused by the failure of dams or other water-retaining structures, as a result of an earthquake. Due to the absence of such structures near the maintenance site alternatives, the potential for earthquake-induced flooding is considered low.

3.9.1.8 Seiches and Tsunamis

According to the City of Los Angeles Safety Element (1996) and the Los Angeles Seismic Safety Element (1990), the maintenance site alternatives are not within a potential inundation area (potential flood area) for an earthquake-induced dam failure from nearby dams.

3.9.1.9 Mineral Resources

Regarding loss of mineral resources, the study area traverses areas underlain by geologic materials, such as sand and gravel, that may be considered mineral resources and which could be used as construction aggregate. However, these materials have not been previously mined in the area. Therefore, mining the material is considered uneconomical. There is a potential for re-use of the excavated materials for fills.

3.9.1.10 Hazardous Materials

Phase I Environmental Site Assessments (ESA) were completed for the maintenance site alternatives. The purpose of the ESA was to identify, to the extent feasible pursuant to the processes prescribed in American Society for Testing and Materials International (ASTM), recognized environmental conditions (RECs) in connection with the subject properties. Table 3-22 summarizes the environmental concerns identified onsite, or associated with the affected parcels, that have a classification criterion of Low to High. Table 3-23 summarizes the off-site environmental concerns adjacent to the maintenance site alternatives. There were no on-site areas of concern identified for the Division 22 Northern Expansion Alternative.

Table 3-22. On-Site Identified Areas of Concern and Potential Hazardous Materials

Facility Name/Location	Concern Observed	Hazard
Site #14 - Arbor Vitae/Bellanca Alternative		
Avis Rent-A-Car Inc – 5740 Arbor Vitae St	Unreported waste disposed of at landfill	Low
Western Federal Credit Union – 9223-Bellanca St	Potential tanks, waste oil disposed-unknown method	**Moderate**
Dollar Rent-A-Car – 5630 Arbor Vitae St	Oil tank spill, active hazardous waste- tetrachloroethylene, hydrocarbon solvents, aqueous solutions <10% total organics, waste oil and mixed oil, and other organic solids disposed by recycler, transfer station, disposal (landfil)	**Moderate to High**
King Delivery, Inc – 5600 Arbor Vitae St	Diesel in the aquifier used for drinking water, unknown number of tanks	**High**
NSHE Lebanon LLC – 9220 Bellanca Ave	Asbestos-containing waster was disposed of in a manner not reported	Low
Dollar/Thrifty Auto – 9310 Bellanca Ave	Active stormwater construction permit	Low
Allan Jonas – 9320 Bellanca Ave	Unknown number of tanks, unspecified organic liquid mixture sent to a recycler	**Moderate**
Blanca Air Freight LTD Partner – 9326 Bellanca Ave	Inactive, zero tanks	Low to Moderate
Glenborough Prop, Inc – 9400 Bellanca Ave	Asbestos-containing waste disposed of at a landfill	Low
Products Engineering Corp – 9430 Bellanca Ave	Waste categories include unspecified aqueous solution and hydrocarbon solvents	Low to Moderate
Site #15 - Manchester/Aviation Alternative		
HF Coors China Co – 8729 Aviation Blvd	Resource Conservation Recovery Act (RCRA) small quantity generator, large quantity generator in the past, no documented spills or leaks	Low to Moderate
SGI USA Warehouse – 8811 Aviation Blvd	Alkaline solution without metals (pH>12.5) were disposed of by an unreported method	Low
Your Man Tours, Inc – 8831 Aviation Blvd	Unknown number of tanks may be present, oil/water separation sludge was disposed of by a recycler	**Moderate**
Northrop Inst of Tech (Crimson College) – 8911 Aviation Blvd	Total Organic Hydrocarbon Gases and Reactive Organic Gases, no documented spills, leaks, or tanks, small quantity generator of ignitable hazardous waste	Low to Moderate
National/Alamo Car Rental – 1213 Arbor Vitae St	Waste categories for the facility include oxygenated solvents, organic solids, unspecified oil-containing waste, and aqueous solution with less than 10% total organic residues	Low

Table 3-22. On-Site Identified Areas of Concern and Potential Hazardous Materials (continued)

Facility Name/Location	Concern Observed	Hazard
Princeland Properties – 1237 Arbor Vitae St	Contaminants of potential concern at the site are perchloroethylene (PCE), trichloroethylene) TCE, other chlorinated hydrocarbons, and metals in soil, soil vapor, and an aquifer used for drinking water supply, site formerly used for degreasing operations, plastic extrusion and furniture distribution, soil vapor extraction systems have been at the site to address chlorinated solvent contamination in soil	**High**
Aviation Inglewood LLC – 9007-9121 Aviation Blvd	Small quantity generator of PCE and TCE with no violations, aqueous solution with <10% organic residues that was disposed of by recycler and disposal, open site assessment of PCE, TCE, Gasoline and oxygenates in the aquifer used for drinking water supply, soil and soil vapor,site began soil vapor extraction remediation in March 2010.	**High**
Sunsetting Auto Body – 9007 Aviation Blvd	No violations of RCRA small quantity generator status, Total Organic Hydrocarbon Gases and Reactive Organic Gases	Low
Freight Forwarders – 9007 Aviation Blvd	Gasoline in groundwater, contaminated soil from site clean-ups, alkaline solution without metals, unspecified sludge waste, and oil/water separation sludge	**Moderate**
Colling Trust Property – 9117 Aviation Blvd	Leaking underground storage tank (LUST), contaminant of concern - other solvent or non-petroleum hydrocarbon, hydrocarbon leak discovered during tank closure	**Moderate to High**
Collins Trust - 9121 Aviation Blvd	LUST, contaminant of concern -other solvent or hydrocarbons, facility status - site assessment phase for volatile organic compounds (VOCs)	**Moderate**
Harry's Airport Garage – 9131 Aviation Blvd	Status of the tanks is unknown, LUST open case - remidiation	**High**
Site #17 - Marine/Redondo Beach Alternative		
DHL Global Forwarding - 4000 Redondo Beach Ave	Small quantity generator of hazardous wastes with an off-site waste receiver; hazardous wastes disposed off-site include unspecified solvent mixture, unspecified organic liquid mixture, inorganic solid waste, ignitable and corrosive hazardous wastes	Low
Douglas Furniture of California - 4000 Freeman Blvd	Property listed as an Historical Active Underground Storage Tank Facility (UST)	Low
Division 22 Northern Expansion Alternative		
No on-site areas of concern identified.		

Source: Leighton and Andersen, 2010.

Table 3-23. Off-Site Identified Areas of Concern and Potential Hazardous Materials

Facility Name/Location	Location in Relation to Property	Concern Observed	Hazard
Site #14 - Arbor Vitae/Bellanca Alternative			
Honeywell International Corp [Allied Signal Inc. Turbocharging Systems] [Garrett Airesearch-Arbor Vitae] - 9225 Aviation	Adjacent south of Site #15; adjacent east of Site #14	USTs; soil contamination was found in the western, northwestern, and northeastern portions of the facility; elevated groundwater concentrations of PCE, TCE, dichloroethylene (DCE), and dioxane	**High**
Hertz Corporation 9000 Airport Blvd -	0.15 miles north of Site #14	LUST, elevated levels of methyl tertbutyl ether (MTBE)	Low
Hertz Rent-A-Car 9029 Airport Blvd	0.07 miles north of Site #14	LUST	Low
Avis Rent-A-Car 9217 Airport Blvd. -	Adjacent to Site #14 west across Airport Blvd.	LUST, -prior remediation, elevated DCE concentrations	Low - Moderate
National Car Rental Systems Inc. 9419 Airport Blvd.	0.01 west of Site #14	LUST	Low
Budget Rent-A-Car 9775 Airport Blvd -	0.2 miles south of Site #14	LUST, prior remediation	Low
Neutrogena Corporation 5755 West 96th Street	Adjacent south of Site #14	Generator of ignitable and corrosive hazardous wastes, lead, chromium, mercury, pyridine, spent non-halogenated solvents and several USTs;	Low - Moderate
National Car Rental System – 9204 Airport Blvd	0.2 miles west of Site #14	Active USTs, gasoline in soil, remediation	**High**
LAX Residential Acquisition Division – 5826 Arbor Vitae St	0.09 miles west of Site #14	Off-specification, aged, or surplus inorganics was disposed	Low
LAWA - 5838 Arbor Vitae St	0.11 miles west of Site #14	Asbestos-containing waster was disposed	Low
LAWA Residence Acquisition – 5860, 5866, 5880, 5870 93rd St	0.09 – 0.19 miles west of Site #14	Asbestos-containing waste were disposed of at a landfill	Low
Flying Tiger Line, Inc	0.25 miles southwest of Site #14	Inactive, zero tanks	Low - Moderate
Site #15 - Manchester/Aviation Alternative			
TTM Printed Circuite Group Inc. - LA Div 8636 Aviation Blvd	Adjacent across Aviation Blvd. to Site #15	Generator of ignitable and corrosive hazardous wastes, lead, chromium, silver, spent non-halogenated solvents, and wastewater treatment sludges and spent cyanide bath solutions from electroplating operations; violations of their handler/generator status; medium corrective action priority in 1992	**Moderate**
Tyco Electronics Printed Circuit Group - 339 Isis Avenue	0.1 miles east of Site #15	Inactive corrective action site; aqueous metal, metal sludges, or alkaline metal solutions	**Moderate**
RHO-Chem Corp [Cemex Inc.] – 425 Isis Ave	0.1 miles east of Site #15	Violations of its generator status; contaminants identified are aromatic and halogenated VOCs; migration of groundwater not resolved	**High**

Table 3-23. Off-Site Identified Areas of Concern and Potential Hazardous Materials (continued)

Facility Name/Location	Location in Relation to Property	Concern Observed	Hazard
Duncan-Inglewood 221 South Hindry Avenue -	0.26 miles east-northeast of Site #15	Waste oil	Low
Charles Caine Co Inc 8325 Hindry Avenue -	0.38 miles east-northeast of Site #15	Former spray painting facility; machine shop and a die-casting; soil has been impacted by VOCs and total recoverable petroleum hydrocarbons (TRPH)	Low
Alamo [California Avitron Corporation] [Vanguard Car Rental 9020 Aviation Boulevard -	Adjacent across Aviation Blvd. to Site #15	LUST, gasoline and diesel in soil	Low
Prince Chrysler Plymouth Inc [Auto Center Body Shop & Paint Inc.] 1030 W Manchester Blvd	0.1 miles east of Site #15	LUST, case closed; formerly listed as related to waste oil in soil	Low
Avaya Property [AT&T] 400 S. Hindry Avenue	0.2 miles east of Site 15	Likely use of acetone, TCE, 1,1,1-trichloroethylene (TCA), and Freon	Low
Tosco - 76 Station #2365 [Circle K Stores #5617] 8600 Aviation Blvd	Adjacent across Aviation Blvd from Site #15	LUST, high concentrations of fuel constituents (TRPH; Benzene; MTBE; and tetrabutylammonium (TBA); remedial options are being considered	High
Ziba Investment Corp [J Sharifi] [P&M Service Stations #921] [Arco Gas Station] 1110 Manchester Blvd.	0.1 miles east of Site #15	LUST	Low - Moderate
P&M #0021 [P&M Service Stations #921] [California Target Enterprises] [ARCO]1100 Manchester Blvd	0.1 miles east of Site #15	LUST	Low - Moderate
Site #17 - Marine/Redondo Beach Alternative			
TRW Inc., Building 140 - 2501 Santa Fe Ave	0.2 miles south of Site #17	Small quantity generator of hazardous wastes with an off-site waste receiver; no violations listed	Low
Division 22 Northern Expansion Alternative			
LA County/Metro Line/Hawthorne Yard -14724 Aviation Boulevard	0.25 miles south of Division 22 Northern Expansion	UST; past use for aerospace manufacturing and maintenance	Low
TRW, Inc. - 14640 & 14520 Aviation Boulevard	0.15 miles west of Division 22 Northern Expansion	LUST; unauthorized release of solvent; unauthorized release of oil	Low

Source: Leighton and Andersen, 2010.

3.9.2 Environmental Impacts/Environmental Consequences

Table 3-24. Summary of Impacts to Geotechnical/Subsurface/Seismic/Hazardous Materials

Impact Criteria	Site #14	Site #15	Site #17	D22N
Traversed by fault or fault zone	No	No	No	No
Contains hazardous materials or hazardous sites	**Yes**	**Yes**	**Yes**	No
Located within a floodplain	No	No	No	No
Located within a designated oil field or other mineral resources	No	No	No	No
Located within tsunami inundation area	No	No	No	No
Potential for soil erosion	**Yes**	**Yes**	**Yes**	**Yes**
Unstable soils	No	No	No	No
Located within a liquefaction zone/high water table	No	No	No	No
Located within a land slide zone	No	No	No	No
Federal or State-listed site contamination	No	**Yes**	No	No
Distance from airport/runway (in miles)	0.56	0.87	3.15	2.65
Affect an emergency response plan	No	No	No	No
Located near wildlands	No	No	No	No

Source: TAHA, 2010.

3.9.2.1 Hazardous Materials

A search of environmental databases with the potential for hazardous materials indicated that none of the properties on the Division 22 Northern Expansion Alternative site were identified as areas of concern. Five of the properties on Site #14 - Arbor Vitae/Bellanca Alternative have a moderate- or high-potential hazard ranking. Seven of the properties on Site #15 - Manchester/Aviation Alternative have a moderate- or high-potential hazard ranking. One of the properties on Site #17 - Marine/Redondo Beach Alternative was found to be a small-quantity generator of hazardous wastes with an off-site waste receiver, and another property is listed as a Historical Active Underground Storage Tank Facility (HIST UST). The hazard risk for both of these properties was determined to be low. There is a potential for asbestos containing materials and lead based paint to be present in the buildings on the maintenance site alternatives. All structures on the proposed maintenance site alternatives would require demolition prior to construction of the maintenance facility. The Phase I ESA recommended that Phase II ESAs be conducted for all properties on the selected site prior to construction of the maintenance facility.

The maintenance facility site will require storing hazardous materials/waste on-site and consist of a storage facility for approximately 70 LRT vehicles, a maintenance area, a paint shop and prep shop with associated sheet metal, welding, and paint storage areas, a car wash building, and a traction power substation for the facility and shop. There is the potential for hazardous materials/waste spills to occur; however, the storage and disposal of hazardous materials/waste would be conducted in accordance with all federal and State regulatory requirements that are intended to prevent or manage hazards, as well as remediate spills. Periodic site inspections are also performed by regulatory agencies, to

ensure that hazardous materials are being handled and disposed of in compliance with all regulatory requirements. No long-term hazardous material impacts are anticipated.

Table 3-25 discusses the remaining impacts to subsurface gases, geotechnical, and seismic hazards.

Table 3-25. Discussion of Direct and Indirect Impacts to Geotechnical/Subsurface/Seismic Hazards

Direct Impacts	Indirect Impacts
Subsurface Gases	
None of the maintenance site alternatives are located within any designated oil fields which could include the release of methane and hydrogen sulfide soil gas, oil seepage, contaminated soils, and leaking or abandoned wells. Therefore, no adverse effects are anticipated to subsurface gases.	No indirect adverse effects to subsurface gases are anticipated.
Faults, Seismicity and Ground Shaking	
Each of the maintenance site alternatives are located within two miles of the Newport-Inglewood Fault. Therefore, there would be a potential for ground deformation to have an adverse effect on the maintenance facility.	No indirect adverse effects from faults, seismicity, and ground shaking are anticipated.
Liquefaction	
None of the maintenance site alternatives are located in an area susceptible to liquefaction. Therefore no adverse effects related to liquefaction are anticipated for the selection of a maintenance facility.	No indirect adverse effects to liquefaction are anticipated.
Seismically-Induced Settlement	
None of the maintenance site alternatives are located in areas susceptible to seismically-induced settlement. Therefore, no adverse effects are anticipated for the selection of a maintenance facility.	No indirect adverse effects to seismically-induced settlement are anticipated.
Landslides	
None of the maintenance site alternatives are located in an area susceptible to landslides. Therefore, no adverse effects are anticipated.	No indirect adverse effects to landslides are anticipated.
Flooding	
None of the maintenance site alternatives are located in an area susceptible to flooding. Therefore, no adverse effects are anticipated for the selection of a maintenance facility.	No indirect adverse effects to flooding are anticipated.
Seiches and Tsunamis	
None of the maintenance site alternatives are located in an area susceptible to seiches and tsunamis. Therefore, no adverse effects are anticipated for the selection of a maintenance facility.	No indirect adverse effects to seiches and tsunamis are anticipated.

Source: TAHA, 2010.

3.9.3 Mitigation Measures

GEO1 All hazardous materials, drums, trash, and debris shall be removed and disposed of in accordance with regulatory guidelines.

GEO2 A health and safety plan shall be developed for persons with potential exposure to the constituents of concern, prior to construction of the proposed Project.

GEO3 Historical and present site usage along the many areas of the proposed alignment includes businesses that stored hazardous materials and/or waste and used USTs, from at least the 1920s to the present. It is possible that areas with soil and/or groundwater impacts may be present that were not identified in this

report, or were considered a low potential to adversely impact the subject property. In general, observations should be made during any future development activities for features of concern or areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, soil staining or odorous soils. Phase II assessments shall be conducted for the properties within the selected site and any contaminated sites shall be remediated to a level suitable for industrial development.

GEO4 There is a potential for lead based paint and asbestos containing building materials to be present at the maintenance facility sites. An asbestos survey and lead based paint survey shall be conducted on all sites where on-site structures would be demolished or significantly renovated.

GEO5 Best Management Practices (BMPs), required as part of the National Pollutant Discharge Elimination System (NPDES) permit and application of SCAQMD Rule 403, shall be implemented for the proposed Project to not only reduce potential soil erosion, but also to maintain soil stability and integrity during grading, excavation, below grade construction, and installation of foundations for aerial structures, and maintenance facilities. BMPs would comply with applicable Uniform Building Codes and include, but are not limited to, scheduling excavation and grading activities during dry weather, covering stockpiles of excavated soils with tarps or plastic sheeting, and debris traps on drains.

3.9.4 Impacts Remaining After Mitigation

Implementation of the Mitigation Measures **GEO1** through **GEO5** would ensure that the impacts related to geologic hazards and hazardous materials are less than significant for all of the maintenance site alternatives.

3.9.5 CEQA Determination

3.9.5.1 Hazards and Hazardous Materials

The previous section identifies the mitigation measures that require the appropriate methods for safely approaching the potentially hazardous situations and reducing this potential impact to less-than-significant levels. Two schools are located near the maintenance site alternatives; however, the potential for exposure to contaminated materials would be limited to the confines of the Project site. LAX is also located near the maintenance site alternatives; however, the potential for a safety hazard to people working on the site would be remote. The mitigation measures provide for the proper disposal of contaminated substances and thus ensure the safety of individuals at nearby schools and the airport. Therefore, a less-than-significant impact is anticipated related to exposure of hazardous materials to sensitive populations.

The maintenance site alternatives would not prohibit emergency responsiveness and may potentially increase response time and evacuation efforts should it be necessary provide a way to efficiently move people in the case of emergency evacuation situations. Therefore, a less-than-significant impact is anticipated related to an emergency response plan.

The maintenance site alternatives are located within an entirely developed area and there are no wildlands in the vicinity that could increase exposure to fires. Therefore, a less-than-significant impact is anticipated related to wildfires.

3.9.5.2 Geology and Soils

The maintenance site alternatives are within two miles of the Newport-Inglewood Fault Zone. The use of these sites would not result in an increased exposure to the risk associated with fault lines, nor would it exacerbate pre-existing seismic conditions. However, the sites would be more vulnerable to damage from ground shaking during an earthquake. This would be a potentially significant impact; however, the mitigation measures described above would reduce impacts to less-than-significant levels.

The maintenance site alternatives are not located in areas mapped as susceptible to landslides. The alignment is relatively flat, and the potential for landslides along the alignment is remote. Therefore, no significant impacts related to landslides are anticipated.

The maintenance site alternatives are in a flat, highly urbanized area, with an extensive drainage system and impervious surfaces. The sites are not subject to high levels of wind or rain, factors that may contribute to soil erosion. Construction and operation of the maintenance facility sites would not affect the existing drainage system at any of the four sites and would not contribute to the loss of topsoil during operation. The maintenance site alternatives are not located on expansive soils, which would create substantial risks to life or property. In addition, the use of septic tanks or alternative wastewater disposal systems is not anticipated due to the location of the sites in a developed area, where existing sewer lines would be utilized. Implementation of Mitigation Measure GEO5 would ensure that the potential for soil erosion and soil instability would be reduced to less-than-significant levels. Therefore, less-than-significant impacts related to the loss of topsoil, erosion, expansive soils, and the support of the use of septic tanks or alternative wastewater disposal systems, are anticipated.

3.10 Water Resources

3.10.1 Existing Conditions/Affected Environment

Figure 3-36 shows the water resources within the vicinity of the maintenance site alternatives. These resources are discussed further below.

3.10.1.1 Flooding

A Federal Emergency Management Agency (FEMA) 100-year floodplain is not located within or in proximity of the maintenance site alternatives. In addition, a FEMA 500-year floodplain is not located within or in proximity of the maintenance site alternatives.

3.10.1.2 Local Surface Water Bodies

The maintenance site alternatives are primarily developed and there are few natural areas or natural drainage features. The nearest streams to the maintenance facility sites are the Inglewood Cemetery (2 miles east) and Ballona Creek (2.4 miles northwest). There is also a manmade water body within Hollywood Park located 2.2 miles east of Aviation Boulevard. The Pacific Ocean is located approximately four miles from the maintenance site alternatives. There are no other waters of the U.S. or natural drainage features that are near the maintenance site alternatives.

3.10.1.3 Groundwater

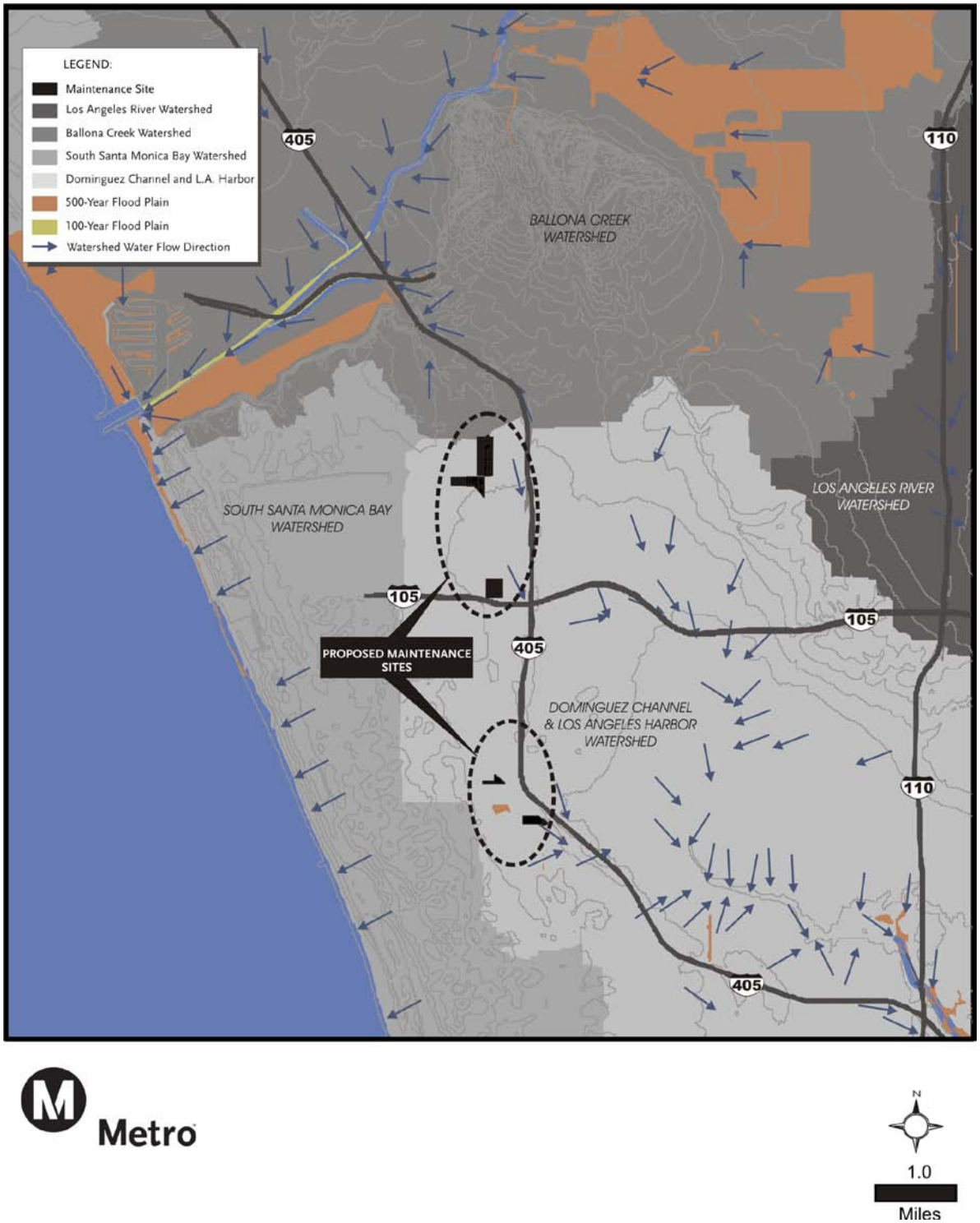
Average annual precipitation in the area is approximately 11 to 14 inches. According to the Los Angeles Department of Water and Power (DPW) and Los Angeles Regional Water Quality Control Boards (RWQCB), the groundwater level is approximately 10 feet below the ground surface between Airport Boulevard and Aviation Boulevard and between Arbor Vitae Street and Manchester Avenue. Between the I-405 and La Brea Avenue north of Florence Avenue, groundwater is estimated to be 2.4 to 2.8 feet below the ground surface. Between Manhattan Beach Boulevard and Artesia Boulevard, west of Inglewood Avenue, groundwater is estimated to be 2.0 to 5.0 feet below the ground surface.[5]

3.10.1.4 Local Drainage Basins

The maintenance site alternatives are along major arterials with curb and gutter features. The maintenance site alternatives are not within any major drainage features that are above ground. The maintenance site alternatives drain indirectly to Ballona Creek and Dominguez Creek through the Municipal Separate Storm Sewer System (MS4). Areas north of Manchester Boulevard drain to Ballona Creek Watershed, and southern areas drain to the Dominguez Creek Watershed.

[5] Los Angeles County Department of Public Works, Groundwater well measurements, located at http://gis.dpw.lacounty.gov/wells, 2010.

Figure 3-36. Water Resources



Source: TAHA 2010

3.10.1.5 Water Quality

The Ballona Creek Watershed has a total maximum daily loads (TMDL) for trash and metals. Ballona Creek is a 303(d) listed impaired water body for, coliform bacteria, dissolved copper, cyanide, lead, selenium, sediment toxicity, trash, viruses (enteric), and zinc. Dominguez Creek Watershed has a TMDL for trash at Machado Lake. Dominguez Creek (lined portion above Vermont Avenue) is a 303(d) listed impaired waterbody for ammonia, copper, diazinon, indicator bacteria, lead, sediment toxicity, and zinc.

3.10.2 Environmental Impacts/Environmental Consequences

Table 3-26. Summary Comparison of Impacts to Water Resources

Impact Criteria	Site #14	Site #15	Site #17	D22N
Adversely affects water supply	No	No	No	No
Potential to degrade groundwater	No	No	No	No
Alter existing drainage patterns to cause flooding, erosion, or siltation	No	No	No	No
Create or contribute runoff that exceeds existing capacity	No	No	No	No
Located within flood areas	No	No	No	No

Source: TAHA, 2010.

3.10.2.1 Direct Impacts

The operation of a maintenance facility would require water supply. The maintenance site alternatives may include restroom facilities or irrigation systems for landscaping. With the implementation of standard water conservation measures, such as water saving devices for irrigation, lavatories, and other water-using facilities, the effect of the Project on the municipal water supply would be negligible. Therefore, no adverse impacts are anticipated related to water supply for any of the maintenance site alternatives.

There are no local surface water bodies located in the immediate vicinity of any of the maintenance site alternatives. Therefore, no adverse effects to local surface water bodies are anticipated for the maintenance site alternatives.

The maintenance site alternatives are all located in highly urbanized areas, consisting of mostly impervious surfaces with drainage structures. Operation of the maintenance facility on any of the site alternatives is not anticipated to result in adverse effects to groundwater resources.

The maintenance site alternatives are not located within designated 100-year floodplains. Drainage would be properly conveyed away from the sites so as not to induce ponding or flooding on the selected sites or adjacent properties. With the implementation of a drainage control plan, no adverse effects to flooding would occur. During operation of this maintenance facility site, storm runoff would be conveyed to treat storm water runoff before it is discharged off-site. No long term adverse effects to water quality are anticipated for any of the maintenance site alternatives.

3.10.2.2 Indirect Impacts

No indirect impacts to water resources are anticipated to result from the selection of any of the maintenance site alternatives.

3.10.3 Mitigation Measures

The Project alternatives must comply with Title III and Title IV of the Clean Water Act (CWA) and NPDES standards during and following construction. To comply with the NPDES General Construction Permit, a Notice of Initiation would be filed with the Los Angeles RWQCB prior to construction. The Project alternatives would include preparation of a Storm Water Pollution Prevention Plan (SWPPP) that includes the identification and implementation of applicable BMPs to control erosion and to ensure that dirt, construction materials, pollutants or other human-associated materials are not discharged from the Project area into surface waters or into areas that would eventually drain to storm drains. BMPs would be monitored to ensure effectiveness. Upon completion of construction, a Notice of Termination would be filed with the Los Angeles RWQCB. The construction and permanent BMPs included as part of the proposed Project shall be developed and implemented in compliance with the Los Angeles RWRCB, Metro storm water standards and shall be developed in cooperation with the Cities of Los Angeles and Inglewood. Prior to approval of grading permits, an appropriate drainage control plan, such as a Standard Urban Storm Water Mitigation Plan (SUSMP) in accordance with City of Los Angeles standards, that controls construction and operational on-site and off-site runoff and drainage in a manner acceptable to Metro and Los Angeles RWQCB for the specific Project site shall be implemented.

No substantial water quality or resource related impacts would result from the maintenance site alternatives. In addition to the standard BMPs required for compliance with NPDES to be included as part of the maintenance site alternatives, the following mitigation measures are recommended for incorporation into the Project:

WQ1 During project construction and operation, remediation will be required at maintenance facilities and vehicle storage areas, where a potential exists for grease and oil contamination to flow into storm drains. Various types of ditch structures, including grease traps, sediment traps, detention basins, and/or temporary dikes may be used to control possible pollutants. These facilities shall be constructed pursuant to guidance published in Section 402 of the CWA and shall follow the most current guidance within the NPDES program.

WQ2 The flood capacity of existing drainage or water conveyance features within the project study corridor shall not be reduced in a way that causes ponding or flooding during storm events. A drainage control plan shall be developed during project design to ensure that drainage is properly conveyed from the study area and does not induce ponding on adjacent properties.

WQ3 A dewatering permit shall be required if groundwater is encountered during operations. The maintenance site alternatives are located in an urbanized area where potential groundwater contamination may exist. If contaminated groundwater

is encountered during construction, the contractor shall stop work in the vicinity of the suspect find, cordon off the area, and contact the appropriate hazardous waste coordinator and maintenance hazardous spill coordinator at Metro and immediately notify the Certified Unified Program Agencies (City of Los Angeles Fire Department, County of Los Angeles Fire Department, and Los Angeles RWQCB) responsible for hazardous materials or waste incidents. Coordination with the Los Angeles RWQCB shall be initiated immediately to develop an investigation plan and remediation plan for expedited protection of public health and environment. Contaminated groundwater is prohibited from being discharged to the storm drain system. The contractor shall properly treat or dispose of any hazardous or toxic materials, according to local, state, and federal regulations.

WQ4 The study area currently drains indirectly to Ballona Creek and Dominguez Creek through the Municipal Separate Storm Sewer System (MS4). Treatment control BMPs shall be incorporated into the project design. The Project shall consider placing the treatment BMPs in series or in a complimentary system to increase the control of pollutants to the maximum extent practicable. The systems shall be designed to efficiently and effectively handle and treat dry and wet weather flows to the maximum extent practicable. A SUSMP and appropriate drainage control plan shall be implemented to select and place appropriate permanent treatment BMPs.

WQ5 During construction of the Project, on-site integrated management strategies that employ green infrastructure strategies to capture runoff and remove pollutants shall be used. Green infrastructure strategies combine a variety of physical, chemical, and biological processes that focus on conveying runoff to bioretention areas, swales, or vegetated open spaces.

3.10.4 Impacts Remaining After Mitigation

With the implementation of Mitigation Measures **WQ1** through **WQ4**, adverse effects to water resources and water quality would be reduced to less-than-significant levels for all of the maintenance site alternatives.

3.10.5 CEQA Determination

The maintenance site alternatives would not significantly impact water resources. The maintenance site alternatives would be required to comply with NPDES permit requirements during construction. In addition, Mitigation Measures **WQ1** through **WQ4** would ensure that no significant long term impacts to drainage patterns or surface water or groundwater quality would occur. The development of a drainage control plan and SUSMP as prescribed in Mitigation Measures **WQ2** and **WQ4** would ensure that drainage flows are properly treated and conveyed. Therefore, with implementation of the proposed mitigation measures, a less-than-significant impact is anticipated on water resources for all of the maintenance site alternatives.

No indirect impacts to water resources are anticipated to result from the maintenance site alternatives.

3.11 Energy

This chapter describes the affected environment for energy consumption, as well as the impacts on energy resources that would result from the maintenance site alternatives.

3.11.1 Affected Environment/Existing Conditions

The maintenance site alternatives' energy needs are measured in petroleum and equivalent British thermal units (BTU). A BTU is the quantity of heat required to raise the temperature of water one degree Fahrenheit at sea level. Other units of energy can all be converted into equivalent BTU units and thus, the BTU is used as the basis for comparing energy consumption associated with different resources. Table 3-27 shows comparisons of various types of energy and their equivalent BTU units.

Table 3-27. Summary Comparison of Impacts to Energy

Energy Type	Energy Unit	Equivalent BTU Units
Electrical	Kilowatt-Hour (kWh)	3,412
Natural Gas	Cubic Foot	1,034
Crude Oil	Barrel (42 Gallons)	5,800,000
Gasoline	Gallon	125,000

Source: California Energy Commission, 2007.

Energy consumption in California continues to be dominated by growth in passenger vehicles, where 40 percent of all energy consumed in the State is used for transportation. California is the second largest consumer of transportation fuels in the world (behind the United States as a whole); more than 16 billion gallons of gasoline and four billion gallons of diesel fuels are consumed each year. California's population is estimated to exceed 44 million by 2020, which would result in substantial increases in fuel demand. Table 3-28 shows the anticipated 149 million barrel increase in demand through 2020.

Table 3-28. California Transportation Fuel Demand

Year	Barrels (Million/year)	Daily Energy Consumption (Billions BTU)
2005	553	8,787
2010	617	9,804
2015	661	10,504
2020	702	11,155

Source: California Energy Commission, *2007 Integrated Energy Policy Report*, 2007.

Energy use for the maintenance site alternatives was calculated based on the 2009 annual energy consumption from the Metro Division 22 maintenance facility. Table 3-29 shows the energy requirements for the operation of a light rail maintenance facility.

Table 3-29. Estimated Daily Energy Consumption

Energy Use	Daily Energy Consumption (BTU)
Operation of Maintenance Facility	88,625,726 /a/

/a/ Energy consumption was obtained using 2009 annual energy consumption from the Metro Division 22 maintenance facility which services 39 LRVs. This energy consumption for the alternative sites was generated using a proportional factor of 1.79 to account for the operation of 70 LRVs.
Source: TAHA, 2010.

Table 3-30 shows the regional energy consumption by existing Metro facilities. Metro's energy usage has been steadily increasing as the Metro regional transit system has continued to expand.

Table 3-30. Metro Facilities Regional Energy Consumption

Daily Energy Consumption (KWH)	Daily Energy Consumption (BTU)
189,041	645,008,219

Source: Metro Baseline Sustainability Report, 2009.

3.11.2 Environmental Impacts/Environmental Consequences

3.11.2.1 Direct Impacts

The two largest demands on energy would be from the movement of the light rail vehicles and the operation of the buildings on the site. Combined, these two activities would result in a per day energy usage of approximately 88,625,726 British Thermal Units (BTUs). The energy consumption would be similar for all of the maintenance site alternatives. There would also be some additional energy consumption from the approximately 200 workers traveling to and from the site. Considering the data and information presented regarding the existing energy conditions, the implementation of public transit projects (of which maintenance facilities are a key part) would help to remove excess vehicles from roadways and freeways, easing the increase in VMT and the usage of fuels. Lower VMT would also result in a reduction of vehicle emissions. Therefore, no adverse effects from energy usage are anticipated from the maintenance site alternatives.

3.11.2.2 Indirect Impacts

No indirect adverse effects from energy usage are anticipated from the maintenance site alternatives.

3.11.3 Mitigation Measures

No mitigation measures are required.

3.11.4 CEQA Determination

The above analysis demonstrated compliance with NEPA. The operation of a maintenance facility would result in a nominal increase (0.0008 percent) in California energy consumption. When combined with the energy savings from the operation of the Crenshaw/LAX Transit Corridor Project, the maintenance site alternatives would result in a less-than-significant energy impact.

3.12 Historic, Archaeological, and Paleontological Resources

3.12.1 The Area of Potential Effects

The Project area of potential effects (APE) was delineated to ensure inclusion of significant cultural resources that may be directly or indirectly affected by the Project, and are listed in or eligible for listing in the National Register of Historic Places (NRHP). The proposed direct APE for the four maintenance site alternatives includes areas of direct ground disturbance, as well as areas with permanent site improvements and areas for staging and temporary construction activities (Figure 3-37 and Figure 3-38).

3.12.1.1 Identify Consulting and Interested Parties

The Section 106 regulations require that a federal agency evaluate all properties within the APE and identify historic properties by gathering information from consulting parties, applying the NRHP Criteria, and seeking concurrence from the State Historic Preservation Officer (SHPO) or Indian tribe, as appropriate. During the preparation of the Crenshaw/LAX Transit Corridor Project DEIS/DEIR, FTA identified 23 consulting parties for historic properties within the APE. FTA sent a letter to the California SHPO on May 22, 2008, initiating Section 106 consultation. In a meeting on July 23, 2008, Metro consulted with the SHPO to discuss the entire Crenshaw/LAX Transit Corridor Project, which includes the selection of a maintenance facility to determine the Section 106 identification effort.

3.12.1.2 National Register Criteria for Evaluation

In order for a property to be considered for inclusion in the NRHP it must meet the criteria for evaluation set forth in 36 CFR Part 60.4, as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association and

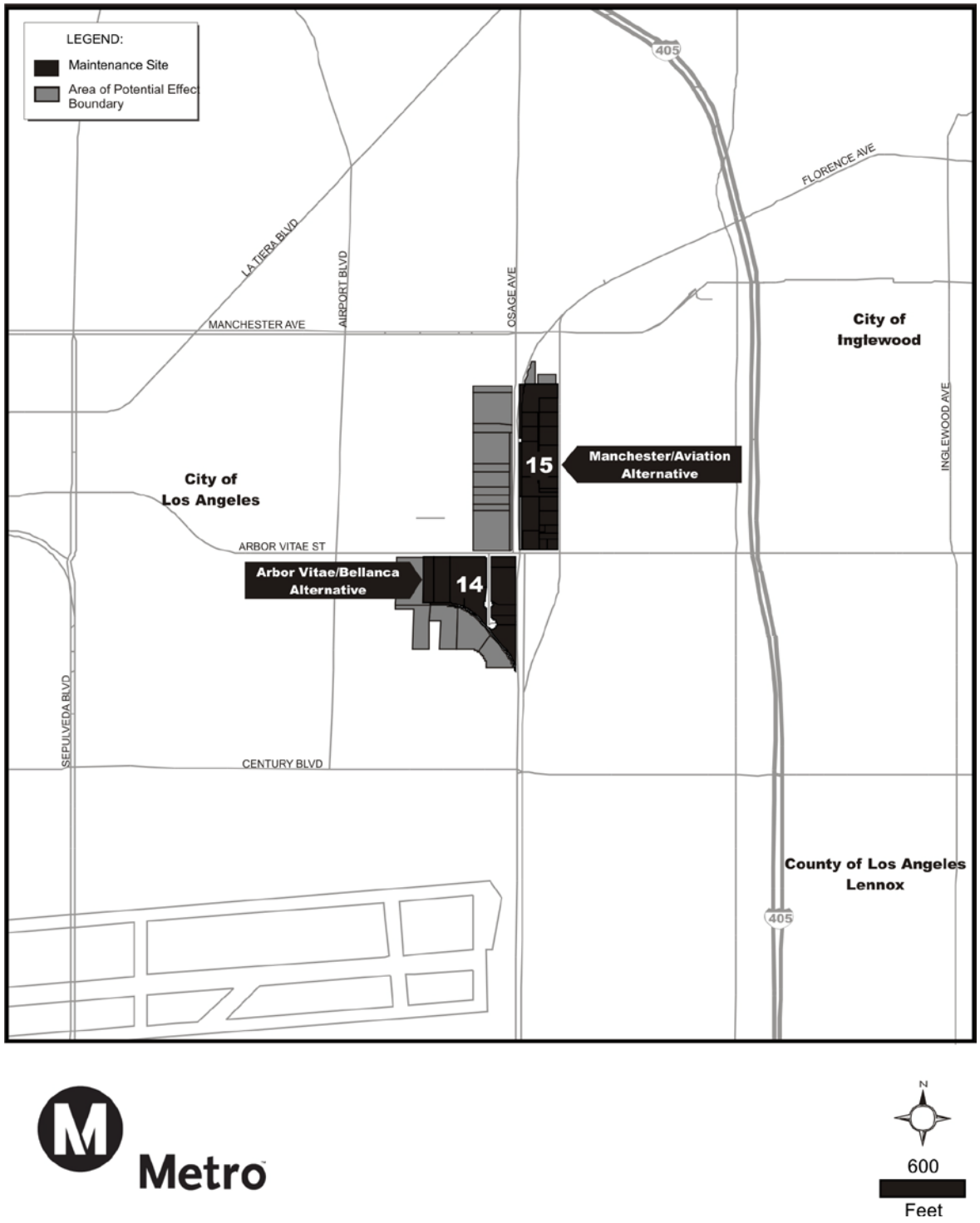
- are associated with events that have made a significant contribution to the broad patterns of our history (A); or
- are associated with the lives of persons significant in our past (B); or
- embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (C); or
- have yielded, or may be likely to yield, information important in prehistory or history (D).

Among other criteria considerations, a property that has achieved significance within the last 50 years is not considered eligible for inclusion in the NRHP unless certain exceptional conditions are met.

3.12.1.3 Section 4(f)

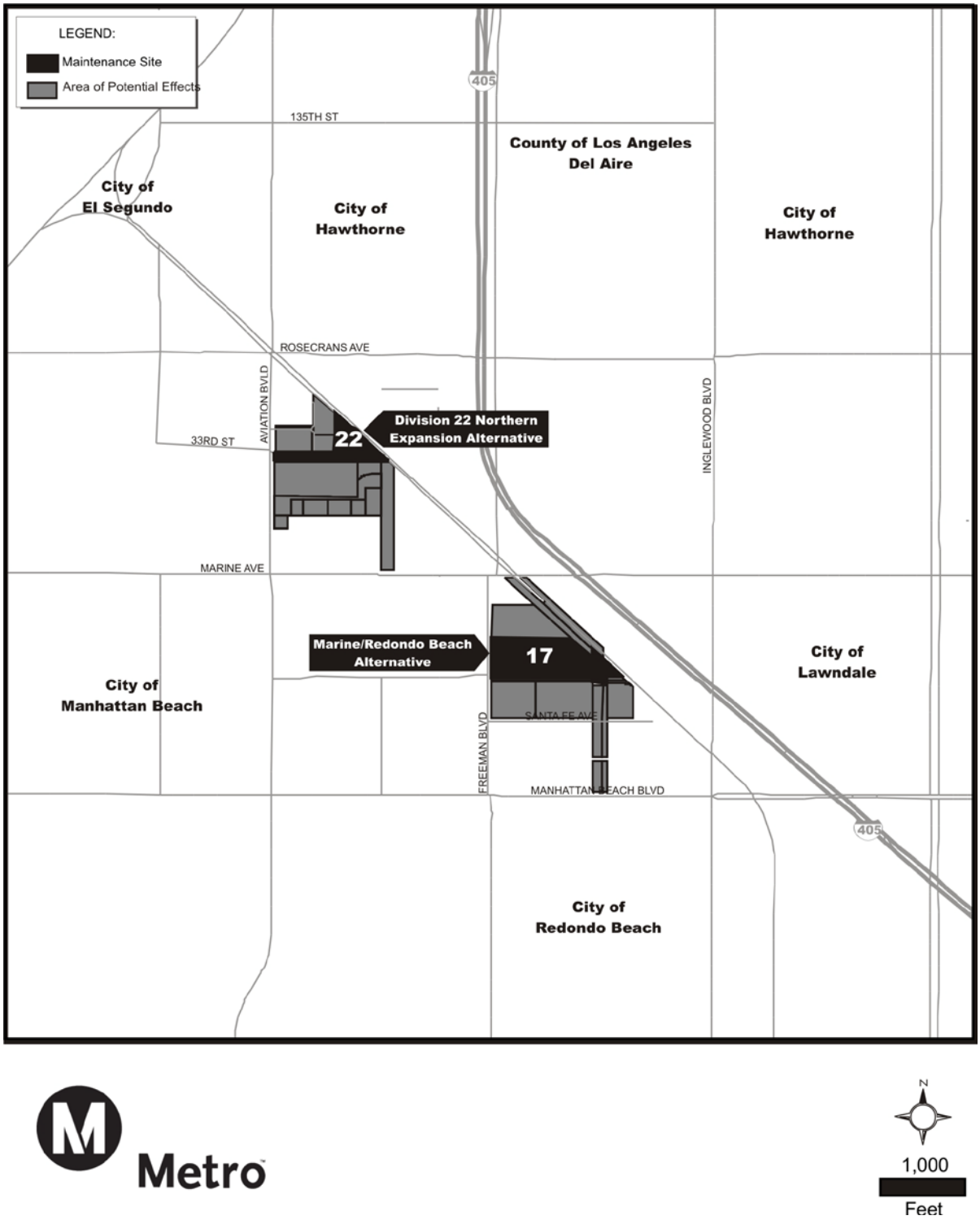
The evaluation of 4(f) resources identified within the APE for the Project is located in Part II of this document.

Figure 3-37. Area of Potential Effects Boundary Map – Sites #14 and #15



Source: TAHA 2010.

Figure 3-38. Area of Potential Effects Boundary Map – Site #17 and D22N



Source: TAHA 2010.

3.12.1.4 Identifying Historic Properties

For the maintenance site alternatives, preliminary research and surveys have been undertaken to identify previously recorded historic properties and potentially eligible historic properties. Preliminary studies have been conducted in accordance with the Secretary of Interior's Standards and Guidelines for Identification of Historic Properties (48 *Federal Register* [FR] 44716), using personnel who meet the Secretary of Interior's Professional Standards (48 FR 22716) in the fields of pre-historic archaeology, historic archaeology, architectural history, and history.

3.12.1.5 Native American Consultation

The Native American Heritage Commission (NAHC) was contacted by SWCA regarding the entire Crenshaw/LAX Transit Corridor Project on June 15, 2010. The NAHC responded on June 28, 2010 and stated that the Sacred Lands File search did indicate the presence of sacred lands within one mile of the Crenshaw/LAX Transit Corridor Project area. The NAHC also provided a list of Native American groups and individuals who might have knowledge of cultural resources in the Project area. Letters describing the Crenshaw/LAX Transit Corridor Project were sent on July 7, 2010 to the nine Native American contacts provided by the NAHC. Additional letters to Native American contacts were sent on January 11, 2011. One group recommended a monitor be present, one group expressed concern about sites in the project area and wanted updates, and the remainder did not have comments or said they would get call back if they had any questions.

The following Native American groups/tribes were contacted in the written communication:

- Gabrielino-Tongya Tribe
- Ti'At Society
- Los Angeles Native American Indian Commission
- Gabrielino-Tongya Indians of California Tribal Council
- Gabrielino-Tongya Nation
- Gabrielino-Tongya San Gabriel Band of Mission Indians
- Tongya Ancestrial Territorial Tribal Nation
- Shoshoneon Gabrielino Band of Mission Indians

3.12.2 Affected Environment/Existing Conditions

The maintenance site alternatives and surrounding areas are paved and developed with primarily industrial and commercial structures. The Site #14 – Arbor Vitae/Bellanca Alternative contains industrial land uses, with several parcels containing large parking areas for a rental car facility. The Site #15 – Manchester/Aviation Alternative contains industrial and commercial uses, and many of the industrial uses also contain parking areas. The Site #17 – Marine/Redondo Beach Alternative contains a large industrial warehouse, part of an underutilized parking lot, and a utility easement occupied by a

nursery. The Division 22 Northern Expansion Alternative contains an industrial public storage facility.

3.12.2.1 Historic and Archaeological Resources Identified

An archaeological records search was conducted by W. H. Bonner Associates at the South Central Coastal Information Center (SSCIC) located at California State University, Fullerton on June 17 and November 4, 2010. The records search included a review of all recorded cultural resources within a 0.5-mile radius of the maintenance site alternatives. A review of historic registers was conducted that included the NRHP, the CR, the California Historic Landmarks (CHL), and the California Points of Historic Interest (CPHI). The maintenance site alternatives and surrounding areas are paved and developed with primarily industrial, commercial structures. All the sites have experienced substantial surface disturbance as a result of past construction activities. No known archaeological resources have been recorded near the any of the sites and no surficial archaeological resources were identified.

3.12.2.2 Built Environment Resources Identified

In accordance with Section 106, all properties within the maintenance site alternatives constructed before 1965 will require formal evaluation for historic significance. SWCA conducted a formal evaluation of all properties with the APE for the Crenshaw/LAX Transit Corridor Project, which includes the maintenance facility sites. Table 3-31 identifies the two parcels that are located within the APE for the maintenance site alternatives that was determined to be eligible for the National Register of Historic Places.

Table 3-31. Eligible Historic Properties for the National Register

Location Information							
Resource Name	Address	Street	City	Proximity to Site	APN	Year Built	Status Code
Site #14: Arbor Vitae/Bellanca, Site #15: Manchester/Aviation, and Division 22 Northern Expansion Alternatives							
No sites identified.							
Site #15: Manchester/Aviation Alternative							
Merle Norman	9030	Bellanca Ave	Los Angeles	Adjacent	4125-010-014	1950	3S
Merle Norman	9130	Bellanca Ave	Los Angeles	Adjacent	4125-010-015	1952	3S

Note: Determination of eligibility is subject to SHPO concurrence.
3S – Appears Eligible for National Register.
Source: SWCA, 2011.

The Merle Norman Cosmetics headquarters is located adjacent to the Site #15 – Manchester/Aviation Alternative (Figure 3-39). Five of the seven buildings for this facility were constructed before 1965. This property was determined to be eligible under the 3S category for the National Register of Historic Places. The Merle Norman Cosmetics factory is eligible for the National Register at the local level of significance under Criterion C as an example of high-design modern commercial/industrial architecture. The property retains integrity of design, materials, workmanship, feeling and setting.

Figure 3-39. Merle Norman Cosmetic Headquarters – 9030, 9130 Bellanca Avenue

3.12.2.3 Paleontological Resources Identified

Paleontological Review

A paleontological review was conducted in June 2010 and October 2010 for the maintenance site alternatives. The results of the paleontological records search indicate that no paleontological sites/specimens have been recorded at or within 0.5 miles of the maintenance site alternatives.

3.12.3 Environmental Impacts/Environmental Consequences

Table 3-32. Summary of Impacts to Historical, Paleontological, and Archaeological Resources

Impact Criteria	Site #14	Site #15	Site #17	D22N
Archaeological Resources				
Located within 0.5 miles of archaeological resources	No	No	No	No
Historical and Architectural Resources				
Contains previously documented historic properties	No	No	No	No
Properties within the APE contain nationally-eligible resources	No	Yes	No	No
Paleontological Resources				
Located within 0.5 miles of paleontological sites/specimens	No	No	No	No

Source: TAHA, 2010.

3.12.3.1 Archaeological Resources

Direct Impacts

No new surficial archaeological resources were identified within the proposed study area. The locations of the pre-recorded sites within the boundaries of the maintenance site alternatives have been developed and no surficial evidence of the sites were observed during the archaeological reconnaissance survey. The majority of the study area is developed (residential, retail, industrial) and disturbed from existing roads, railroad alignments and landscape vegetation. No known archaeological resources listed in or eligible for listing in the NRHP would be affected. Therefore, no direct adverse effects to archaeological resources are anticipated for any of the maintenance site alternatives.

Indirect Impacts

No indirect adverse effects to archaeological resources are anticipated from the maintenance site alternatives.

3.12.3.2 Historic and Architectural Resources

Direct Impacts

One property containing two parcels (Merle Norman) was determined to be eligible for the National Register of Historic Places and is located approximately from the Site #15 Manchester/Aviation Alternative. The construction and operation of a maintenance facility on this site would not require any acquisition of property from Merle Norman and would not alter any characteristics of the Merle Norman facility in a manner that would diminish the integrity of the property's location, current use, design, setting, materials, workmanship, feeling, or association. There are no eligible historic or architectural resources within the APE for any of the other three alternatives. Therefore, no adverse effects to historic and architectural resources would occur for any of the maintenance site alternatives.

Indirect Impacts

No indirect adverse effects to historical resources are anticipated from the maintenance site alternatives.

3.12.3.3 Paleontological Resources

Direct Impacts

The results of the paleontological records search indicate that no paleontological sites/specimens have been recorded at or within 0.25 miles of any of the maintenance site alternatives. Implementation of Mitigation Measure **CR1**, described below, would be implemented as appropriate to ensure no adverse impact would occur.

Indirect Impacts

No indirect adverse effects to paleontological resources are anticipated from maintenance site alternatives.

3.12.4 Mitigation Measures

No adverse effects to archaeological, historical, or paleontological resources are anticipated for any of the maintenance site alternatives. Consultation with the SHPO is ongoing and will result in the development a Memorandum of Agreement which would establish measures to minimize adverse effects from the discovery of any unknown resources during construction.

3.12.5 CEQA Determination

Similar to the discussion of impacts above, the construction and operation of a maintenance facility is not anticipated to disturb or alter any archaeological, historical, or paleontological resources. Therefore, less-than-significant impacts are anticipated for all of the maintenance site alternatives.

3.13 Parklands and Community Facilities

3.13.1 Affected Environment/Existing Conditions

Table 3-33 lists the parkland and community facilities near the maintenance site alternatives and whether they are within a 0.25-mile distance of the maintenance site alternatives.

Table 3-33. Public Services Serving the Project Area

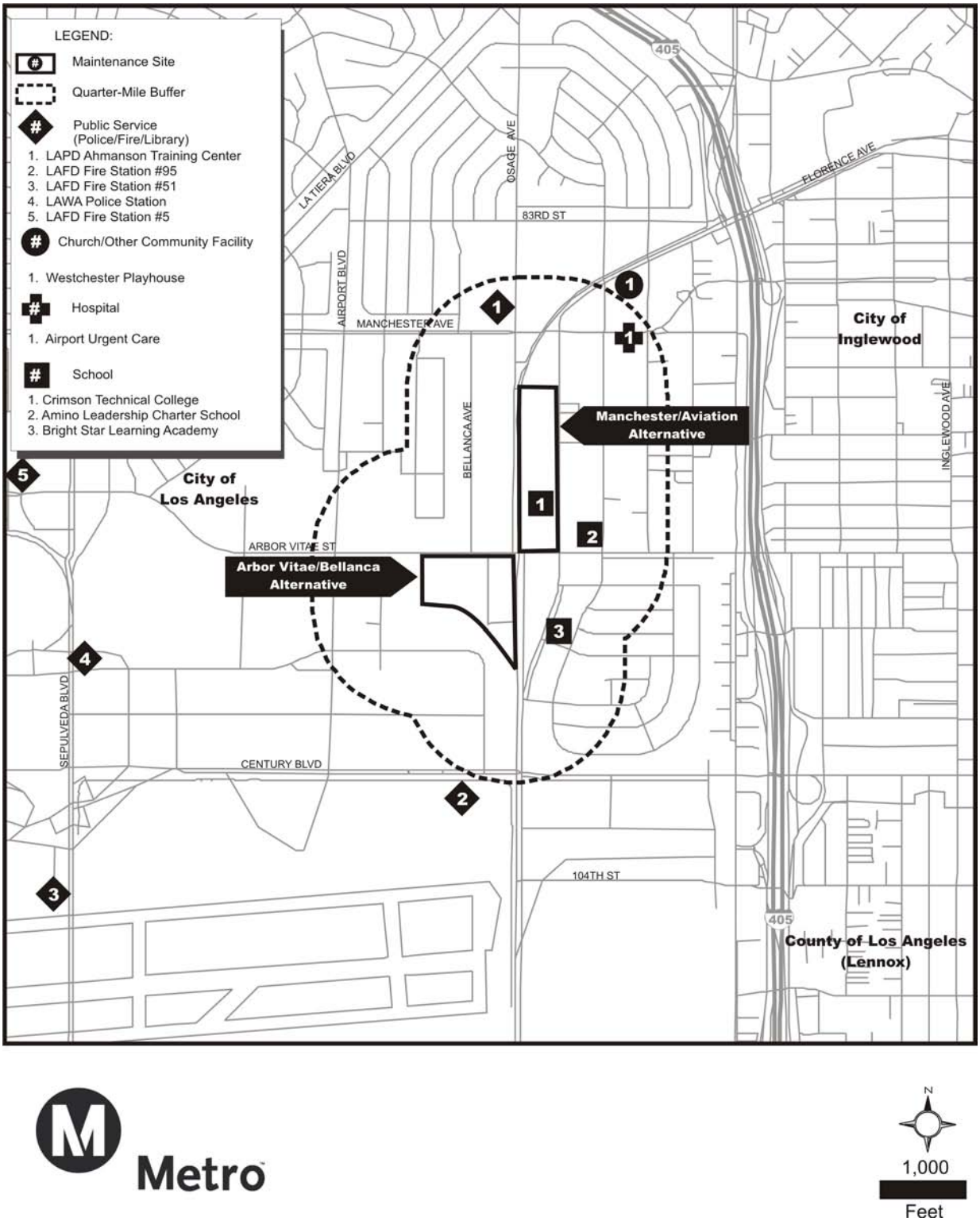
Figure #/ Map ID #	Parkland or Community Facility	Street Address/City	Within ¼ Mile of Maintenance Site (Yes/No)			
			Site #14	Site #15	Site #17	D22N
Police Stations						
Figure 3-40/1	LAPD Ahmanson Training Center	5651 W. Manchester Blvd.	No	**Yes**	No	No
Figure 3-40/4	Los Angeles World Airports Police Station	6320 West 96th St./Los Angeles	No	No	No	No
Fire Stations						
Figure 3-40/2	LAFD Fire Station #95	10010 International Rd./Los Angeles	No	No	No	No
Figure 3-40/3	LAFD Fire Station #51	10435 S. Sepulveda Blvd./Los Angeles	No	No	No	No
Figure 3-40/5	LAFD Fire Station #5	8900 S. Emerson Ave./Los Angeles	No	No	No	No
Figure 3-41/6	Los Angeles County Fire Department Fire Station #160	5323 W. Rosecrans Ave./ Hawthorne	No	No	No	Yes
Figure 3-41/7	Los Angeles County Fire Department Fire Station #21	4312 W. 147th St./Lawndale	No	No	No	No
Figure 3-41/8	Manhattan Beach Fire Department Fire Station #2	1400 Manhattan Beach Blvd./Manhattan Beach	No	No	No	No
Schools						
Figure 3-40/1	Crimson Technical College	8911 Aviation Blvd./ Inglewood	**Yes**	**Yes**	No	No
Figure 3-40/2	Amino Leadership Charter High School	1155 W. Arbor Vitae St./Inglewood	**Yes**	**Yes**	No	No
Figure 3-40/3	Bright Star Learning Academy	5431 W. 98th St./Los Angeles	**Yes**	**Yes**	No	No
Figure 3-41/4	Vistamar School	737 Hawaii St./El Segundo	No	No	No	No
Figure 3-41/5	Richard Henry Dana Middle School	5504 W. 135th St./Hawthorne	No	No	No	No
Figure 3-41/6	Billy Mitchell Elementary School	14429 Condon Ave./Lawndale	No	No	No	No
Figure 3-41/7	Lawndale High School	14901 S. Inglewood Ave./Lawndale	No	No	**Yes**	No
Figure 3-41/8	Jane Addams Middle School	4535 W 153rd Pl./Lawndale	No	No	No	No
Figure 3-41/9	Manhattan Beach Middle School	1501 N Redondo Ave./Manhattan Beach	No	No	No	No
Figure 3-41/10	Lincoln Elementary School	2223 Plant Ave./Redondo Beach	No	No	No	No
Figure 3-41/11	Lucille J. Smith Elementary	4521 W. 147th St./ Lawndale	No	No	No	No

Table 3-33. Public Services Serving the Project Area (continued)

Figure #/ Map ID #	Parkland or Community Facility	Street Address/City	Within ¼ Mile of Maintenance Site (Yes/No)			
			Site #14	Site #15	Site #17	D22N
Parks						
Figure 3-41/1	Marine Avenue Park	1625 Marine Ave./Manhattan Beach	No	No	No	No
Figure 3-41/2	Holly Glen Park	13700 Glasgow Pl./ Hawthorne	No	No	No	No
Figure 3-41/3	Jane Addams Park	15114 Firmona Ave./Lawndale	No	No	No	No
Figure 3-41/4	Polliwog Park	1600 Manhattan Beach Blvd./Manhattan Beach	No	No	No	No
Figure 3-41/5	Manhattan Heights Park	1600 Manhattan Beach Blvd./Manhattan Beach	No	No	No	No
Figure 3-41/6	Glenn M. Anderson Park	2229 Ernest Ave./Manhattan Beach	No	No	No	No
Religious or Other Community Facilities						
Figure 3-40/1	Westchester Playhouse	8301 Hindry Ave./Inglewood	No	**Yes**	No	No
Figure 3-41/2	Wiseburn Library	5335 W 135th St./Hawthorne	No	No	No	No
Figure 3-41/3	Lawndale Library	14615 Burin Ave./Lawndale	No	No	No	No
Figure 3-41/4	Jehovah's Witness: Hawthorne Congregation	4610 Marine Ave./Lawndale	No	No	No	No
Figure 3-41/5	Centinela Baptist Church	4724 W 152nd St./Lawndale	No	No	No	No
Figure 3-41/6	Lawndale Foursquare Church	4560 W 154th St./Lawndale	No	No	No	No
Figure 3-41/7	The Rock Covenant Church	1431 15th St./Manhattan Beach	No	No	No	No
Figure 3-41/8	Church of the Beach Cities	1808 Manhattan Beach Blvd/Manhattan Beach	No	No	No	No
Figure 3-41/9	City of Redondo Beach Performing Arts Center	1935 Manhattan Beach Blvd./Redondo Beach	No	No	No	No
Figure 3-41/10	Christian Heritage Church	16421 Hawthorne Blvd./Lawndale	No	No	No	No
Hospitals						
Figure 3-40/1	Airport Urgent Care	1117 W. Manchester Blvd./Inglewood	No	**Yes**	No	No
Figure 3-41/2	LA Metropolitan Medical Center	13300 S. Hawthorne Blvd./ Hawthorne	No	No	No	No

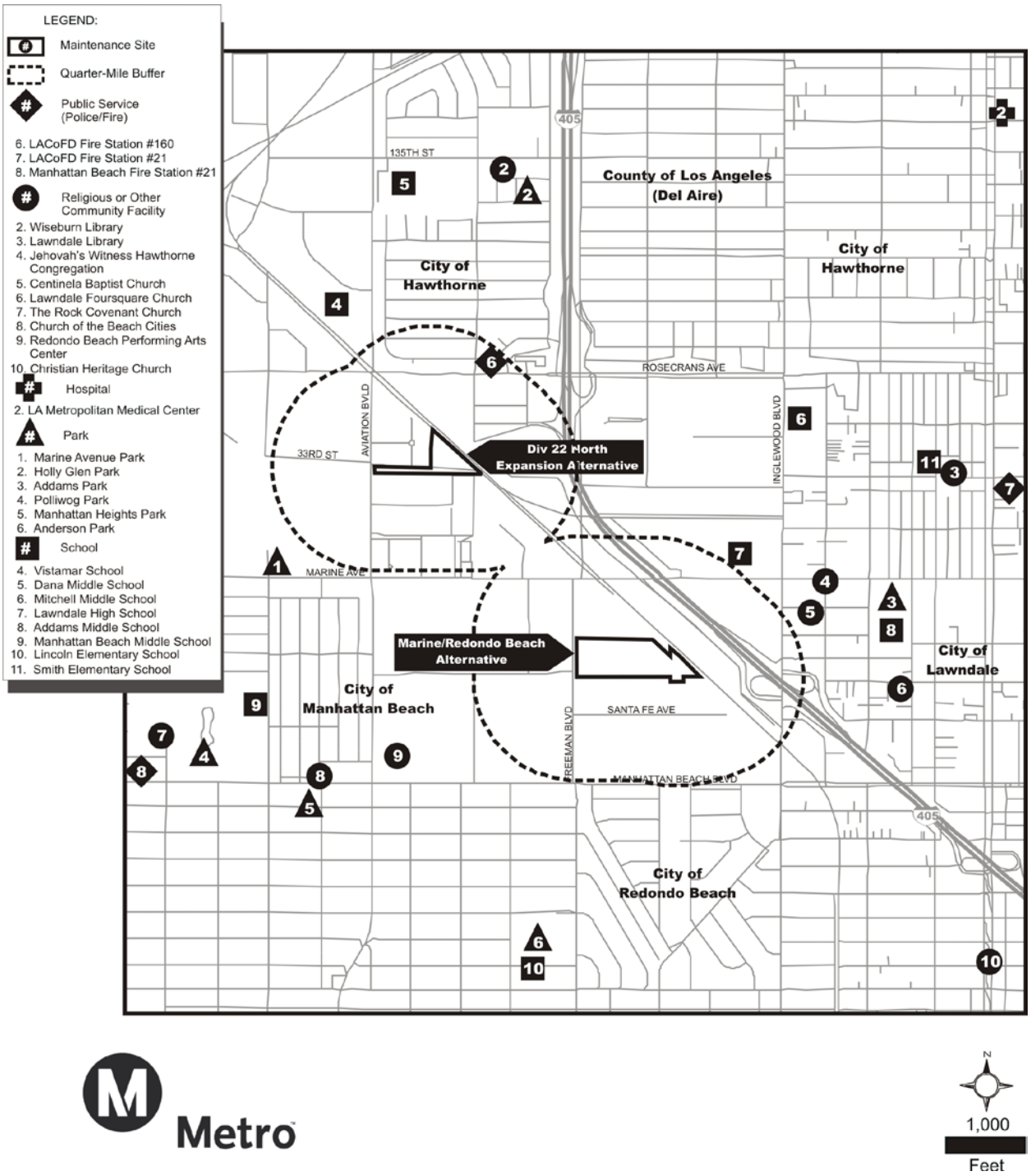
Source: TAHA, 2010.

Figure 3-40. Parks and Community Facilities – Sites #14 and #15



Source: TAHA, 2010.

Figure 3-41. Parks and Community Facilities – Sites #17 and D22N



Source: TAHA, 2010.

3.13.1.1 Police Services

The maintenance site alternatives are within the vicinity of the Los Angeles Police Department (LAPD), Los Angeles World Airports (LAWA) Airport Police Division, the Inglewood Police Department (IPD), Redondo Beach Police Department (RBPD), and the Hawthorne Police Department (HPD) patrol areas.

The LAPD provides police protection services to an area of approximately 473 square miles, with 19 communities representing approximately four million residents (LAPD, July 2005). The LAPD Pacific Community Police Station has a patrol area of 24.1 square miles and serves communities of Del Rey, Manchester Square, Mar Vista, Oakwood, Palms, Playa Del Rey, Playa Vista, Venice, and Westchester. Site #14 – Arbor Vitae/Bellanca Alternative is within the patrol area of the Pacific Community Police Station.

The LAWA Airport Police Division provides police protection services to the Los Angeles International Airport (LAX), Ontario Airport, Van Nuys Airport, and Palmdale Airport. The LAWA operates a police facility within the vicinity of LAX. The LAX police facility is located at 6320 West 96th Street and is approximately one mile west of the Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Alternatives.

The IPD provides police patrol services to the City of Inglewood, an area of approximately nine square miles. The IPD operates one police station that is located at One West Manchester Boulevard. Site #15 – Manchester/Aviation Alternative is within the patrol area of the IPD and is located approximately 1.3 miles west of the IPD police station.

The RBPD provides police patrol services to the City of Redondo Beach, an area of approximately six square miles. The RBPD operates one police station that is located at 401 Diamond Street and is located approximately 3.3 miles southwest of the Site #17 – Marine/Redondo Beach Alternative.

The HPD provides police patrol services to the City of Hawthorne. The HPD operates one police station that is located at 12501 South Hawthorne Blvd and is located approximately 1.8 miles northwest the Division 22 Northern Expansion Alternative.

3.13.1.2 Fire Services

The maintenance site alternatives are within the vicinity of the City of Los Angeles Fire Department (LAFD), Los Angeles County Fire Department (LACoFD), and the Redondo Beach Fire Department (RBFD) service areas

The LAFD provides fire protection and paramedic services to the City of Los Angeles. The LAFD operates 106 fire stations throughout the City which are grouped into three divisions and 16 battalions. The Site #14 – Arbor Vitae/Bellanca Alternative is within the service area of the LAFD.

The LACoFD provides fire protection and paramedic services to unincorporated areas and many incorporated cities of Los Angeles County, including the Cities of Inglewood, Lawndale and Hawthorne. The LACoFD operates over 100 fire stations which are

organized into 21 battalions. The Site #15 – Manchester/Aviation and Division 22 Northern Expansion Alternatives are within the service area of the LACoFD.

The RBFD operates within and provides fire protection and paramedic services to the City of Redondo Beach. The Site #17 – Marine/Redondo Beach Alternative is within the service area of the RBFD. The Manhattan Beach Fire Department Fire Station #2 is also in close proximity to the Site #17 – Marine/Redondo Beach Alternative. All of these jurisdictions can also provide mutual aid to adjacent fire departments if necessary.

3.13.1.3 Libraries

The maintenance site alternatives are near the Los Angeles Public Library (LAPL), City of Inglewood Public Library (IPL), City of Redondo Beach Public Library (RPL), and the Los Angeles County Public Library (LACPL) service areas.

3.13.1.4 Parks

The maintenance site alternatives are near five parks that are operated by the Cities of Lawndale and Manhattan Beach.

3.13.1.5 Educational Facilities

Maintenance site alternatives are near 11 educational facilities that are operated by the CVUHSD, Lawndale Elementary School District (LESD), LAUSD, Manhattan Beach Unified School District (MBUSD), RBUSD, Wiseburn School District (WSD), or independent operators.

3.13.1.6 Religious Facilities

The maintenance site alternatives are located near eight religious facilities

3.13.1.7 Hospital Facilities

The maintenance site alternatives are located near two hospital facilities: the Airport Urgent Care and LA Metropolitan Medical Center.

3.13.2 Environmental Impacts/Environmental Consequences

Table 3-34. Summary Impacts to Public Service and Other Community Facilities

Public Service or Facility	Maintenance Alternative Site	Impact			
		Acquisition of Facility	Affect Vehicle Access or Response Times	Increase Demand for Service	Disruption to Community Facility
Police Stations					
LAPD Ahamanson Training Center	Site #14	No	No	No	No
	Site #15	No	No	No	No
	Site #17	No	No	No	No
	D22N	No	No	No	No
Schools					
Amino Leadership Charter High School	Site #14	No	No	No	No
	Site #15	No	No	No	No
	Site #17	No	No	No	No
	D22N	No	No	No	No
Bright Star Learning Academy	Site #14	No	No	No	No
	Site #15	No	No	No	No
	Site #17	No	No	No	No
	D22N	No	No	No	No
Lawndale High School	Site #14	No	No	No	No
	Site #15	No	No	No	No
	Site #17	No	No	No	No
	D22N	No	No	No	No
Crimson Technical College	Site #14	No	No	No	No
	Site #15	No	No	No	No
	Site #17	No	No	No	No
	D22N	No	No	No	No
Hospital Facilities					
Airport Urgent Care	Site #14	No	No	No	No
	Site #15	No	No	No	No
	Site #17	No	No	No	No
	D22N	No	No	No	No

Source: TAHA 2010.

3.13.2.1 Direct Impacts

The operation of a maintenance facility would not affect the access or disrupt the services provided by parklands or community facilities for any of the maintenance site alternatives. The maintenance facility sites would not result in a population increase that would increase the demand for public services. No Section 4(f) lands would be affected by any of the maintenance site alternatives. No adverse impact on parklands, public services and community facilities would result.

3.13.2.2 Indirect Impacts

Development of a maintenance facility on any of the maintenance site alternatives would not impede access, parking or the daily operations of any parklands, public services and community facilities. Therefore, no indirect adverse effects to parklands public services or community facilities are anticipated.

3.13.3 Mitigation Measures

No adverse impacts have been identified to parklands and other community facilities, and the Project would comply with all applicable regulations; therefore, no mitigation measures are required.

3.13.4 CEQA Determination

None of the maintenance site alternatives are within 0.25 miles of parkland. As places of employment, the maintenance site alternatives would not add population and would not increase the demand on parklands or community facilities. Therefore, the operation of the selected maintenance site alternatives would not could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for parks. The operation of a maintenance facility would employ approximately 129 to 200 employees and result in the displacement of between five and 390 employees. This would not result in an increase in residents or workers that would increase demand for the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. None of the maintenance facility sites would impact airports, physically interfere with an adopted emergency response plan or evacuation plan, nor would it expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Therefore, less-than-significant impacts on parks and community facilities are anticipated.

The maintenance site alternatives would not impede access, parking or the daily operations of any parklands, public services and community facilities. Therefore, no indirect adverse effects to parklands public services or community facilities are anticipated.

3.14 Economic and Fiscal Impacts

This section discusses the economic and fiscal impacts of the maintenance site alternatives. Specific emphasis is placed on jobs created during construction and long-term operations of the maintenance facility, as well as jobs potentially displaced. Indirect economic multipliers and impacts to property tax revenues are also discussed.

3.14.1 Affected Environment/Existing Conditions

The maintenance site alternatives are located in close proximity to LAX. Activities at LAX, including business travel, tourist travel and goods movement, contribute to LAX's importance as a key element of the Southern California economy. According to Southern California Association of Governments (SCAG), there are currently more than 73,000 jobs in the airport vicinity (8.5 square miles). As shown in Table 3-35, 40 percent of all jobs in the area are related to the transportation industry. Within the LAX vicinity, there are more than 8,700 jobs per square mile (approximately 14 jobs per acre on average). Many of the industries located near the airport include hotels, motels, rental car agencies, trucking companies, freight forwarders, warehousing and cold storage facilities. There also a number of manufacturing industries that have taken advantage of the industrial land available as a means to optimize shipping.

Table 3-35. Airport Vicinity Jobs

Industry	Employees	Percent
Transportation	29,432	40.0
Professional	10,633	14.5
Arts/Entertainment	7,793	10.6
Education	4,975	6.8
Manufacturing	4,609	6.3
Retail	3,468	4.7
Finance/Real Estate	3,442	4.7
Public Administration	2,336	3.2
Construction	2,156	2.9
Wholesale	1,759	2.4
Other Services	1,497	2.0
Information	1,402	1.9
Agriculture	78	0.1
Total	73,582	100.0

Source: SCAG, 2003.

As discussed in Section 3.3, Displacement and Relocation, the maintenance site alternatives are occupied with commercial and industrial businesses. The total estimated employment for these sites is approximately 804 jobs. Table 3-36 indicates that the employment found on the maintenance site alternatives ranges from five employees on the Division 22 Northern Expansion Alternative to 390 jobs on the Site #14 – Arbor Vitae/Bellanca Alternative.

Table 3-36. Estimated Existing Jobs on Maintenance Site Alternatives

Proposed Site	Estimated Jobs
Site #14 - Arbor Vitae/Bellanca Alternative	390
Site #15 - Manchester/Aviation Alternative	159
Site #17 – Marine/Redondo Beach Alternative	250
Division 22 Northern Expansion	5
Total Existing Jobs on Maintenance site alternatives	804

Source: TAHA, 2010.

Table 3-37 shows the existing property tax revenue for the proposed maintenance site alternatives. Property taxes are important revenue sources to all of the jurisdictions. Economic conditions affect the Los Angeles County assessed valuations that are the basis for the property taxes. Recent down turns in the national and State economy have influenced these property tax revenues, as well as actions by the State of California to balance the State budget have also adversely affected the property tax share received by the four jurisdictions. In fiscal year 2008-2009, approximately 16 percent of general revenue of the City of Los Angeles came from property taxes, nine percent of the City of Hawthorne general revenue came from property taxes, 13 percent of the City of Inglewood general revenue came from property taxes, and 39 percent of the City of Redondo Beach came from property taxes.

Table 3-37. Existing Property Tax Revenue (2009)

Proposed Site	Jurisdiction	Revenue
Site #14: Arbor Vitae/Bellanca Alternative	Los Angeles	$464,622
Site #15: Manchester/Aviation Alternative	Inglewood	$494,582
Site #17: Marine/Redondo Beach Alternative	Redondo Beach	$390,908
Division 22 Northern Expansion Alternative	Hawthorne	$2,863

Source: Los Angeles County Assessor, 2010.

3.14.2 Environmental Impact/Environmental Consequences

Table 3-38. Summary Comparison of Impacts to Economics and Fiscal Effects

Impact Criteria	Site #14 (stand alone)	Site #14 (satellite)	Site #15 (stand alone)	Site #15 (satellite)	Site #17 (satellite)	D22N (satellite)
Direct construction jobs	249	277	306	335	225	116
Total construction jobs (direct, indirect, induced)	4,536	5,064	5,592	6,120	4,056	2,119
Existing jobs displaced	390	390	159	159	250	5
Jobs created by operation of proposed alternative	200	129	200	129	129	71
Property tax loss	$464,622	$464,622	$494,582	$494,582	$390,908	$2,863

/a/Uses Factor or 24,000 jobs per billion for construction which is a blend of IMPLAN and REMI modeling systems.
/b/Direct jobs are calculated using a ratio 18.25 Total/Direct jobs obtained from BEA, RIMS II.
Source: US Department of Commerce, Los Angeles County Assessor, Bureau of Economic Analysis, *2005 RIM II Modeling System,* and TAHA, 2010.

Direct Impacts

Table 3-38 summarizes the economic and fiscal effects of each of the maintenance site alternatives. Acquisition of property necessary for the maintenance facility would result in the displacement of a substantial number of employees on Sites #14, #15, and #17 working in a variety of businesses, each with their own unique relocation needs. The displacement of this number of jobs and loss of property tax revenue would result in an adverse effect to the regional economy. While the creation of total jobs by the facility would lessen the extent of the jobs lost through displacement, an adverse impact is anticipated without the implementation of mitigation measures. Should these businesses be able to be relocated in the surrounding area, a beneficial effect would result to local and regional employment and the economy.

Indirect Impacts

The relocation of a majority of these businesses would be anticipated to occur in proximity to LAX. However, because the area is largely built out, the relocation of businesses would likely be dispersed and would only occur to the extent that adequate property is vacant and/or for sale or lease. Should these businesses be able to be relocated in the surrounding area, a beneficial indirect effect would result to employment and the economy.

3.14.3 Mitigation Measures

The Site #14 – Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives would result in adverse effects to the regional economy from the loss of jobs and government revenue. Refer to Mitigation Measures **DR1** through **DR3** identified Section 3.3, Displacement and Relocation.

3.14.4 Impacts Remaining After Mitigation

The effects of the maintenance site alternatives discussed above address regional economic activity, long-term operations employment, government revenues, and the potential contribution of the alternatives to the long-term effects on businesses. The economic and fiscal effects for the Site #14 - Arbor Vitae/Bellanca and Site #15 - Manchester/Aviation, and Site #17 – Marine Redondo Beach Alternatives are anticipated to be adverse from the loss of government revenue and impact to the regional economy. Implementation of Mitigation Measure **DR1** through **DR3** identified in the Displacement and Relocation section would reduce the severity of the economic and fiscal impacts; however, impacts would remain adverse for Site #14 - Arbor Vitae/Bellanca and Site #15 - Manchester/Aviation, and Site #17 – Marine Redondo Beach Alternatives.

3.14.5 CEQA Determination

The economic and fiscal effects discussed above address regional economic activity, long-term operations employment, government revenues, and likely long-term effects on adjacent businesses and business districts. A significant impact would occur for the Site #14 – Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives due to the effect of job loss on the regional economy and the loss of government revenues if the displaced businesses do not relocate to comparable sites in the vicinity.

3.15 Safety and Security

3.15.1 Affected Environment/Existing Conditions

Security within and around the selected maintenance facility site would be conducted by the policing authorities whose jurisdictions apply to the surrounding areas. The Los Angeles Police Department (LAPD) has policing responsibilities for the neighborhoods surrounding the Site #14 – Arbor Vitae/Bellanca Alternative southwest of Manchester (Westchester Community) and in the vicinity of the LAX. The Inglewood Police Department provides services to the area surrounding the Site #15 – Manchester/Aviation Alternative, the City of Hawthorne Police Department provides services to the area surrounding Division 22 Northern Expansion Alternative and the City of Redondo Beach Police Department provides services to the area surrounding the Site #17 – Marine/Redondo Beach Alternative.

Table 3-39 identifies the Part I crimes in the vicinity of the maintenance site alternatives. Part I crimes include violent crimes, such as homicide, rape, and robbery, and property crimes, such as burglary and grand theft auto. Data is shown for the various divisions of LAPD and other jurisdictions. In general, the data indicate that the crime rate (measured in offences per each 10,000 persons of population) for Part I crimes near the maintenance site alternatives is higher than the overall crime rate for LAPD.

Table 3-39. Crime Statistics within Project Corridor

Jurisdiction / Area	Total Population	Part I Crime Rate per 10,000 Persons/a/
City of Hawthorne (2007)	88,583	371.44
City of Inglewood (2007)	129,900	294.77
City of Los Angeles (2008)		
Southwest Area	189,723	89.66
LAPD Jurisdiction (Total)[2]	4,003,694	66.29
City of Redondo Beach (2008)	67,099	261.44

/a/City of Los Angeles population totals based on LAPD 2007 Statistical Digest.
Source: Los Angeles Police Department, Hawthorne Police Department, Inglewood Police Department, and Redondo Beach Police Department.

3.15.2 Environmental Impacts/Environmental Consequences

Table 3-40. Summary Comparison of Impacts to Safety and Security

Impact Criteria	Site #14	Site #15	Site #17	D22N
Create potential for pedestrian conflict	No	No	No	No
Create potential for vehicular conflict	No	No	No	No
Create potential for adverse security/crime	No	No	No	No
Affects emergency services	No	No	No	No

Source: TAHA, 2010.

3.15.2.1 Direct Impacts

The selected maintenance site would have either two or three access points for vehicles where employees, service trucks and other visitors could enter. The maximum estimated number of hourly vehicle trips entering and exiting the facility would be 45 vehicles. This would result in an approximate average of one vehicle entering or exiting every three minutes assuming the trips are split between two access points. All of the light rail vehicle access points for the maintenance site alternatives would be located along the Harbor Subdivision Railroad Right-of-way. None of these rail access points would introduce a threat to safety or security. There would also be an on-site sheriff/security building for the selected site. Entrance into the maintenance site would require passing through security to enter the buildings and/or gate. The operation of the maintenance facility would not increase any other potential risks to safety. Crimes that would likely take place include vandalism and auto theft. The maintenance facility site would be lighted and patrolled to prevent crime. With adherence to Mitigation Measures **SS1** and **SS2**, the maintenance site alternatives would not have any adverse effects to safety or security.

3.15.2.2 Indirect Impacts

No indirect adverse effects to safety and security are anticipated to occur under any of the four maintenance site alternatives.

3.15.3 Mitigation Measures

SS1 The maintenance facility shall be well-lit to standards that minimize shadows and all pedestrian pathways leading to/from sidewalks and parking shall be well illuminated.

SS2 Metro shall coordinate and consult with the LAPD, the Hawthorne Police Department, the Inglewood Police Department, or the Redondo Beach Police Department to develop safety and security plans for the alignment, parking facilities, and station areas, where such facilities fall within the specific jurisdiction.

Impacts Remaining After Mitigation

Implementation of Mitigation Measures **SS1** and **SS2** would reduce safety and security impacts to less-than-significant levels.

3.15.4 CEQA Determination

The maintenance site alternatives would be located within a city block with multiple and separate access points for motor vehicles and LRVs. All of the maintenance site alternatives would have a sheriff/security facility to provide adequate security for the maintenance yard. None of the maintenance site alternatives would create the potential for adverse safety conditions by limiting the provision of police, fire, or emergency services. Implementation of Mitigation Measures **SS1** and **SS2** would reduce safety and security impacts to less-than-significant levels for all of the maintenance site alternatives.

The maintenance site alternatives would have no indirect impacts on safety and security.

3.16 Construction Impacts

3.16.1 Affected Environment/Existing Conditions

The construction of a maintenance facility for the Crenshaw/LAX LRT Line would involve the following construction phases:

- Demolition
- Site preparation and grading
- Installation of foundations
- Erection of buildings
- Installation of track work and pavements •
- Site aesthetic improvements such as landscaping

The construction process would occur over an approximate 24-month period and would employ conventional construction techniques and equipment typically used in the Southern California region would follow all applicable local, state and federal laws for building and safety. Typical equipment could include excavators, loaders, lifts, backhoes, bulldozers, compactors, cranes, pavers, and graders. For security and safety purposes the facility would be fenced during construction. During the construction period, adjoining property owners would be experience increases in noise, dust, construction traffic and visual degradation. These issues would be comparatively minor because the surrounding land uses are industrial and rail oriented. These construction vehicles may temporarily impede traffic mobility in areas of construction and truck routes would be required during construction. Construction of the facility would be limited to the site, lane closures would be minimal and nighttime construction would not be required.

3.16.2 Environmental Impacts/Environmental Consequences

Table 3-41. Summary Comparison of Impacts During Construction

Impact Criteria	Site #14	Site #15	Site #17	D22N
Adverse Effects to Traffic, Circulation, and Parking	No	No	No	No
Adverse Effects to Land Use and Development	No	No	No	No
Adverse Effects to Displacement and Relocation of Existing Uses	No	No	No	No
Adverse Effects to Community and Neighborhood	No	No	No	No
Adverse Effects to Visual and Aesthetic	No	No	No	No
Adverse Effects to Air Quality				
Localized	**Yes**	**Yes**	No	No
Regional	**Yes**	**Yes**	**Yes**	No
Adverse Effects to Noise and Vibration	**Yes**	No	No	**Yes**
Adverse Effects to Ecosystems/Biological Resources	No	No	No	No
Adverse Effects to Geotechnical/Subsurface/Seismic/Hazardous Materials	No	No	No	No
Adverse Effects to Water Resources	No	No	No	No
Adverse Effects to Energy	No	No	No	No
Adverse Effects to Historic, Archaeological and Paleontological	No	No	No	No
Adverse Effects to Parklands and Community Facilities	No	No	No	No

Table 3-41. Summary Comparison of Impacts During Construction (continued)

Impact Criteria	Site #14	Site #15	Site #17	D22N
Adverse Effects to Economic and Fiscal	No	No	No	No
Adverse Effects to Safety and Security	No	No	No	No
Adverse Effects to Environmental Justice	No	No	No	No

Source: TAHA, 2010

3.16.2.1 Traffic

Construction of the maintenance facility would be limited to the sites and would only require limited and temporary lane closures and/or reductions in parking. Because the sites are located in the airport area, there is limited on-street parking available. The Site #15 Manchester/Aviation Alternative is the only site with on-street parking. In addition, the existing uses on the sites would be removed, eliminating the existing parking demand. The number of truck trips and construction equipment needed to construct the facility would not adversely affect the surrounding traffic circulation patterns. Truck trips during construction are not anticipated to exceed eight per hour and would not degrade the level of service at surrounding intersections. A traffic management plan to assure access to local roads and businesses would be implemented during the approximately two-year construction period. These effects would be temporary and no adverse effects to traffic, circulation, and parking are anticipated.

3.16.2.2 Land Use and Development

Construction of the maintenance facility would be located adjacent to the industrial-zoned areas adjacent to the Harbor Subdivision right-of-way. While these activities may require temporary easements, zoning and land use compatibility would not be altered and no adverse effects are anticipated.

3.16.2.3 Displacement and Relocation of Existing Uses

Displacement and relocation of existing uses would occur prior to any construction activity for all of the maintenance site alternatives, and, therefore, no adverse construction effects are anticipated.

3.16.2.4 Community and Neighborhoods

None of the four maintenance site alternatives would alter or block access to any community assets, displace on- or off-street parking spaces for community facilities during construction. Therefore, no adverse environmental effects are anticipated.

3.16.2.5 Visual Resources

Construction of a maintenance facility on any of the maintenance site alternatives would result in construction-related signage, the stockpiling of dirt and materials, construction staging areas, and heavy equipment which would all be visible in the vicinity of construction sites. The placement of concrete barriers and fencing would also be visible along the perimeter of the construction area. Security lighting could also be used on the

perimeter of the construction site. These visual elements would temporarily degrade the physical character of the area and would result in an adverse effect without mitigation.

3.16.2.6 Air Quality

Emissions would be generated during excavation, grading, hauling, and various other activities related to construction activities. The main sources of emissions would be exhaust from heavy-duty equipment and trucks. Commuting by construction workers would also generate greenhouse gas emissions.

Localized Construction Concentrations

Table 3-42 shows the maximum off-site pollutant concentrations. Localized concentrations would exceed the standards for $PM_{2.5}$ and PM_{10}. Therefore, construction activity would result in an adverse impact related to localized concentrations without mitigation.

Table 3-42. Localized Construction Concentrations - NEPA

Pollutant	Concentration	Standard/a/	Impact?
Site # 14 –Arbor Vitae/Bellanca Alternative			
PM_{10} – 24-Hour ($\mu g/m^3$)	177	150	**Yes**
$PM_{2.5}$ – 24-Hour ($\mu g/m^3$)	38	35	**Yes**
CO – 1-Hour (ppm)	0.27	35	No
CO – 8-Hour (ppm)	0.1	9	No
NO_2 – Annual (ppm)	0.004	0.053	No
Site # 15 –Manchester/Aviation Alternative			
PM_{10} – 24-Hour ($\mu g/m^3$)	236	150	**Yes**
$PM_{2.5}$ – 24-Hour ($\mu g/m^3$)	52	35	**Yes**
CO – 1-Hour (ppm)	0.9	35	No
CO – 8-Hour (ppm)	0.3	9	No
NO_2 – Annual (ppm)	0.001	0.053	No
Site # 17 –Marine/Redondo Beach Alternative			
PM_{10} – 24-Hour ($\mu g/m^3$)	83	150	No
$PM_{2.5}$ – 24-Hour ($\mu g/m^3$)	18	35	No
CO – 1-Hour (ppm)	0.23	35	No
CO – 8-Hour (ppm)	0.1	9	No
NO_2 – Annual (ppm)	0.007	0.053	No
Division 22 Northern Expansion Alternative			
PM_{10} – 24-Hour ($\mu g/m^3$)	115	150	No
$PM_{2.5}$ – 24-Hour ($\mu g/m^3$)	27	35	No
CO – 1-Hour (ppm)	0.10	35	No
CO – 8-Hour (ppm)	0.1	9	No
NO_2 – Annual (ppm)	0.006	0.053	No

Source: TAHA, 2010.
/a/Threshold established by the National Ambient Air Quality Standards..

Toxic Air Contaminants

The greatest potential for TAC emissions during construction would be diesel particulate emissions associated with heavy equipment operations.[6] According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Given the short-term construction schedule of approximately two years for each of the alternatives, construction activity would not result in a long-term (i.e., 70 years) source of TAC emissions. No residual emissions and corresponding individual cancer risk are anticipated after construction. Therefore, construction activity would not result in an adverse impact related to toxic air contaminants.

Odors

Potential sources that may emit odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the immediate area surrounding the construction site. Construction activity would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Therefore, construction activity would not result in an adverse impact related to odors.

3.16.2.7 Noise and Vibration

The noise levels generated by construction equipment will vary greatly depending on factors such as the type of equipment, the specific model, the operation being performed, and the condition of the equipment. The equivalent sound level (L_{eq}) of the construction activity also depends on the fraction of time that the equipment is operated over the time period of construction. The dominant source of noise from most construction equipment is the engine, usually a diesel, often without sufficient muffling. Table 3-43 lists typical noise levels associated with equipment that would be used during the construction process. No other detailed information (e.g., equipment duration) was available when this analysis was completed.

Table 3-43. Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) at 50 feet from Source
Excavator	82
Loader	85
Backhoe	80
Crane	83
Compactor	82
Paver	89
Grader	85
Truck	88
Pneumatic Tool	85

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

[6] SCAQMD, *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions*, December 2002.

The FTA has published construction noise criteria in *Transit Noise and Vibration Impact Assessment* (May 2006). Based on daytime construction activity, the FTA guidance states that residential locations should be identified where residential exposure would exceed 90 dBA L_{eq} and commercial/industrial exposure would exceed 100 dBA L_{eq}.

Construction activity would generate a noise level of 91.5 dBA at 50 feet. The nearest residential land use to any Project site is located approximately 150 feet from the Division 22 Northern Expansion site. At this distance, the construction noise level would be 82.0 dBA, which would be less than the 90-dBA significance threshold.

Each of the maintenance site alternatives are located adjacent to commercial and/or industrial land uses. Construction activity may occur within 25 feet of these land uses. At this distance, the construction noise level would be 97.5 dBA, which would be less than the 100-dBA significance threshold. Construction activity would not result in an adverse noise impact at residential, commercial, or industrial land uses under any alternative.

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings founded on the soil in the vicinity of the construction site respond to these vibrations, with varying results ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. Table 3-44 lists typical vibration levels associated with equipment that would be used during the construction process.

Table 3-44. Construction Equipment Vibration Levels

Equipment	Typical Vibration Level (PPV) at 25 feet from Source
Roller	0.210
Large Bulldozer	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

The FTA has published construction vibration criteria in *Transit Noise and Vibration Impact Assessment* (May 2006). The FTA guidance states that typically constructed buildings (i.e., engineered concrete and masonry) can be exposed to a vibration level of 0.3 PPV (inches per second) without experiencing damage.

Each of the maintenance site alternatives are located adjacent to commercial and/or industrial land uses and construction activity may occur within 25 feet of these land uses. This would generate a vibration level of 0.210 inches per second peak particle velocity (PPV), which would be less than the 0.3 inches per second PPV significance threshold. Construction activity would not result in an adverse vibration impact under any alternative.

3.16.2.8 Ecosystems/Biological Resources

The construction of the maintenance site alternatives would not take place on any undisturbed land or areas that contain sensitive species or habitats.

3.16.2.9 Geotechnical/Subsurface/Seismic/Hazardous Materials

Construction of the maintenance site alternatives may potentially encounter subsurface gases in the areas where grading and/or excavation would occur which may include the release of methane and hydrogen sulfide soil gas, oil seepage, contaminated soils, leaking wells, and wells not plugged and abandoned to current standards. The possibility of discovering subsurface gases would increase relative to the depth of construction.

Construction of any of the maintenance site alternatives is not anticipated to result in a significant amount of subsurface excavation. However, discovery of any subsurface gases would potentially result in an adverse effect.

Construction of a maintenance facility is not anticipated to result in exposure to hazardous materials. The previous mitigation measures identified in Section 3.10 provide the appropriate methods for safely approaching the potentially hazardous situations and reducing this potential impact to less-than-adverse levels. The maintenance site alternatives would be implemented in accordance with all federal and State requirements and permits during the construction process. It is anticipated that no adverse effects would occur to geotechnical, seismic, or hazardous materials during construction.

3.16.2.10 Water Resources

The construction of a maintenance facility would potentially include increased sediment and erosion in or near disturbed areas for all of the maintenance site alternatives. The maintenance site alternatives are required to comply with the NPDES General Construction Permit to discharge stormwater associated with construction activity. To address and reduce water quality adverse effects, a SWPPP will be prepared in accordance with the General Construction Stormwater Permit requirements. BMPs will be identified in the SWPPP to reduce or eliminate pollutants in stormwater discharges from the construction site. Implementation of temporary and permanent treatment BMPs would minimize adverse effects to water quality during the construction of a maintenance facility for all of the maintenance site alternatives.

3.16.2.11 Energy

The highest daily energy consumption for the maintenance site alternatives would occur during the two year construction of the maintenance facility from construction equipment and workers. The demand for energy during construction of the Project is anticipated to be met by the available supply. Impacts on energy resources would be temporary and not be considered adverse.

3.16.2.12 Historic, Archaeological, and Paleontological Resources

Archaeological Resources

No known archaeological resources listed or eligible for listing in the National Register would be affected by the construction of a maintenance facility. No adverse impacts are anticipated during construction.

Historic and Architectural Resources

A preconstruction survey of the adjacent structures and all historical buildings in the vicinity would be conducted to establish a baseline for measuring potential construction-induced damage. Construction monitoring would be required to ensure that ground movement does not exceed threshold values. No adverse impacts are anticipated during construction.

Paleontological Resources

Excavation during the construction of a maintenance facility would not be anticipated to exceed five feet in depth for any of the maintenance site alternatives and the potential discovery of a paleontological resource would be remote. No adverse impacts are anticipated during construction.

3.16.2.13 Parklands and Other Community Facilities

For all sites, construction would occur within the maintenance facility site and would have no adverse impact on parklands or community facilities.

3.16.2.14 Economic and Fiscal Effects

The preliminary capital cost for a maintenance facility is estimated to range from $116 to $333 million ($2010). Total direct, indirect, and induced jobs would create a demand for between 2,119 and 6,120 new workers during construction. The 116 to 335 direct jobs created is a very small proportion of the 2010 average annual employment in the regional construction sector. The demand for workers would be expected to be met by the available work force. The construction of the maintenance facility would involve expenditures for labor as well as materials and supplies. The construction of a maintenance facility is not anticipated to adversely affect the regional economy.

Again, it is expected that the construction labor force would be from the region. The magnitude of the construction project is relatively small, the construction duration is one to two years, and the regional construction work force is very large. State and local governments would theoretically benefit from income taxes paid on the project construction force wages. However, the magnitude of the construction activities associated with the site is relatively small compared to all construction activities in the region and the available construction work force. As such, it is not expected that the labor expenditures would result in substantial net new expenditures for construction labor in the region. Therefore, it is unlikely that state and local governments would actually benefit from increased income tax revenues.

The purchase of materials and supplies include routine construction purchases. They would include gravel, asphalt, concrete, architectural materials. Most of these materials

and supplies would be expected to be purchased within the region, if not a substantial portion in Los Angeles County. The purchase of these materials and supplies by the selected contractor would include the payment of sales tax, which would be revenue distributed to the state and local governments in the region. The amount of materials and supplies required for the maintenance facility, however, is relatively small compared to all construction projects that would be ongoing in the region. As such, it is unlikely that the State or local governments would see a substantial increase in sales tax revenues.

Construction activities would inconvenience and disturb area employees, business operations, and business customers. Temporary construction effects would include:

- Presence of construction workers, heavy construction equipment, and materials
- Increase in airborne dust
- Increase in noise and vibration from construction equipment and vehicles

These effects would occur during the short-term one to two year construction process and are not anticipated to adversely affect the regional economy.

3.16.2.15 Safety and Security

During the construction of the site, concrete barriers with fencing would be placed around the perimeter of the site to restrict access and eliminate the threat to safety and security of anyone not directly involved in construction activity. Security lighting could be used during the construction of a maintenance facility. Lighting would be focused on potential access points to the site to deter access. It is assumed that all additional related activity would be implemented in accordance with all federal and State requirements and permits during the construction process. Therefore, the construction of a maintenance facility would have no adverse effects related to safety and security.

3.16.2.16 Environmental Justice

The maintenance site alternatives are not located in areas with significant elderly or limited English Proficiency (LEP) populations. Two of the maintenance site alternatives are located in low-income areas (Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Alternatives), and three are located in minority areas (Site #14 – Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation and Division 22 Northern Expansion Alternatives). One of the goals of the light rail line is to provide transit to minority and low-income communities. The construction of a maintenance facility would temporarily affect the minority and low-income communities listed above. Construction would not result in the displacement of any residences. Access to surrounding businesses would be maintained throughout the duration of construction. Therefore, these effects would be temporary and not considered adverse.

3.16.3 Mitigation Measures

Mitigation measures are proposed for the maintenance site alternatives to avoid, minimize, and mitigate adverse effects that would occur during construction.

CON1 Visually obtrusive erosion control devices, such as silt fences, plastic ground cover, and straw bales shall be removed as soon as the area is stabilized.

CON2 Stockpile areas shall be located in less visibly sensitive areas and, whenever possible, not be visible from the road or to residents and businesses.

CON3 For security lighting during construction, lighting shall be aimed at the downward and away from residential and other sensitive uses adjacent the maintenance site alternatives, to the extent feasible.

CON4 Contractor shall maintain a clean and neat work environment at all times.

CON5 Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes.

CON6 Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday.

CON7 Contractors shall be required to utilize at least one of the measures set forth in SCAQMD Rule 403 section (d)(5) to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site.

CON8 All haul trucks hauling soil, sand, and other loose materials shall maintain at least 6 inches of freeboard in accordance with California Vehicle Code Section 23114.

CON9 All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).

CON10 Traffic speeds on unpaved roads shall be limited to 15 miles per hour (mph).

CON11 Operations on unpaved surfaces shall be suspended when winds exceed 25 mph.

CON12 Heavy equipment operations shall be suspended during first and second stage smog alerts.

CON13 On-site stockpiles of debris, dirt, or rusty materials shall be covered or watered at least two times per day.

CON14 Contractors shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications.

CON15 Contractors shall utilize electricity from power poles rather than temporary diesel or gasoline generators, as feasible.

CON16 Heavy-duty trucks shall be prohibited from idling in excess of five minutes, both on- and off-site.

CON17 Construction parking shall be configured to minimize traffic interference.

CON18 Construction activity that affects traffic flow on the arterial system shall be limited to off-peak hours, as feasible.

CON19 During project construction, remediation shall be required at maintenance facilities and vehicle storage areas, where a potential exists for grease and oil

contamination to flow into storm drains. Various types of ditch structures, including grease traps, sediment traps, detention basins, and/or temporary dikes shall be used to control possible pollutants. These facilities shall be constructed pursuant to guidance published in Section 402 of the CWA and shall follow the most current guidance within the NPDES program.

CON20 The maintenance site alternatives currently drain indirectly to Ballona Creek and Dominguez Channel through the MS4. Treatment control BMPs shall be incorporated into the project design. The project shall consider placing the treatment BMPs in series or in a complimentary system to increase the control of pollutants to the maximum extent practicable. The systems shall be designed to efficiently and effectively handle and treat dry and wet weather flows to the maximum extent practicable. A SUSMP and appropriate drainage control plan shall be implemented to select and place appropriate permanent treatment BMPs.

CON21 Nearby business owners and commercial property owners shall be notified of the schedule for specific planned construction activities, changes in traffic flow, and required short-term modifications to property access.

3.16.4 Impacts Remaining After Mitigation

With the implementation of Mitigation Measures **CON1** through **CON21**, the construction effects would be reduced to less than adverse for visual resources, water resources, historic, archaeological, paleontological resources, and fiscal and economic, resources. No adverse effects are anticipated to these resources. After implementation of mitigation, construction activity would remain adverse related to localized concentrations for Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Alternatives.

3.16.5 CEQA Determination

The CEQA Guidelines implicitly acknowledge that construction-related changes may be the source of significant impacts to the physical environment even though these effects may be short-term in duration. The preceding discussion has addressed all topic areas of environmental effects as required by CEQA except for air quality and noise, which use separate significance thresholds under CEQA than under NEPA. Typically significant construction effects are identified in CEQA as changes to the physical environment that are particularly disruptive or that have specific health and safety considerations. The construction effects identified above by in large require the development and implementation of a comprehensive array of construction management and abatement measures as described previously under the Mitigation Measures heading. Those environmental changes requiring mitigation would be considered significant for purposes of CEQA and include:

- Air Quality
- Noise and Vibration

3.16.5.1 Significance Criteria

3.16.5.2 Air Quality

Based on SCAQMD guidance, the maintenance site alternatives would have a significant impact if:

- Regional construction emissions were to exceed SCAQMD emissions thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10}, as presented in Table 3-45;
- Localized concentrations of CO exceed the one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm;
- Localized concentrations of NO_2 exceed the one-hour standard of 0.18 ppm;
- Localized concentrations of $PM_{2.5}$ or PM_{10} exceed 10.4 ug/m^3;
- The maintenance site alternatives would generate significant emissions of TACs; and/or
- The maintenance site alternatives would create an odor nuisance.

Table 3-45. SCAQMD Daily Construction Emissions Thresholds

Criteria Pollutant	Pounds Per Day
Volatile Organic Compounds (VOC)	75
Nitrogen Oxides (NO_X)	100
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150

Source: SCAQMD, 2010

Noise and Vibration

The prior NEPA analysis discusses construction equipment and associated noise levels. CEQA noise impacts are often based on the noise ordinance for the project locations. The maintenance site alternatives occur within four different jurisdictions. Because there is no threshold common to all of these jurisdictions, a widely-used, acceptable industry standard within the southern California region was used as a CEQA significance threshold. Based on this threshold, a significant construction noise impact would result if:

- The maintenance site alternatives cause the ambient noise level measured at the property line of the affected uses to increase by 3 decibels CNEL to or within the "normally unacceptable" or "clearly unacceptable" categories, as show in State Land Use Noise Compatibility Guidelines, or any 5-dBA or more increase in noise level.

The Cities of Los Angeles, Inglewood, Hawthorne, and Redondo Beach have not developed specific CEQA vibration significance thresholds for transportation projects. Therefore, refer to the previous NEPA analysis for a discussion of vibration effects.

3.16.5.3 Air Quality

Localized Concentrations

Table 3-46 shows the maximum off-site pollutant concentrations for the most impacted sensitive receptor under each of the alternatives. Localized particulate matter concentrations would exceed the SCAQMD standards under each of the alternatives and would result in a significant impact related to localized concentrations without mitigation.

Table 3-46. Localized Construction Concentrations - CEQA

Pollutant	Concentration	Standard/a/	Impact?
Site #14 – Arbor Vitae/Bellanca Alternative			
PM_{10} (µg/m^3)	177	10.4	Yes
$PM_{2.5}$ (µg/m^3)	38	10.4	Yes
CO – 1-Hour (ppm)	0.27	20	No
CO – 8-Hour (ppm)	0.1	9.0	No
NO_2 (ppm)	0.10	0.18	No
Site #15 – Manchester/Aviation Alternative			
PM_{10} (µg/m^3)	236	10.4	Yes
$PM_{2.5}$ (µg/m^3)	52	10.4	Yes
CO – 1-Hour (ppm)	0.9	20	No
CO – 8-Hour (ppm)	0.3	9.0	No
NO_2 (ppm)	0.02	0.18	No
Site # 17 –Marine/Redondo Beach Alternative			
PM_{10} (µg/m^3)	83	10.4	Yes
$PM_{2.5}$ (µg/m^3)	18	10.4	Yes
CO – 1-Hour (ppm)	0.23	20	No
CO – 8-Hour (ppm)	0.1	9.0	No
NO_2 (ppm)	0.04	0.18	No
Division 22 Northern Expansion Alternative			
PM_{10} (µg/m^3)	115	10.4	Yes
$PM_{2.5}$ (µg/m^3)	27	10.4	Yes
CO – 1-Hour (ppm)	0.10	20	No
CO – 8-Hour (ppm)	0.1	9.0	No
NO_2 (ppm)	0.02	0.18	No

/a/Threshold established by the South Coast Air Quality Management District.
Air Quality calculations are provided in Appendix C of this report
Source: TAHA, 2010.

3.16.5.4 Noise and Vibration

The noise level during the construction period at each receptor location was calculated by (1) making a distance adjustment to the construction source sound level and (2) logarithmically adding the adjusted construction noise source level to the ambient noise

level. Vibration levels are also provided in the guidance document, and were estimated using a similar methodology.

Site #14 – Arbor Vitae/Bellanca Alternative

Table 3-47 shows the construction noise levels associated with the Site #14 - Arbor Vitae/Bellanca Alternative. Construction activity would exceed the 5-dBA significance threshold at multiple sensitive receptors. Therefore, construction activity would result in a significant impact related to noise without mitigation.

Table 3-47. Construction Noise Levels – Site #14 – Arbor Vitae/Bellanca Alternative

Receptor	Distance to Source (Feet)	Existing Noise Level (dBA, Leq)	Project Noise Level (dBA, Leq)	Noise Exposure (dBA, Leq)	Increase	Impact?
Residential – North	280	65.2	69.0	70.5	5.3	Yes
Residential – East	350	68.8	72.1	73.8	5.0	Yes
Residential - West	375	57.9	71.5	71.7	13.8	Yes
Bright Star School	600	55.0	57.4	59.4	4.4	No
Animo School	750	68.8	65.5	70.5	1.7	No
Residential – South	850	57.9	54.4	59.5	1.6	No

Source: TAHA, 2010.

Site #15 – Manchester/Aviation Alternative

Table 3-48 shows the construction noise levels associated with the Site #15 – Manchester/Aviation Alternative. Construction activity would exceed the 5-dBA significance threshold at multiple sensitive receptors. Therefore, construction activity would result in a significant impact related to noise without mitigation.

Table 3-48. Construction Noise Levels – Site #15 – Manchester/Aviation Alternative

Receptor	Distance to Source (Feet)	Existing Noise Level (dBA, Leq)	Project Noise Level (dBA, Leq)	Noise Exposure (dBA, Leq)	Increase	Impact?
Animo School	250	68.8	75.0	76.0	7.2	Yes
Residential - Southeast	450	68.8	73.7	72.4	3.6	No
Residential - West	750	65.2	60.5	66.5	1.3	No
Residential – Northwest	1,000	64.8	58.0	65.6	0.8	No

Source: TAHA, 2010.

Site #15 – Manchester/Aviation Alternative

Table 3-49 shows the construction noise levels associated with the Site #15 - Manchester/Aviation Alternative. Construction activity would exceed the 5-dBA significance threshold at multiple sensitive receptors. Therefore, construction activity would result in a significant impact related to noise without mitigation.

Table 3-49. Construction Noise Levels – Site #17 – Marine/Redondo Beach Alternative

Receptor	Distance to Source (Feet)	Existing Noise Level (dBA, Leq)	Project Noise Level (dBA, Leq)	Noise Exposure (dBA, Leq)	Increase	Impact?
Lawndale High School	1,000	66.1	53.0	66.3	0.2	No
Residential – East	1,200	66.0	51.4	66.1	0.1	No
Residential – South	1,400	66.3	50.1	66.4	0.1	No

Source: TAHA, 2010.

Division 22 Northern Expansion Alternative

Table 3-50 shows the construction noise levels associated with the Division 22 Northern Expansion Alternative. Construction activity would exceed the 5-dBA significance threshold at multiple sensitive receptors. Therefore, construction activity would result in a significant impact related to noise without mitigation.

Table 3-50. Construction Noise Levels – Division 22 Northern Expansion Alternative

Receptor	Distance to Source (Feet)	Existing Noise Level (dBA, Leq)	Project Noise Level (dBA, Leq)	Noise Exposure (dBA, Leq)	Increase	Impact?
Residential - South	150	58.7	74.5	74.6	15.9	Yes
Residential - North	800	66.0	49.9	66.1	0.1	No
Residential - Southwest	1,000	66.0	53.0	66.2	0.2	No

Source: TAHA, 2010.

3.16.5.5 Additional Mitigation Measures

The following mitigation measures are applicable to the Sites #14 - Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives.

CON22 Architectural coatings shall be purchased from a compliant architectural coating manufacturer as identified by the SCAQMD.

Division 22 Northern Expansion and Sites #14, #15, and #17

CON23 Contractors shall comply with SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). The requirements for demolition activities include asbestos surveying, notification, Asbestos-containing materials (ACM) removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials.

The following mitigation measures are applicable to the Sites #14 - Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Division 22 Northern Expansion Alternatives.

CON24 Noise barriers (e.g., sound attenuation blankets or solid walls) shall be placed such that the line-of-sight is blocked between sensitive receptors (e.g., residential and institutional land uses) and the project site, as feasible.

CON25 During the early stages of construction plan development, natural and artificial barriers, such as ground elevation changes and existing buildings, shall be considered for use as shielding against construction noise.

CON26 The contractor shall comply with Standard Specification 1565, FTA noise criteria and all local sound control and noise level rules, regulations, and ordinances that apply to any work performed pursuant to the contract. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated without a muffler.

CON27 Grading and construction contractors shall use quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than metal-tracked equipment) as much as possible.

CON28 The contractor shall submit a noise plan for construction activity associated with the Division 22 Northern Expansion and Site #14 – Arbor Vitae/Bellanca Alternatives. The plan shall be prepared by a qualified acoustical engineer and should be approved by the resident engineer before construction is initiated. The noise control plan shall include an inventory of the equipment, the estimated noise level at 50 feet for each major piece of equipment, calculations of the noise levels at impacted sensitive receptors, and noise reduction measures for sensitive receptor locations where the predicted noise levels exceed the ambient noise level by 5 dBA. Impacted receptors include, but may not be limited to, adjacent residences to the south of the Division 22 Northern Expansion Alternative and residences to the west of the Site #14 – Arbor Vitae/Bellanca Alternative.

3.16.6 Impacts Remaining After Mitigation

Mitigation Measures **CON5** through **CON13** would ensure compliance with Rule 403. Mitigation Measures **CON14** through **CON18**, although difficult to quantify, would also control construction emissions. Mitigation Measure **CON22** would reduce architectural coating emissions by 96 percent and Mitigation Measure **CON23** would control asbestos exposure. The mitigation measures would not reduce fugitive dust emissions beyond the 61 percent achieved with SCAQMD Rule 403 compliance. VOC emissions under construction activity for Sites #14, #15, and #17 would be reduced to 16 pounds per day, which is less than the 75 pounds per day regional significance threshold. Regional construction emissions would still result in a regional PM_{10} impact at Sites #14, #15, and #17.

Localized particulate matter concentrations would still exceed the SCAQMD particulate matter thresholds under each alternative. Therefore, construction activity would result in a significant and unavoidable adverse impact related to localized concentrations.

Mitigation Measure **CON24** would reduce construction noise levels by at least 5 dBA at sensitive receptors. While difficult to quantify, Mitigation Measures **CON25** through **CON28** would also reduce construction noise levels. The mitigation measures would eliminate the impacts associated with Site #15 – Manchester/Aviation Alternative.

However, construction noise level associated with the Division 22 Northern Expansion Alternative and Site #14 – Arbor Vitae/Bellanca Alternative would still be significant. Therefore, construction activity would result in a significant and unavoidable adverse impact related to noise.

3.17 Growth-Inducing Impacts

3.17.1 Existing Conditions/Affected Environment

The maintenance site alternatives are all located in the vicinity of LAX, and have been designated for industrial use. The existing area contains a fully developed network of roads and highways, and all areas are within serviced by utilities and infrastructure.

3.17.2 Environmental Impacts/Environmental Consequences

3.17.2.1 Direct Impacts

The maintenance site alternatives are all within a densely developed urban setting and would not extend into previously undeveloped areas that may induce changes in such areas. The operation of a maintenance facility on this site would not create housing or a change in population. The industrial-designated areas surrounding the airport are located in fully developed areas with extensive infrastructure, including roads, highways and utilities. The land required for the operation of a maintenance facility would not create the opportunity for additional growth or development. Therefore, no adverse growth inducing effects with occur for any of the maintenance site alternatives.

3.17.2.2 Indirect Impacts

None of the maintenance site alternatives would remove a barrier to growth or otherwise create the opportunity for significant indirect growth. Therefore, no adverse indirect impacts are anticipated related to growth inducement.

3.17.3 Mitigation Measures

No mitigation measures are required.

3.17.4 CEQA Determination

According to CEQA, growth inducing impacts would be considered significant if the maintenance site alternatives have the potential to induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). The maintenance site alternatives would be located within a densely developed urban setting and would not extend into previously undeveloped areas that may induce changes in such areas. No direct or indirect growth-inducing impacts are anticipated for the maintenance site alternatives.

3.18 Cumulative Impacts

"Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects, whereas the cumulative impact is the change in the environment from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.

An adequate discussion of significant cumulative impacts involves analyzing either (1) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency", or (2) "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact."

This cumulative impact analysis relies on method (2) described above. This cumulative impact analysis incorporates the regional projections from the RTP. The maintenance site alternatives are within two of the 14 Subregions in SCAG's planning area that consist of the City of Los Angeles and the South Bay Cities Council of Governments subregions. The RTP reflects transportation, population, employment, and land use data for the six-county SCAG area through the year 2035, and is, thus, an appropriate basis for the analysis of cumulative impacts.

The region wide impact analysis conducted in the RTP Program Environmental Impact Report (PEIR) (SCH No. 2007061126, May 2008), serves as the basis for this analysis of cumulative impacts, per Section 15150 of the CEQA guidelines. SCAG states that lead agencies, such as the Los Angeles County Metropolitan Transportation Authority (Metro), may use the region-wide impact analysis contained in the RTP PEIR as the basis of their cumulative impact analysis. The RTP PEIR contains a thorough analysis of environmental impacts resulting from implementation of various transportation projects throughout SCAG's six county region that encompasses approximately 38,000 square miles. Therefore, the RTP PEIR is used as the basis of this cumulative impact analysis and is hereby incorporated by reference per Section 15150 of CEQA guidelines. The SCAG RTP PEIR found that there would be significant cumulative impacts in the following areas:

- Traffic, Circulation, and Parking
- Land Use and Development
- Open Space
- Public Services and Utilities
- Visual and Aesthetic
- Population, Housing, and Employment
- Historic, Archaeological and Paleontological
- Water Resources
- Energy
- Noise and Vibration
- Air Quality
- Ecosystems/Biological Resources
- Geotechnical/Subsurface/Seismic
- Hazards and Hazardous Materials

3.18.1 Impact Assessment

The SCAG RTP PEIR found that there would be significant cumulative impacts region wide in a multitude of environmental areas, as summarized above. The cumulative effects of the transit project have been disclosed in the Crenshaw Transit Corridor DEIS/DEIR circulated in the Fall of 2009. This supplement addresses four maintenance site alternatives for this maintenance facility and whether the maintenance site alternatives would add a cumulatively considerable contribution to the surrounding region. All of the candidate sites are within the general vicinity of LAX. The greatest impetus for change within the area is the implementation of the LAX Facilities Master Plan that encompasses areas beyond the specific limits of airport property, but includes properties owned by LAWA.

The actual timing of the implementation of the *LAX Master Plan* is uncertain, as LAWA is currently considering revisions to the Master Plan in an Amendment study. It reasonably foreseeable, as a worst case scenario, that the construction of the maintenance facility in 2018 could occur simultaneously with other *LAX Master Plan* improvements. As such, there could be traffic disruptions from construction associated with detours and land closures for streets and arterials within the LAX vicinity. These effects would be considered cumulative impacts.

When compared to the current *LAX Master Plan*, the Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Alternatives would be located north of the area proposed for LAX Consolidated Rental Car Facility, as well as north of the proposed LAX Ground Transportation Center. The Site #17 Marine/Redondo Beach and Division 22 Northern Expansion Alternatives would be located south of the proposed LAX facilities.

In the event that all proposed LAX facilities would be constructed in the same time frame as the maintenance facility, there would be cumulative air emissions from construction equipment, as well as traffic disruption from haul trucks, detours and lane closures. Over the long term , the *LAX Master Plan* Final EIS/EIR has disclosed the changes that would occur in the area encompassing the effects of air traffic growth to approximately 98,000,000 annual passengers as well as the creation of ancillary facilities for LAX.[7] Key changes to the surrounding area disclosed in the *LAX Master Plan* Final EIS/EIR include:

- The intensification of development in the area with expansion of the airport property and subsequent land use impacts due largely to incompatible land use from aircraft noise;
- Office, retail, hotel and light industrial space would need to be relocated to off-airport areas. There may be increased demand for cargo-related space in the surrounding area, thereby increasing competition with displaced uses for the limited supply of light industrial space. Consequently, the ability for displaced airport-dependent businesses to find suitable relocation sites in proximity to LAX may be constrained. Acquired air-freight businesses would have limited readily available relocation sites and therefore may incur operational and/or financial hardships as a result of relocation to locations far-removed from the airport;

[7]Los Angeles World Airports. *LAX Master Plan Final EIR*. April 2004.

- Cumulative impacts to air quality, including GHG emissions, may occur as operational and construction emissions in conjunction with emission from past, present and foreseeable future development projects in the vicinity would be significant;
- Impacts to water quality may result as increased surface water runoff and peak flows in conjunction with runoff and peak flows from past, present and foreseeable future projects in the vicinity may not be accommodated by the regional drainage infrastructure. Airport related development would directly increase water demand and wastewater production in the region
- Energy – demand for electricity, natural gas and transportation-related fuels would increase due to new development within Master Plan boundaries, increases in passenger activity, aircraft operations and development of LAX Northside

It is not anticipated that the contribution of impacts from any of the maintenance site alternatives would be cumulatively considerable due to low intensity use, small peak hour trip generation, and the industrial character of the use.

3.19 Environmental Justice

3.19.1 Affected Environment/Existing Conditions

The United States Department of Transportation Order 5610.2 and subsequent agency guidance defines the following groups in Title IV of the Civil Rights Act of 1964 to be considered "minorities":

- Black
- Hispanic
- Asian
- American Indian
- Native Hawaiian or other Pacific Islander

The United States Department of Transportation Order 5610.2 uses the following definition given in Title IV of the Civil Rights Act of 1964 to define "low-income":

Low-income a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines.

The HHS poverty guidelines are simplifications of the poverty thresholds as established annually by the U.S. Census Bureau that are used for administrative purposes. The U.S. Census Bureau poverty thresholds are used primarily in statistical analyses and will be used in this environmental justice analysis as the basis for determining low-income and poverty characteristics.

The Department of Human Health Services uses the following thresholds to determine poverty (Table 3-51).

Table 3-51. 2000 U.S. Census Poverty Thresholds

Household Size	Income Threshold
One-Person	$8,794.00
Two-Person	$11,239.00
Three-Person	$13,738.00
Four-Person	$17,603.00
Five-Person	$20,819.00
Six-Person	$23,528.00

Source: U.S. Census Bureau, Housing and Household Economic Statistics Division, 2000.

3.19.1.1 Regional Demographic and Socioeconomic Existing Settings

The four maintenance site alternatives are located in Los Angeles County: The Site # 14 - Arbor Vitae/Bellanca Alternative is located in the City of Los Angeles; the Site #15 – Manchester/Aviation Alternative is located in the City of Inglewood; the Site #17 – Marine/Redondo Beach Alternative is located in the City of Redondo Beach; and the

Division 22 Northern Expansion Alternative is located in the City of Hawthorne. The following sections present the existing demographic and socioeconomic characteristics of the region and of the Census tract block groups wherein the maintenance facility are located. Any analysis of potential disproportionate adverse effects on individuals should be conducted with relatively current data. The most current and comprehensive data available for small subareas such as Census tract block groups is from the 2000 U.S. Census. For consistency, the data for all the larger geographies discussed in this report is from the 2000 U.S. Census. The Census data was compared with socioeconomic data from surrounding schools to ensure that the compositions within the census block groups have not significantly changed from 2000 to 2010. The school data showed that these neighborhoods were relatively stable over this time period. Based on this data, minority populations have increased slightly (5 percent) near the Site #17 – Marine Redondo Beach Alternative. The demographic and socioeconomic characteristics for the applicable jurisdictions are shown in Table 3-52.

Table 3-52. Summary of Regional Demographic and Socioeconomic Characteristics

Characteristic	Los Angeles County	City of Los Angeles	City of Inglewood	City of Hawthorne	City of Redondo Beach
Total Population (persons)	9,519,338	3,694,820	112,580	83,963	63,261
Total Housing Units	3,270,909	1,337,706	38,648	29,574	29,543
Percent Minority	69%	71%	96%	43%	16%
Percent population low-income /a/	18%	22%	23%	20%	6%
Median Household income (1999 dollars)	$42,189	$39,942	$34,269	$31,887	$69,173
Percent of Population over 65 years of Age	10%	10%	7%	6%	8%
Percent Limited English Proficiency	16%	18%	27%	13%	3%

/a/ Percent population low-income is population that is below the poverty level defined in Table 3-51.
Source: U.S. Census Bureau, 2000.

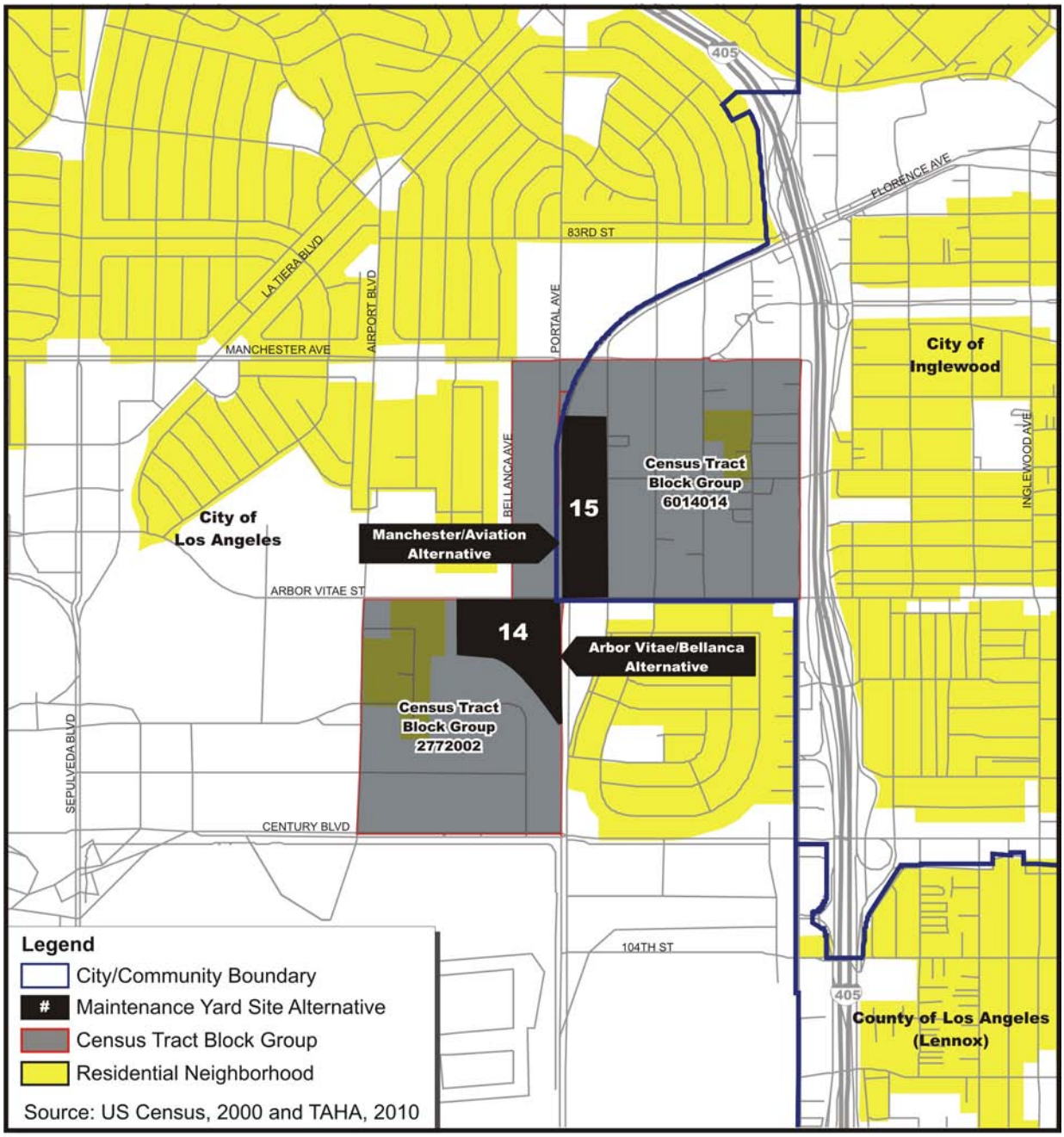
3.19.1.2 Site-Specific Demographic and Socioeconomic Existing Settings

The maintenance site alternatives are located within four Census tract block groups:

- Site #14 – Arbor Vitae/Bellanca is located in Census tract block group 2772002
- Site #15 – Manchester/Aviation is located in Census tract block group 6014014
- Site #17 –Marine/Redondo Beach is located in Census tract block group 6205011
- Division 22 Northern Expansion is located in Census tract block group 6023023

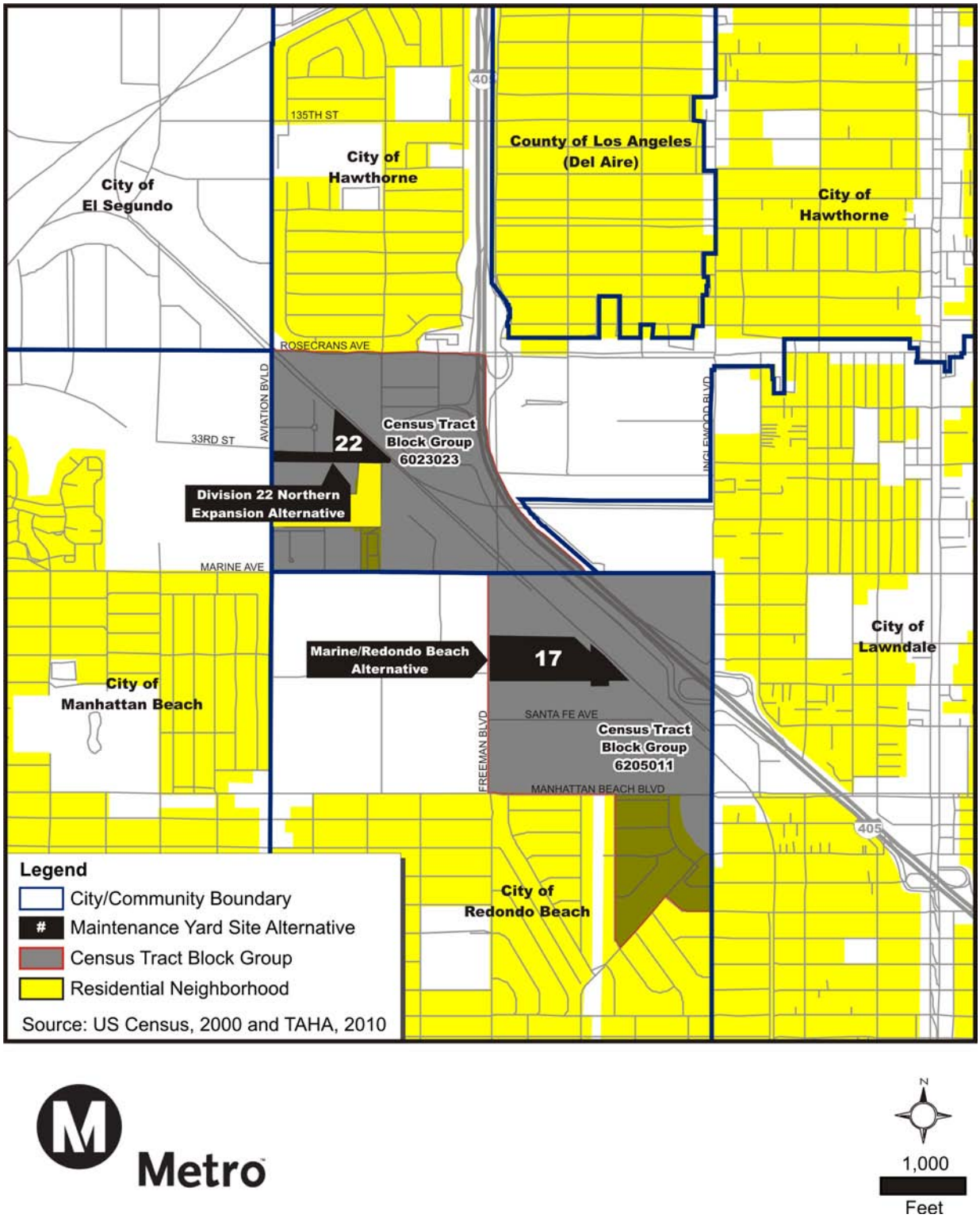
Figure 3-42 and Figure 3-43 show the outline of these Census tract block groups and the residential communities located within them. The demographic and socioeconomic characteristics for each of the maintenance site alternatives are detailed below. Since the minority population of Los Angeles is 69 percent, a minority threshold of 69 percent was chosen to determine whether the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population (Executive Order 12898).

Figure 3-42. Census Track Block Groups and Residential Communities – Sites #14 and #15



Source: US Census 2000.

Figure 3-43. Census Track Block Groups and Residential Communities – Sites #17 and D22N



Source: US Census 2000.

3.19.1.3 Demographic Characteristics

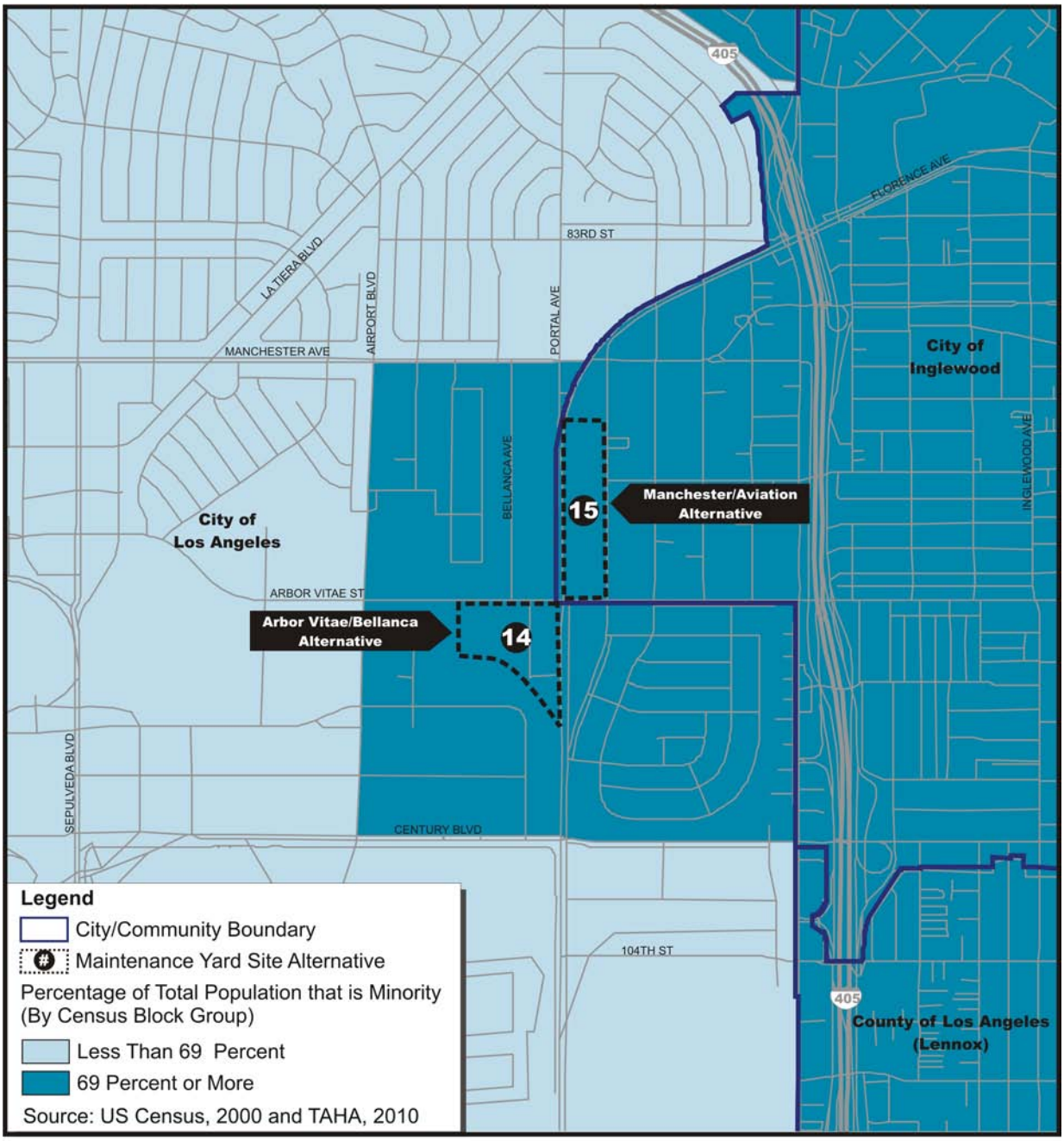
The demographic characteristics of the maintenance site alternatives are summarized in Table 3-53 and shown in Figure 3-45 and Figure 3-45. According to the 2000 U.S. Census, the percent of the population within the four Census Tract Block Groups that is minority ranges from 33 percent (Site #17 in Redondo Beach) to 84 percent (Site #15 in Inglewood). The minority group with the largest representation varied by Census tract block group, with Sites #14 and #17 being largely Hispanic, Site #15 being largely Black or African American, and Division 22 Northern Expansion being largely Other Races. Maintenance Sites #14 – Arbor Vitae/Bellanca, #15 – Manchester/Aviation, and Division 22 Northern Expansion Alternatives are all in areas above the 69 percent threshold. Although the Site #17 – Marine/Redondo Beach Alternative is below the 69 percent threshold (33 percent), it has a significantly higher percentage of minorities than the City of Redondo Beach (15 percent).

Table 3-53. Demographic Characteristics of Maintenance Site Alternatives

Maintenance Site (Census Tract Block Group/ Jurisdiction)	Race/Ethnicity in Census Tract/Project Area (Persons)					
	White	Black or African American	Asian	Other Race	Hispanic or Latino	Total Minority
Maintenance Site #14 (2772002/Los Angeles)	259	298	102	141	721	**1,521**
	17%	20%	7%	9%	47%	
Percent of Census Tract Population that is Minority						**83%**
Maintenance Site #15 (6014014/Inglewood)	47	170	0	11	63	**291**
	16%	58%	0%	4%	22%	
Percent of Census Tract Population that is Minority						**84%**
Maintenance Site #17 (6205011/Redondo Beach)	218	0	22	11	74	**325**
	67%	0%	7%	3%	23%	
Percent of Census Tract Population that is Minority						**33%**
Maintenance Site D22N (6023023/Hawthorne)	25	14	13	28	20	**100**
	25%	14%	13%	28%	20%	
Percent of Census Tract Population that is Minority						**75%**

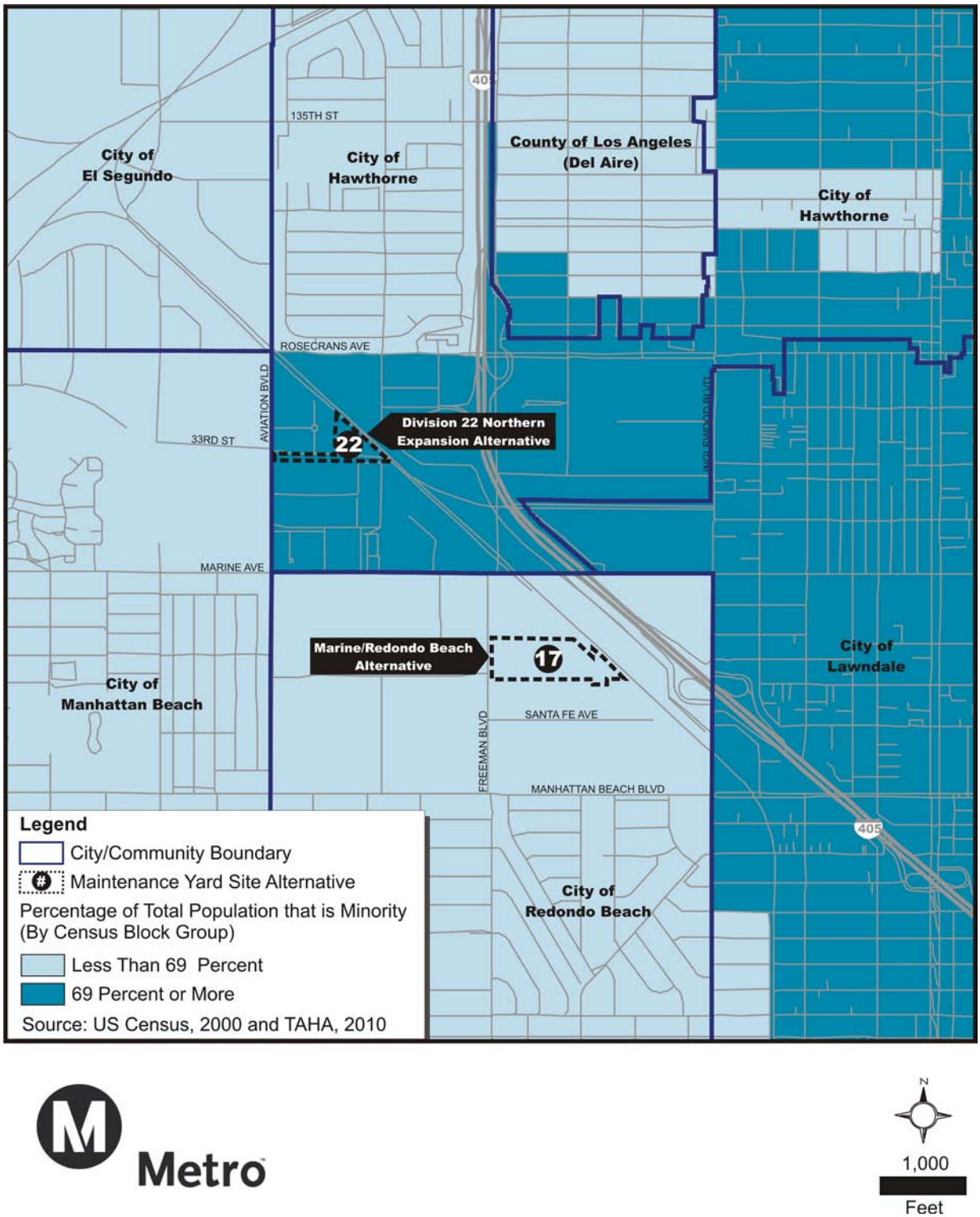
Source: U.S. Census Bureau, 2000.

Figure 3-44. Demographic Distribution – Sites #14 and #15



Source: US Census 2000.

Figure 3-45. Demographic Distribution – Sites #17 and D22N



Source: US Census 2000.

3.19.1.4 Socioeconomic Characteristics

The socioeconomic characteristics of the Census Tract Block Groups associated with the maintenance site alternatives are summarized in Table 3-54 and shown in Figure 3-46 and Figure 3-47.

Table 3-54. Socioeconomic Characteristics of Maintenance Site Alternatives

Maintenance Site (Census Tract Block Group/ Jurisdiction)	Total Number of Housing Units	Median Household Income	Percentage Population Living Below Poverty Level /a/	Percent of Total Population that is Transit-Dependent
Maintenance Site #14 (2772002/Los Angeles)	538	$33,657	21%	15%
Maintenance Site #15 (6014014/Inglewood)	24	$6,250	57%	0%
Maintenance Site #17 (6205011/Redondo Beach)	116	$67,344	0%	0%
Maintenance Site D22N (6023023/Hawthorne)	39	$79,165	0%	0%

/a/ Poverty status is based on thresholds defined in 3-51.
Source: U.S. Census Bureau, 2000.

3.19.1.5 Elderly Population

The age characteristics of the Census Tract Block Group associated with the maintenance site alternatives are summarized in Table 3-55 and shown in Figure 3-48 and Figure 3-49.

Table 3-55. Age Characteristics of Maintenance Site Alternatives

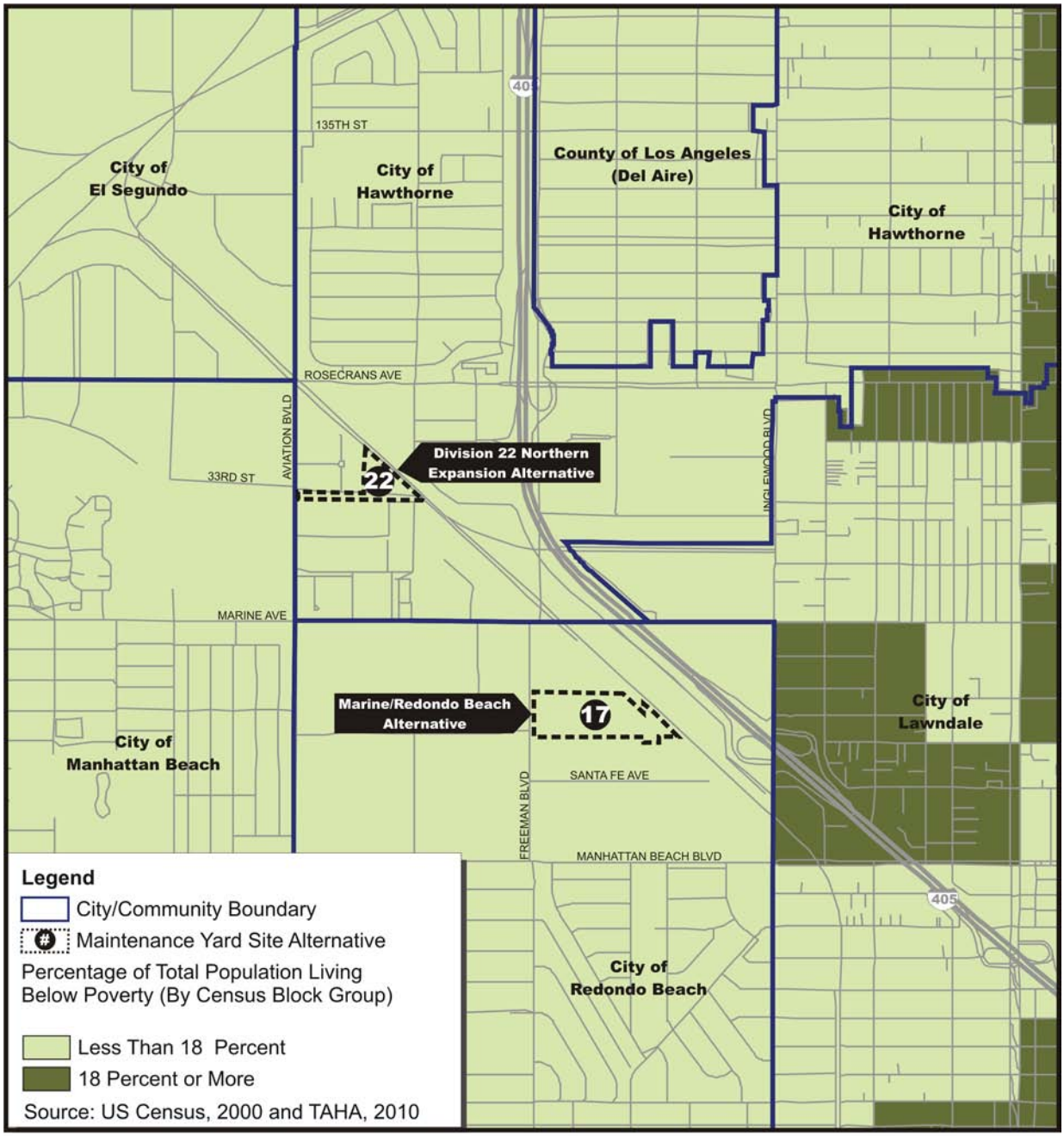
Maintenance Site (Census Tract Block Group/ Jurisdiction)	Ages 0-17		Ages 18-64		Ages 65 and Over	
	Persons	% of Total Population	Persons	% of Total Population	Persons	% of Total Population
Site #14 (2772002/Los Angeles)	443	29%	1054	69%	24	2%
Site #15 (6014014/Inglewood)	13	4%	272	93%	6	2%
Site #17 (6205011/Redondo Beach)	113	35%	206	63%	6	2%
D22N (6023023/Hawthorne)	35	35%	65	65%	0	0%

Source: U.S. Census Bureau, 2000.

Figure 3-46. Poverty Distribution – Sites #14 and #15

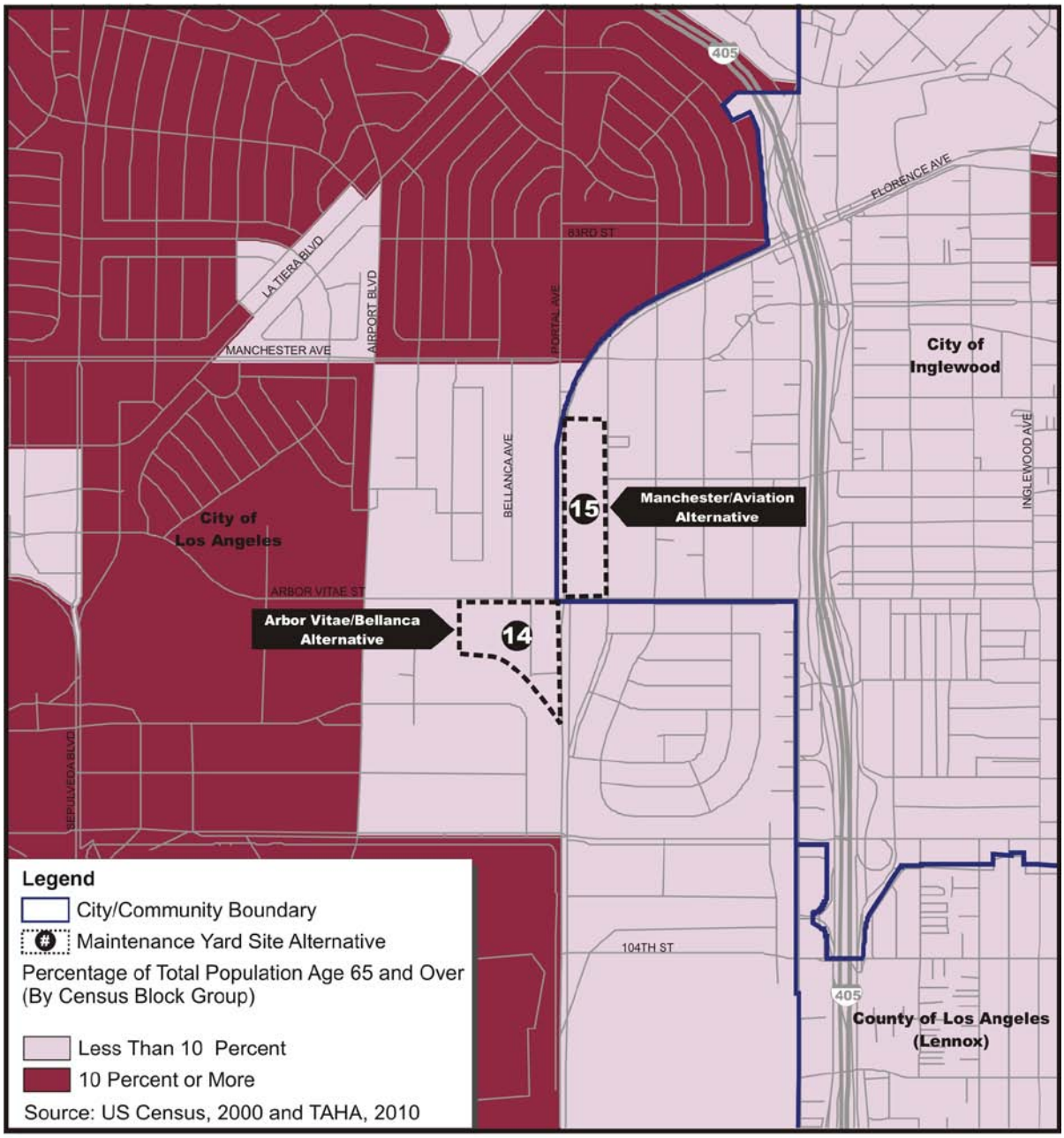
Source: US Census 2000.

Figure 3-47. Poverty Distribution –Sites #17 and D22N



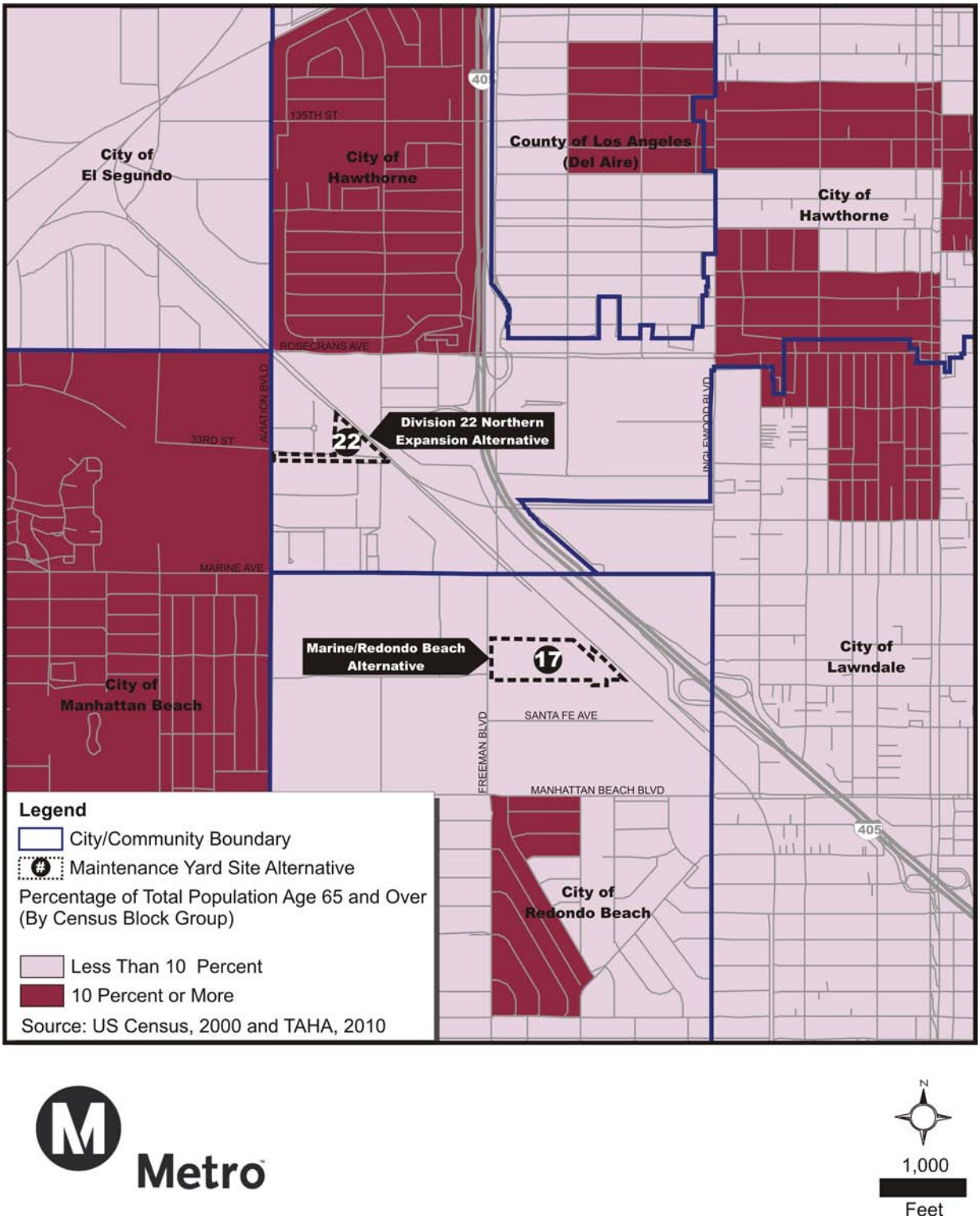
Source: US Census 2000.

Figure 3-48. Elderly Population Distribution – Sites #14 and #15



Source: US Census 2000.

Figure 3-49. Elderly Population Distribution – Sites #17 and D22N



Source: US Census 2000.

3.19.1.6 Limited English Proficiency Population

The limited English-proficiency (LEP) characteristics of the Census Tract Block Groups associated with the maintenance site alternatives are summarized in Table 3-56.

Table 3-56. LEP Characteristics of Maintenance Site Alternatives

Maintenance Site (Census Tract Block Group/ Jurisdiction)	Not Linguistically Isolated		Linguistically Isolated							
			Spanish		Asian		Other Languages		Total	
	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%
Maintenance Site #14 (2772002/Los Angeles)	1,230	87%	141	10%	17	1%	33	2%	191	13%
Maintenance Site #15 (6014014/Inglewood)	286	97%	8	3%	0	0%	0	0%	8	3%
Maintenance Site #17 (6205011/Redondo Beach)	304	98%	6	2%	0	0%	0	0%	6	2%
Maintenance Site D22N (6023023/Hawthorne)	90	100%	0	0%	0	0%	0	0%	0	0%

Source: U.S. Census Bureau, 2000.

The percentage of LEP population of the four Census tract block groups associated with the four maintenance site alternatives ranges between zero and 13 percent. None of the Census tract block groups associated with the maintenance site alternatives has a significant LEP population compared to the County of Los Angeles LEP population percentage (16 percent).

3.19.2 Public Participation

3.19.2.1 Presentation of Potential Sites

The supplemental analysis for the Crenshaw/LAX Light Rail Transit Corridor maintenance facility was initiated at a public workshop on February 24, 2010. Spanish translation services were available but not required. Approximately 3,060 flyers were distributed to notice this workshop, as well as e-mail blasts to stakeholders. Flyers were distributed to elected officials, agencies, local jurisdictions, community organizations, churches, and schools. At the end of March 2010, four additional public workshops were held to display the 16 initial sites that the public had identified at the February public workshop, as well as the criteria that would be used to screen the potential sites (in which the public also had previous input in the selection process). Approximately 15,080 flyers were distributed to notice these workshops. Similarly, flyers included community organizations, churches, and schools.

The format of the public workshops allowed attendees the opportunity to review Project information prior to the start of the presentation. Project team members were present at the display boards to address public questions and/or comments related to the Project. Spanish translators were made available, as appropriate. Following the open house period, a presentation was made to provide attendees with information regarding the purpose of the workshops, and to provide a presentation of the maintenance site alternatives. No formal

comment period followed. Instead, attendees were encouraged to interact with staff to present their views and comments.

In addition to the foregoing outreach, Metro contacted all potentially affected major property owners and tenants in an effort to disclose information about the maintenance site alternatives and the evaluation process. Metro conducted briefings and presentations with more than 40 potentially affected owners and tenants. Typically, the briefing included an overview of the Project and the process for selecting a maintenance facility, which included the timeline involved, and how any potential real estate acquisitions would occur. Owners and tenants were also asked to contribute any information about their property or business, which could help characterize the extent of the potential displacement and relocation efforts.

3.19.2.2 Public Comments Related to Environmental Justice

No specific comments regarding environmental justice were received during the public workshops. Although the required screening process of alternatives primarily takes into account environmental, engineering, and technical considerations, it also takes into account the comments and input from the public at these meetings. The public expressed a general interest in keeping the maintenance facility away from residential neighborhoods and commercial areas. They also preferred vacant or underutilized land as the best location for a facility. As a result, several alternatives were eliminated that could have had adverse and disproportionately adverse impacts on minority and low-income populations.

3.19.3 Environmental Impacts/Environmental Consequences

3.19.3.1 Effects on Populations of Environmental Justice Concern

Table 3-57 summarizes the populations of environmental justice concern that are located in the Census tract block groups where the maintenance site alternatives are located.

Table 3-57. Summary of EJ Communities in Maintenance Alternative Site Census Block Groups Compared to Los Angeles County Percentages

Maintenance Site (Census Tract Block Group/ Jurisdiction)	Compared to Los Angeles County			
	Predominately Minority (Over 69%)	Predominately Low-Income (Over 18%)	Predominately Elderly (Over 10%)	Predominately LEP (Over 16%)
Site #14 (2772002/Los Angeles)	Yes (83%)	Yes (21%)	No (2%)	No (13%)
Site #15 (6014014/Inglewood)	Yes (84%)	Yes (57%)	No (2%)	No (3%)
Site #17 (6205011/Redondo Beach)	No (33%)	No (0)	No (2%)	No (2%)
D22N (6023023/Hawthorne)	Yes (75%)	No (0)	No (0)	No (0)

Source: U.S. Census Bureau, 2000.

Minority Populations. One of the goals of the light rail line is to provide transit to minority communities. Elements of the light rail line, such as the operation of a maintenance facility would affect these minority communities for the Site #14 – Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation and Division 22 Northern Expansion

Alternatives. The Site #17 – Redondo Beach/Marine Alternative is not located in a minority community and would not affect any adjacent residential areas.

Low-Income Populations. One of the goals of the light rail line is to provide transit to low-income communities. Elements of the light rail line, such as the operation of a maintenance facility would affect these low-income communities for the Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Alternatives. The Site #17 – Redondo Beach/Marine and Division 22 Northern Expansion Alternatives are not located in low-income communities and would not affect low-income areas.

Elderly Populations. There are no predominantly elderly populations located near the maintenance facility site alternatives. The operation of a maintenance facility on any of the maintenance site alternatives would not adversely affect elderly communities.

LEP Populations. None of the four maintenance site alternatives are located in Census tract block groups that have a large percentage of LEP population when compared to the Los Angeles County minority percentage, 16 percent. Despite this, outreach has targeted Spanish speakers in the area to allow comprehensive public participation of residents nearby the maintenance site alternatives. In addition, none of the maintenance site alternatives would displace services that cater to LEP populations. The operation of a maintenance facility on any of the maintenance site alternatives would not adversely affect LEP communities.

3.19.3.2 Indirect Impacts

The construction of the maintenance site alternatives could have the potential to reduce access to local businesses adjacent to the proposed sites. Some of these local businesses may be minority-owned. These businesses may also see an increase in sales due to the jobs generated during construction. In order to minimize potential loss of revenue due to restricted access or visibility of a business in a predominately minority area, Mitigation Measure **CON20** is included. Upon implementation of this mitigation measure, no indirect disproportionate adverse impacts associated with environmental justice are anticipated during construction of any maintenance site alternatives.

3.19.4 Measures to Minimize Harm

None required.

3.19.5 CEQA Determination

CEQA does not have any thresholds of significance specific to environmental justice. Based on the only CEQA thresholds specifically applicable to low-income communities, none of the site alternatives would displace affordable housing necessitating the construction of replacement housing elsewhere. No significant impacts are anticipated under any of the site alternatives and, therefore, no mitigation measures are required under CEQA.

3.20 Additional Federal Requirements and NEPA Considerations

3.20.1 Affected Environment/Existing Conditions

Refer to Sections 3.1 through 3.19 for a description of existing conditions for the maintenance site alternatives.

3.20.2 Environmental Impacts/Environmental Consequences

3.20.2.1 Short Term Uses vs Long Term Productivity

NEPA requires analysis of the relationship between a project's short-term impacts on the environment and the effects those impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. The maintenance site alternatives would result in both short- and long-term environmental effects, however, they would provide valuable infrastructure to the regional transit system and are not expected to alter long-term productivity or result in inefficient use of designated land, or pose long-term risks to public health and safety. The alternative site locations are in an already highly urbanized area and consist primarily of commercial and industrial uses. A maintenance facility would be consistent with the existing uses and related productivity of the sites. The short-term impacts of the Project would be primarily localized, construction related impacts. Short-term economic and displacement impacts would result at all of the maintenance site alternatives, as tenants and businesses on these sites would require relocation. Although this represents an impact to the affected environment, it is not one that would have an effect on the long-term productivity of the affected environment. The maintenance facility will be a beneficial long-term public use, as it will enhance the public transportation system in the area, thereby reducing the dependency on personal vehicles for transportation.

3.20.2.2 Irreversible and Irretrievable Resources

The maintenance facility would require the commitment of irreversible and irretrievable resources. Irreversible resources would occur from the use of land, fill and gravel resources, electrical energy, fuel, and labor. The commitment of energy and labor for construction is considered irretrievable and irreversible. These resources are not in short supply, and resource use would not have an adverse effect on continued availability of these resources. Construction of the maintenance site alternatives would require an expenditure of both State and/or federal funds, which are not retrievable. The land acquired for the maintenance site alternatives would be considered an irreversible commitment of resources. However, the land required for the maintenance facility represents a small portion of land in the surrounding region and is consistent with the industrial uses in the area. The commitment of these non-renewable resources is based on the premise that area residents would benefit from the improved quality of the transportation system, which would result in a reduction of VMT. The commitment of these resources would not be adverse.

3.20.3 Mitigation Measures

None required.

3.21 Significant and Irreversible Changes and Unavoidable Significant Impacts

3.21.1 Significant and Irreversible Changes

Section 15126(c) of the CEQA Guidelines requires that an EIR describe any significant irreversible environmental changes that would be caused by the maintenance site alternatives should they be implemented. In the case of the maintenance site alternatives, implementation would convert the existing primarily industrial land to public transit infrastructure for a maintenance facility. No additional access to a previously inaccessible area would occur. Implementation of the Project would allow construction activities that would entail the commitment of nonrenewable and/or slowly renewable energy resources, human resources, and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, and water. The resulting consumption of fossil fuels would incrementally reduce existing supplies of fuel oil, natural gas and gasoline. An incremental increase in energy demand would also occur during post-construction activities including lighting and maintenance activities. This commitment of resources would be representative of resource commitments normally associated with urban development that would occur within the region. Development of a maintenance facility is a long-term irreversible commitment of the land and it is improbable that the site would revert to its existing use due to the large capital investment that would already have been committed.

3.21.2 Significant and Unavoidable Impacts

As indicated in Chapter 3.0, most of the significant and/or potentially significant impacts can be mitigated to less-than-significant levels. The significant and unavoidable environmental impacts that would result from the maintenance site alternatives are listed below.

Displacements and Relocations. A significant and unavoidable impact would occur related to displacement and relocation for the Site#14 - Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Site #17 Marine/Redondo Beach Alternatives. The Site #14 – Arbor Vitae/Bellanca Alternative would require 12 full parcel acquisitions to accommodate a maintenance facility on this site. These parcels include industrial land uses. Many of the owners and tenants on this site have long term leases, were seeking to sublet property, or had either planned or completed recent improvements to their properties. A trading company on the site also has a one of a kind refrigeration system that would not be able to be relocated. There are two car rental facilities, one of which has acquired adjacent property for added capacity. The displacement of businesses within this site could result in loss of approximately 390 employees.

The Site #15 – Manchester/Aviation Alternative would require the acquisition of 39 parcels to accommodate a maintenance facility on this site. The land uses in these parcels are industrial and institutional. The displacement of businesses within this site could result in loss of approximately 159 employees. Many of the owners and tenants on this site also have long term leases or had either planned or recently completed improvements or investments in their properties.

The Site #17 – Marine/Redondo Beach Alternative would require the acquisition of three full parcels and one partial parcel to accommodate a maintenance facility on this site. The land uses in these parcels are industrial. The displacement of businesses within this site could result in loss of approximately 400 employees. Many of the owners and tenants on this site also have long term leases or had either planned or recently completed improvements or investments in their properties.

The three maintenance site alternatives discussed above are in close proximity to LAX and the success of many of these affected businesses depends on their proximity to the airport. The airport vicinity is highly urbanized and developed and as a result, relocation sites with proximity to the airport are scarce. Relocating all of the owners and tenants on each of these maintenance site alternatives, according to their individual needs, especially with proximity to the airport and available land, would be challenging. While adherence to the provisions of the Uniform Act and coordination with LAWA regarding the *LAX Master Plan* (Mitigation Measures **DR1**through **DR3**) may lessen acquisition and relocation impacts from Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Alternatives, there is no certainty that all displaced businesses can be relocated in areas that ensure that there is no adverse effect on their competitive position. Nor is there certainty that the time frames for the Crenshaw/LAX Transit Project and implementation of the *LAX Master Plan* will be totally in sync to facilitate a seamless relocation of affected businesses in comparable facilities. Under these circumstances a significant and unavoidable s effect would remain.

Historic, Archaeological, Paleontological. A significant and unavoidable impact would occur on all four of the maintenance site alternatives if a historical resource is identified within the site. According to an archaeological records search that was conducted by W. H. Bonner Associates at the South Central Coastal Information Center (SSCIC) located at California State University Fullerton, no known archaeological resources have been recorded near the any of the sites and no surficial archaeological resources were identified. Although no known archaeological resources listed in or eligible for listing in the NRHP would be affected by the maintenance site alternatives, discovery of archaeological resources is possible during excavation activities. If an archaeological resource is damaged or destroyed, construction of the maintenance site alternatives would result in a significant and unavoidable impact. A paleontological review was conducted in June and November of 2010 for the maintenance site alternatives, and the results indicate that no paleontological sites/specimens have been recorded at or within 0.25 miles of the maintenance site alternatives. Based upon the paleontological review, there is the potential to encounter paleontological resources, especially at depths below five feet. Excavation could exceed five feet in depth during utility relocations. If construction of the maintenance site alternatives destroys a significant paleontological resource, it would result in a significant and unavoidable impact. Each site does contain properties that were constructed before 1965 and that will require historic evaluation. Should the selected alternative result in the demolition of parcels identified as historic properties, a significant and unavoidable impact would occur.

Economic. A significant and unavoidable economic impact would occur if the Site #14 – Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives were selected as a location for the maintenance facility. These

maintenance site alternatives are located in an area within two miles of LAX. The activities at LAX, including business travel, tourist travel and goods movement each contribute to LAX's importance as a key element of the Southern California economy. Acquisition of property necessary for the maintenance facility would result in the displacement of a substantial number of employees working in a variety of businesses, each with their own unique relocation needs. The total estimated employment for these sites is approximately 800 jobs. The displacement of this number of jobs and loss of property tax revenue would result in an adverse effect to the regional economy. The ability to relocate these owners and tenants would be pivotal in determining the extent of the impact to the regional economy, however, as discussed above, there is no certainty that all displaced businesses can be relocated in areas that ensure that there is no adverse effect on their competitive position. Nor is there certainty that the time frames for the Crenshaw/LAX Transit Project and implementation of the *LAX Master Plan* will be totally in sync to facilitate a seamless relocation of affected businesses in comparable facilities. Under these circumstances a significant and unavoidable effect would remain.

Air Quality. A significant localized impact would occur during construction at the Site #14 – Arbor Vitae/Bellanca and Site #15 – Manchester/Aviation Site Alternatives. Regional emissions would be generated by construction equipment, haul trucks, worker commute trips, earthwork activity, and architectural coating activity. Mitigation measures will be implemented to reduce regional air quality impacts to the greatest extent feasible. Mitigated regional construction emissions would result in a significant and unavoidable PM_{10} impact for the Site #14 – Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Site #17 – Marine/Redondo Beach Alternatives.

Noise. A significant noise impact would occur during construction at the Site #14 – Arbor Vitae/Bellanca, Site #15 – Manchester/Aviation, and Division 22 Northern Expansion Alternatives. Construction activity would exceed the 5-dBA significance threshold at multiple sensitive receptors for the Site #14 – Arbor Vitae/Bellanca, Site #15– Manchester/Aviation, and Division 22 Northern Expansion Alternatives. Mitigation measures would reduce construction noise levels by at least 5 dBA at sensitive receptors. The mitigation measures would eliminate the impacts associated with Site #15 – Manchester/Aviation Alternative. However, construction noise level associated with the Division 22 Northern Expansion Alternative and Site #14 – Arbor Vitae/Bellanca Alternative would still be significant. Therefore, construction activity would result in a significant and unavoidable adverse impact related to noise for the Division 22 Northern Expansion Alternative and Site #14 – Arbor Vitae/Bellanca Alternative.

4.0 COMMUNITY PARTICIPATION

4.1 Introduction

This chapter documents the community participation for the Metro Crenshaw/Los Angeles International Airport (LAX) Light Rail Transit (LRT) Project Supplemental Draft Environmental Impact Statement/Recirculated Draft Environmental Impact Report (SDEIS/RDEIR), in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). This chapter documents the public participation activities specifically related to the evaluation of the four new maintenance facility site alternatives. The community participation activities completed to date include the initial identification of the potential new sites (February 2010), the identifications of site alternatives (March 2010), and notification of efforts to prepare this SDEIS/RDEIR (September 2010). During circulation of this SDEIS/RDEIR, a public hearing will be held on March 1, 2011 at 6:00 p.m. to receive public testimony regarding the environmental effects of the alternative maintenance facility sites. Responses to comments will be received through the public circulation period and will be addressed and incorporated into the Crenshaw/LAX Transit Corridor Project Final environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR), which is scheduled to be completed in Summer 2011. The FEIS/FEIR will identify a preferred maintenance site alternative for the Crenshaw/LAX Transit Corridor Project. The following meetings were held during this outreach process:

- February 24, 2010, 6:00 p.m., Westchester United Methodist Church – Meeting to disclose new site search and solicitation for initial identification of sites.
- March 24, 2010, 6:00 p.m., Westchester United Methodist Church – Briefings to update site selection process.
- March 25, 2010, 6:00 p.m., Saint Mary's Academy School Gym – Briefings to update site selection process.
- March 27, 2010, 10:00 a.m., Christ the Good Shepherd Episcopal Church – Briefings to update site selection process.
- March 31, 2010, 6:00 p.m., Lula Washington Dance Theater – Briefings to update site selection process.
- September 2010 through January 2011 – Meetings with potentially affected individual tenants and property owners. All properties were sent a notice in the mail and offers of meetings were made available.
- February 10, 2011, 6:00 p.m., Flight Path Learning Center – Public Hearing to receive comment on circulated SDEIS/RDEIR.

The goals of the Metro's public involvement program for this project are to:

- Encourage and educate a broad and diverse base of stakeholders, particularly underrepresented minority communities, regarding the on-going status of the project.

- Ensure that the outreach activities facilitated meaningful participation in the project planning/development process, especially for potentially affected members of the community.
- Document, log, and respond to the public's concerns regarding the project, which in turn could provide the technical team with information needed to develop mitigation measures and to ensure that the public's comments can be appropriately summarized in this environmental document.
- Facilitate public participation by providing multiple opportunities for the project team to meet and engage the public.
- Provide multi-lingual communications. Handout materials are always produced in both English and Spanish and are prepared in other languages, as needed.

4.2 Public Outreach Activities

4.2.1 Disclosure of Identification of Potential Sites

Following the elimination of the two maintenance facility site alternatives evaluated in the Crenshaw/LAX Transit Corridor Project DEIS/DEIR, renewed community participation was initiated to solicit ideas for new sites that the project team should consider. The first community participation activity was a public workshop held on February 24, 2010. At this meeting, the public was presented with a summary of the services to be provided at the maintenance facility and the physical requirements necessary to make it functional. The public was asked to identify potential sites by placing markers in locations they found to be desirable. The second part of the meeting was focused on identifying selection criteria that the public felt was important to the evaluation of the potential sites.

4.2.2 Stakeholder Identification

To continue to keep the public informed of the site evaluation and selection study, Metro maintained a contact list of stakeholders located throughout the project area and, in particular, those located adjacent to the potential maintenance facility sites and others who could be directly affected. The stakeholder list is a "living document" and has continued to grow throughout the life of the project. Contacted stakeholders included, but were not limited to: residents, chambers of commerce, business improvement districts (BIDs), environmental groups, transit organizations/advocates, community-based organizations, faith-based organizations, educational institutions, neighborhood councils, businesses, professional associations, homeowners associations (HOAs), elected officials, city managers, and community redevelopment agencies. The current stakeholder database for the Crenshaw/LAX Transit Corridor Project includes approximately 1,600 individuals, businesses, and organizations.

4.2.3 Mailings for Public Workshops

Based on the list of stakeholders, approximately 3,000 flyers were distributed to notify stakeholders of the the February 24, 2010 public workshop, which initiated the additional

analysis for the new maintenance facility sites. In the flyers, the public was presented with information regarding the purpose and physical requirements of a maintenance facility site and was asked to participate in the initial identification of potential sites.

In March 2010, approximately 15,000 flyers were distributed for four additional public workshops. The purpose of these workshops was for the project team to present the 16 potential sites that the public identified at the first public workshop in February 2010. In addition, the project team planned to discuss the selection criteria proposed by the public to screen the potential sites.

4.2.4 Electronic Invitations

E-mail blasts, including a "Save-the-Date" and a "Reminder" e-mail, were sent out to the stakeholder list for the one February and four March 2010 meetings. The stakeholder list includes over 3,500 individuals.

4.2.5 Workshops for the Screening of Potential Sites

At the four March 2010 meetings, the 16 potential sites that the public had identified at the previous February meeting, as well as the public-recommended screening criteria, were displayed. The project team informed the meeting attendees of the results of an initial screening that had occurred using the criteria. The objective was to identify potential sites that could be eliminated because of fatal flaws. This initial screening process was displayed on a matrix and identified eight sites to be dropped from further consideration. During these meetings, public input was sought regarding the remaining eight sites under consideration.

4.2.6 Community/Stakeholder Briefings

Metro also contacted all potentially affected major property owners and nearby building tenants in an effort to disclose information about the remaining four potential maintenance facility sites. Metro conducted briefings and presentations with more than 40 potentially affected property owners and tenants. Typically, the briefing included an overview of the project and the selection process to be used to identify potential maintenance facility sites. The information also included a timeline for potential property acquisitions and an explanation of how potential real estate acquisitions would occur. Owners and tenants were also asked to contribute information about their property or business that could help characterize the extent of potential displacements and relocations. Metro also conducted a supplementary briefing on December 1, 2010, to inform adjacent property owners and area residents and businesses in the vicinity of the Site #17 Marine/Redondo Beach and Division 22 Northern Expansion Alternatives. A mailing was sent out to property owners within a half-mile of the two sites and included approximately 5,000 properties.

4.2.7 Briefings with Local Governments

Metro also wanted to ensure local governments were kept informed of efforts to identify and select new maintenance facility sites. The maintenance facility site alternatives are

located in four different local government jurisdictions. These include the Cities of Los Angeles, Hawthorne, Inglewood, and Redondo Beach. Introductory briefings were conducted with each of these jurisdictions. Briefings included information on potential issues resulting from the selection of maintenance site alternatives. Update briefings were provided as requested.

PART II
SECTION 4(F) EVALUATION

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PART II - SECTION 4(F) EVALUATION

1.0 Summary

Since the circulation of the Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR) for the Crenshaw/Los Angeles International Airport (LAX) Transit Corridor Project, advanced conceptual engineering has been completed and the area of potential effects (APE) for the Project has been refined to reflect the locally preferred alternative (LPA). Impacts for historic resources and parklands were already evaluated for all alternatives in the DEIS/DEIR. Concerns expressed during the circulation of the DEIS/DEIR, resulted in the Metro Board, as part of its actions on the Project, removing from further consideration the maintenance facility sites that were originally evaluated in the DEIS/DEIR. Four additional maintenance site alternatives have advanced through a screening process and are being evaluated in Part I of this SDEIS/SDEIR. Part II of this SDEIS/SDEIR presents the evaluation of resources protected under Section 4(f) of the Department of Transportation Act of 1966, as amended (hereinafter referred to as Section 4(f) resources, for the refined APE. Section 4(f) protects publicly-owned land of parks, recreational areas, and wildlife refuges. Section 4(f) also protects historic sites of National, State, or Local significance located on public or private land. The preliminary Section 4(f) finding is that the Project would cause a de minimis use of one Section 4(f) resource, the Broadway Department Store. The final Section 4(f) finding will be presented in the Final Section 4(f) Evaluation after further consultation and concurrence by the State Historic Preservation Office (SHPO).

2.0 Proposed Project

The proposed Crenshaw/LAX Transit Corridor Project (Project) involves a light rail transit (LRT) alignment that would extend approximately 8.5 miles from the Metro Green Line Aviation/LAX Station to the Exposition LRT line (under construction) at the Exposition/Crenshaw Boulevards intersection. The LRT alignment would be double-tracked and would be comprised of at-grade street, at-grade railroad, aerial, and below-grade sections. The development of a new maintenance facility in connection with the Crenshaw/LAX Transit Corridor Project is essential to the successful implementation of the Project. Moreover, there is a lack of adequate capacity at Metro's existing light rail maintenance facilities and logistical issues require that a new maintenance facility be constructed. For a full description of the Project, refer to Chapter 2.0 of the DEIS/DEIR.

3.0 Section 4(f) Evaluation

This section contains the Section 4(f) evaluation of the Crenshaw/LAX Transit Corridor Project on parklands and historic properties. The Section 4(f) evaluation includes a description of the proposed action, a list of eligible properties for the National Register of Historic places, and an evaluation of individual parklands or historical resources potentially impacted by the Project. The evaluation of each resource includes information on the location and of the property impacted, impacts of the project on the property, measures to minimize harm, and coordination with the agency having jurisdiction over the resource.

Section 4(f) of the Department of Transportation Act of 1966, as amended, (49 U.S.C. 303) states that the U.S. Department of Transportation may not approve the use of land from a significant publicly-owned public park, recreation area, wildlife or wildfowl refuge, or any significant historic site unless a determination is made that:

- There is no feasible and prudent alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from such use.

The Section 4(f) evaluation follows the guidance established in the *FHWA Section 4(f) Policy Paper* (USDOT 2005), which has been adopted by the FTA.

3.1 Section 4(f) "Use" Definitions

An evaluation of a 4(f) resource is required when a project would result in a use of that resource. As defined in 23 CFR 774.17, the "use" of a protected Section 4(f) property occurs when any of the following conditions are met.

3.2 Direct Use

A direct use of a Section 4(f) resource occurs when property is permanently incorporated into a proposed transportation project (23 CFR Section 774.17). This may occur as a result of partial or full acquisition of the Section 4(f) property, permanent easements, or temporary easements that exceed regulatory limits noted below.

3.3 Temporary Occupancy

A temporary use of a Section 4(f) resource occurs when there is a temporary occupancy of property (direct use) that is considered adverse in terms of the preservationist purpose of the Section 4(f) statute. Under the FTA regulations (23 CFR Section 774.13), a temporary occupancy of property does not constitute a use of a Section 4(f) resource when all the following conditions are satisfied:

- Duration is temporary (i.e., less than the time needed for construction of the project), and there should be no change in ownership of the land;
- Scope of work is minor (i.e., both the nature and magnitude of the changes to the Section 4(f) property are minimal);
- There are no anticipated permanent adverse physical impacts, nor is there interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
- The land being used will be fully restored (i.e., the property must be returned to a condition that is at least as good as that which existed prior to the project); and
- There must be documented agreement of the official(s) having jurisdiction over the Section 4(f) resource regarding the above conditions.

3.4 De Minimis Impacts

The requirements of Section 4(f) would be considered satisfied if it is determined that a transportation project would have only a de minimis impact on the Section 4(f) resource (direct use). The provision allows avoidance, minimization, mitigation, and enhancement measures to be considered in making the de minimis determination. The agencies with jurisdiction must concur in writing with the determination. De minimis impact is defined in 23 CFR 774.17 as follows:

- For parks, recreation areas, and wildlife and waterfowl refuges, a de minimis impact is one that would not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f); and
- For historic sites, de minimis impact means that the FTA has determined, in accordance with 36 CFR Part 800, that no historic property is affected by the project or the project would have "no adverse effect" on the property in question.

3.5 Constructive Use

A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate land from a resource, but the proximity of the project results in impacts (e.g., noise, vibration, visual, and property access) that, including mitigation, are so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished (23 CFR 774.15).

FTA Construction Vibration Criteria Used for Constructive Use Evaluation of Sensitive Structures on 4(f) Resources

Construction. Constructive use could occur when vibration during construction of a project would permanently damage a structure that is a Section 4(f) resource. Ground-borne vibration would be generated by general construction activity. The DEIS/DEIR used the FTA construction vibration damage criteria of 0.3 inches per second peak particle velocity (PPV) for non engineered timber and masonry buildings.[1] Often, historic buildings are susceptible to vibration because of their age and composition. The FTA has published a construction vibration damage criteria of 0.12 inches per second PPV in inches per second for buildings extremely susceptible to building damage. This threshold was used for the construction use evaluation of 4(f) resources. Per Metro policy, pile driving would not be used within the proximity of any identified sensitive structures during construction of the Project. General construction activity typically generates a vibration level of 0.089 inches per second PPV at 25 feet. This reference level would result in a vibration level of 0.12 inches per second PPV at 21 feet. Resources that are located beyond 21 feet, would not result in adverse vibration levels during general construction activity and no adverse effects to sensitive structures would occur.

[1]Federal Transit Administration. 2006. *Transit Noise and Vibration Assessment*.

Operation. The FTA has published criteria for assessing construction vibration impacts in *Transit Noise and Vibration Impact Assessment* (May 2006). The vibration impact level is identified as 65 VdB for Category 1 land uses. These land uses include buildings where vibration would interfere with operation activity (e.g., concert halls and recording studios).

3.6 Avoidance Alternatives

Avoidance alternatives were evaluated for each resource with a greater than de minimis Section 4(f) use.

3.7 Measures to Minimize Harm

Avoidance alternatives were evaluated for each resource with a Section 4(f) use.

3.8 General Agency Coordination and Consultation

All property owners adjacent to the Project alignment were notified of public workshops and meetings conducted for the Crenshaw/LAX Transit Corridor Project and were provided an opportunity to provided comments on the Project. As documented in Chapter 6.0 of the DEIS, an extensive public involvement program has been implemented for the Project. No objections have been received regarding Project-related impacts to Section 4(f) properties. Public involvement is ongoing, and any comments received on this draft Section 4(f) Evaluation will be addressed in the FEIS/FEIR and Final Section 4(f) Evaluation.

The methodology for determining eligibility of properties for listing on the National Register of Historic Places and determining the effects of the Project on eligible resources was guided by the California State Historic Preservation Office (SHPO). Metro has coordinated with SHPO through meetings and correspondence to resolve issues on methodology, APE definition, and documentation content throughout the Project. Metro and its consultant team met with SHPO personnel to further discuss the proposed undertaking, methods for identification of historic properties, and documentation standards. Coordination and consultation with SHPO and the relevant agencies with jurisdiction over the 4 (f) resources is ongoing. SHPO concurrence will be required on the assessment of effects to verify that the Project is unlikely to substantially impair the features and attributes of the 4(f) uses evaluated below. This concurrence will take place prior to completion of the FEIS/FEIR for the Project. For direct uses of historic resources that are determined to be de minimis, written concurrence of a de minimis effect from the agency with jurisdiction over the resource will be submitted to SHPO, prior to their review of the findings.

3.9 Determination of Properties Eligible for the National Register of Historic Places

Figure 3-1 and Table 3-1 and Table 3-2 show the parklands or recreational facilities within the APE for the Project and the properties that are determined to be eligible for the National Register of Historic Places or are parklands or recreational facilities. The effects of the proposed project are evaluated against this list to determine what resources are to undergo 4(f) evaluation.

Figure 3-1. Location of Nationally Eligible Properties and Parklands

Source: SWCA, 2011.

Table 3-1. Parklands and Recreational Facilities within the Project APE

Name	Distance to Alignment	Location	Jurisdiction Over Resource	Requires 4(f) Evaluation
Parklands				
Rogers Park/ Community Center	300 feet	400 W. Beach Ave., Inglewood	City of Inglewood Parks and Recreation	**Yes**
Grevillea Park	800 feet	231 S. Grevillea Ave., Inglewood	City of Inglewood Parks and Recreation	No
Centinela (Edward Vincent Jr.) Park	Adjacent	700 Warren Ln., Inglewood	City of Inglewood Parks and Recreation	**Yes**
Leimert Plaza Park	Adjacent	4395 Leimert Blvd, Los Angeles	City of Los Angeles Department of Parks and Recreation	**Yes**

Table 3-2. Properties Determined or Eligible for National Register of Historic Places

Name	NR Status Code	Distance to Alignment	Location	Jurisdiction	Preliminary Section 106 Determination
Properties Eligible for National Register of Historic Places					
Proud Bird	3S	250 feet	11022 Aviation Blvd., Los Angeles	SHPO	No Adverse Effect
Merle Norman	3S	Adjacent	9130 Bellanca Ave, Los Angeles	SHPO	No Adverse Effect
Veteran's Memorial Building, Centinela (Edward Vincent Jr.) Park	2S2 & 1CS	Adjacent	700 Warren Ln, Inglewood	City of Inglewood Parks and Recreation, SHPO	No Adverse Effect
Inglewood Park Cemetery	3S	150	720 E Florence Ave, Inglewood	SHPO	No Adverse Effect
Harrison Ross Mortuary	3S	50 feet	4601 Crenshaw Blvd., Los Angeles	SHPO	No Adverse Effect
Maverick's Flat	3S	25 feet	4225 Crenshaw Blvd, Los Angeles	SHPO	No Adverse Effect
Broadway Department Store (Walmart)	3S	Adjacent	4101 Crenshaw Blvd, Los Angeles	SHPO	No Adverse Effect
May Company (Macy's)	2S2	80	4005 Crenshaw Blvd, Los Angeles	SHPO	No Adverse Effect
Department of Water and Power	3S	25 feet	4030 Crenshaw Blvd, Los Angeles	SHPO	No Adverse Effect
Angelus Funeral Home	3S	100 feet	3887 Crenshaw Blvd, Los Angeles	SHPO	No Adverse Effect
Los Angeles Sentinel	3S	75 feet	3800 Crenshaw Blvd., Los Angeles	SHPO	No Adverse Effect

Eligibility: National Register (NR) Criteria for eligibility for listing on the National Register are 1D- Contributor to a district or multiple resource property listed in NR by the Keeper; 1CS- - Listed in the CR as individual property by the SHRC; 2S2-Individual property determined eligible for NR by a consensus through Section 106 process; 3S- Appears eligible for NR as an individual property through survey evaluation.
Source: SWCA, 2011.

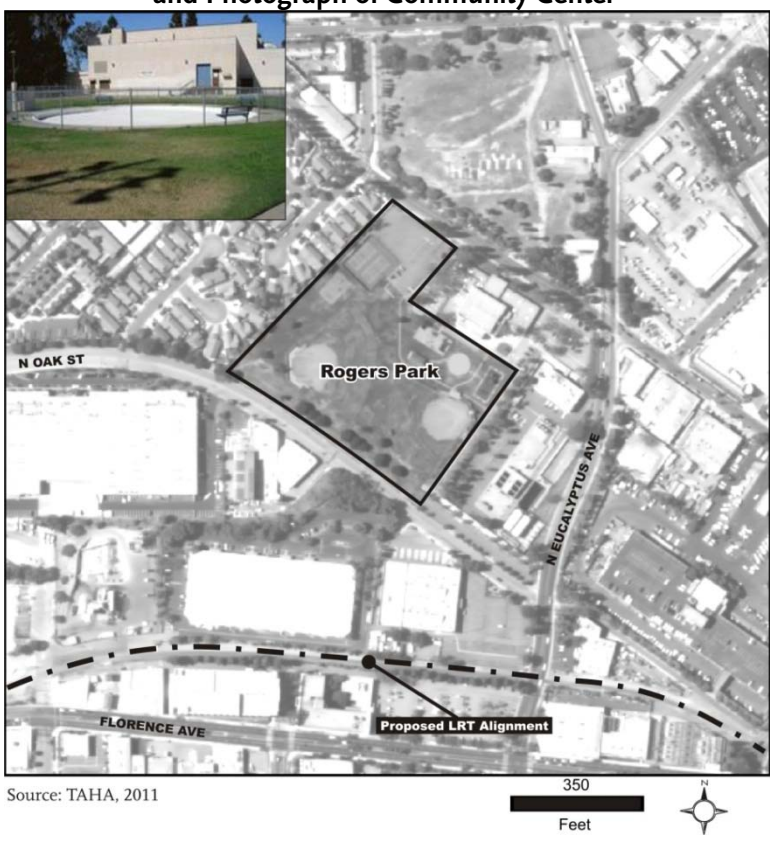
For each resource with a Section 4(f) use, the individual evaluations of Section 4(f) properties discuss coordination specific to that resource.

3.10 Individual Evaluations of Section 4(f) Properties

The project would not result in the direct use of any parklands or recreational areas identified in Table 3-1. Three of the four parklands are evaluated for potential constructive use based on the nature of the use and their proximity to the alignment. The Project would result in the direct use of one Nationally-Eligible properties identified in Table 3-2 and individual 4(f) evaluation is required. The preliminary finding under section 106 is that the project would not adversely affect the remaining ten Nationally-Eligible properties. Under the FHWA Section 4(f) Policy Paper, if there is no adverse effect determination under Section 106, there is no constructive use and Section 4(f) requirements do not apply. Therefore, the remaining ten Nationally-Eligible properties do not require Section 4(f) Evaluation. There are no wildlife or waterfowl refuges in the Project area.

3.10.1 Rogers Park/Community Center

Figure 3-2. Rogers Park/Community Center, Location and Photograph of Community Center



Description of the Property

Rogers Park/Community Center (Figure 3-2) is located at 400 West Beach Avenue, approximately 300 feet north of the Harbor Subdivision near Beach and Eucalyptus Avenues. This park is located in the City of Inglewood and has a 33,500-square-foot multipurpose recreation building. The park also has a playground, basketball court, two lighted tennis courts, a baseball field, a lighted football/soccer field and a wading pool. The City of Inglewood Department of Parks and Recreation has jurisdiction over Rogers Park/Community Center.

Table 3-3. Summary of Section 4(f) Evaluation

Resource	APN	Location	Impact	4(f) Use Determination
Parklands				
Rogers Park/ Community Center	4017-032-912, 4017-032-911, 4017-032-902, 4017-031-905	320, 400, 534 W. Beach Ave., Inglewood	Potential noise impact	No Direct Use No Constructive Use
Centinela (Edward Vincent Jr.) Park	4015-015-900, 4015-015-901, 4015-016-025	560, 700 Warren Ln., 301 Centinela Ave., Inglewood	Potential noise and vibration impacts	No Direct Use No Constructive Use
Leimert Park	5024-018-900	4395 Leimert Blvd, Los Angeles	Underground easement required for Vernon station (Design Option 5)	No Direct Use No Constructive Use
Properties Eligible for National Register of Historic Places				
Broadway Dept. Store	5032-002-054	4101 Crenshaw Blvd, Los Angeles	Potential surface or underground easement for station portal Potential view obstruction of small portion of building features;	Direct Use - De Minimis No Constructive Use

Section 4(f) Evaluation

The LPA alignment would travel at-grade along the existing Harbor Subdivision. The La Brea Station would be located approximately one half mile to the east, which would improve access.

Temporary Construction Effects. The Project would not require the use of any property from the Rogers Park/Community Center during construction. Therefore, the Project would not result in a direct use of this resource.

Rogers Park is beyond the 21-foot criteria for vibration damage described previously and no adverse ground-bourne vibration effects from general construction activity would occur. Access to Rogers Park would not be restricted, and all remaining potential effects of project construction (including fugitive dust, noise, and traffic) would be temporary and would not substantially impair this resource. Therefore, the Project would not result in a constructive use of this resource.

Operation. Operation of the Project would not require the use of any property from the Rogers Park/Community Center. Therefore, the Project would not result in a direct use of this resource.

Operation of the Project would not restrict access, generate localized pollutant emissions, or create a visual impairment to the park. There is no direct line of sight from the park to the alignment. At a distance of 300 feet, operational activity would generate a vibration

level of 47 VdB at Rogers Park. This would be less than the FTA significance criteria of 65 VdB for the most sensitive land uses. Therefore, operational activity would not result in adverse vibration levels. Rogers Park would be approximately 300 feet from the LRT alignment. In addition, intervening buildings would block the line-of-site between Rogers Park and light vehicle operations along the proposed alignment. These intervening buildings act as barriers and would attenuate light rail vehicle noise. Moreover, the FTA screening distance for LRT operational noise is 175 feet when considering obstructed views. Rogers Park is located outside of the operational noise screening distance, and no further analysis is required. No substantial impairment of the use of the park features would occur. Therefore, the Project would not result in a constructive use of this resource.

Preliminary Section 4(f) Finding

The Project would not cause a use of the Rogers Park/Community Center.

3.10.2 Centinela (Edward Vincent Jr.) Park

Description of the Property

Centinela (Edward Vincent Jr.) Park is located north and adjacent to the Harbor Subdivision near Centinela and Florence Avenues (Figure 3-3). This park contains the Inglewood Veterans Memorial building and Centinela Springs. The park contains one recorded archaeological site (19-000181), one CHL (CHL 363 and 19-186555) and one historic structure (19-188002) located within the park. The Veteran's Memorial Building was determined eligible for listing in the National Register under Criteria C (2S). The park also contains an outdoor amphitheater used primarily for public concerts and rallies. Uses in this amphitheater occur infrequently (approximately two to three times a year)

Figure 3-3. Centinela (Edward Vincent Jr.) Park, Location and Photograph of Proposed LRT Alignment Along Park

Source: TAHA, 2011

and generally involve the use of amplified sound and the use of portable speakers. The City of Inglewood Department of Parks and Recreation has jurisdiction over Centinela (Edward Vincent Jr.) Park.

Section 4(f) Evaluation

The LPA alignment would extend along the southern edge of Centinela (Edward Vincent Jr.) Park at-grade along the existing Harbor Subdivision. The alignment is located approximately 525 feet away from the amphitheater, approximately 475 feet away from the Veteran's Memorial, and approximately 440 feet away from Centinela Springs.

Temporary Construction Effects. The Project would not require the use of any property from Centinela (Edward Vincent Jr.) Park during construction. Therefore, the Project would not result in a direct use of this resource.

The sensitive structures in Centinela (Edward Vincent Jr.) Park are beyond the 21-foot criteria described previously and no adverse ground-bourne vibration effects from general construction activity would occur. Therefore, the Project would not result in a constructive use of this resource.

Operation. Operation of the Project would not require the use of any property from Centinela (Edward Vincent Jr.) Park. Therefore, the Project would not result in a direct use of this resource.

Operation of the Project would not restrict access, generate localized pollutant emissions, or create a visual impairment to the park. Operational activity would generate a vibration level of 51 VdB at the Edward Vincent Park land uses. This would be less than the FTA significance criteria of 65 VdB for the most sensitive land uses. Therefore, operational activity would not result in adverse vibration levels. The FTA screening distance for LRT operational noise is 350 feet when considering unobstructed line of sight from a transit noise source. The nearest of sensitive land uses associated with Edward Vincent Park would be located no closer than 440 feet of the proposed LRT alignment. Thus, the sensitive uses within Edward Vincent Park are located outside of the operational noise screening distance, and no further analysis is required. No substantial impairment of the use of the park features would occur. Therefore, the Project would not result in a constructive use of this resource.

Preliminary Section 4(f) Finding

The Project would not cause a use of Centinela (Edward Vincent Jr.) Park.

3.10.3 Leimert Plaza Park

Figure 3-4. Leimert Plaza Park, Location and Photograph of Park Feature

Description of the Property

Leimert Plaza Park (Figure 3-4) is a one-acre park located to the south of Leimert Park Village at the northeast corner of the Crenshaw Boulevard/Vernon Avenue intersection. This park contains picnic tables, benches and a decorative water fountain. This park is one of the most heavily used parks in Los Angeles and is a center of political and cultural activity in the local surrounding community, holding events such as the 4th of July Jazz Festival, Kwanza Parade, Martin Luther King Jr. Parade and Festival, and Christmas Toy Giveaway. The City of Los Angeles Department of Parks and Recreation has jurisdiction over this resource.

Section 4(f) Evaluation

Temporary Construction Effects. The LPA in the vicinity of this resource would require the cut and cover excavation of a below-grade vertical alignment within the right-of-way of Crenshaw Boulevard. No parkland would be permanently acquired and the zone of construction, including safety fencing and tiebacks for the excavation would not extend into the park. Therefore no direct use of this resource would occur for the LPA.

Design Option 5. Design Option 5 for the Project involves the potential inclusion of an additional station at the Crenshaw Boulevard/Vernon Avenue intersection. This design option could involve a below-grade station in the Vernon Triangle, adjacent to the south of the park. This station configuration would require an underground easement for a tunnel boring machine to travel beneath the western half of the park to get back under the median of Crenshaw Boulevard, where it would continue north below grade. The underground easement required for Design Option 5 would not adversely affect the use of park. Per U.S. DOT Policy (USDOT 2005), Section 4(f) would only apply if the tunneling:

1) Disturbs any archaeological sites on or eligible for the National Register of Historic Places which warrant preservation in place, or

2) Causes disruption which would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established, or

3) Substantially impairs the historic values of the historic site.

Design Option 5 would not meet any of these three criteria; therefore, Design Option 5 would not result in the direct use of Leimert Park.

There are no sensitive structures within the park that would be affected by construction vibration. Access to Leimert Park would be maintained, and all remaining potential effects of project construction (including fugitive dust, noise, and traffic) would be temporary and would not substantially impair this resource. Therefore, the Project would not result in a constructive use of this resource.

Operation. The Project would be located in a tunnel adjacent to Leimert Park for the LPA and underneath the park for Design Option 5. As described earlier, no direct use would occur.

Under the LPA for the Project, the light rail line would operate in a tunnel in the median of Crenshaw Boulevard and would not substantially impair the features of Leimert Park. The LPA would not result in a constructive use of this resource.

Under Design Option 5, light rail operational activity in a tunnel beneath the park would generate a vibration level below 65 VdB at Leimert Park. This would be less than the FTA significance criteria of 65 VdB for the most sensitive land uses. Therefore, operational activity would not result in adverse vibration levels. The alignment is below-grade at Leimert Park and operational noise would not be audible at this land use. Other than a restroom building there are no occupied structures in the park and ground-borne noise would not be an impact consideration. No substantial impairment of the use of the park features would occur.

Therefore, the LPA and Design Option 5 for the Project would not result in a constructive use of this resource.

Preliminary Section 4(f) Finding

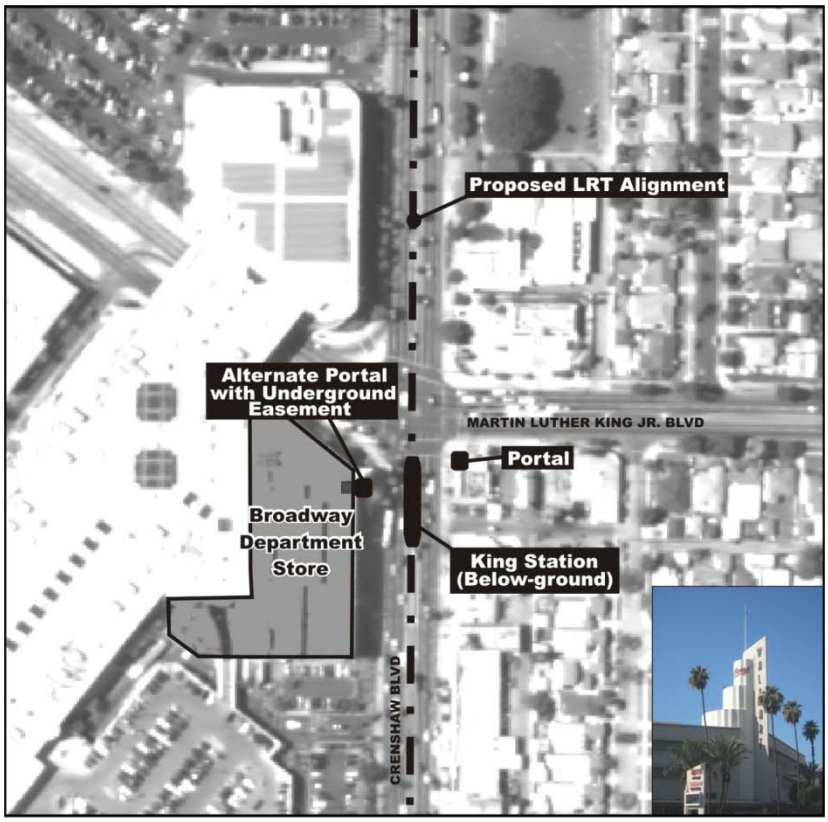
The Project would not cause a use of Leimert Park.

3.10.4 Broadway Department Store

Description and Significance of the Property

The Broadway Department Store (now Walmart) (Figure 3-5) was designed by architect Albert B. Gardner in the Streamline Moderne style, and constructed between 1945 and 1947. The Broadway Department Store was the largest in the nation at the time with 208,000 square feet of retail space and, combined with the adjacent retail stores and supermarket represented almost 550,000 square feet of enclosed space.

Figure 3-5. Broadway Department Store, Location and Photograph of Building Front



In the 1980s, all of the smaller and ancillary retail structures surrounding the Broadway store were demolished, and in the early 1990s, a new enclosed shopping mall was constructed immediately behind. While the setting has changed, the Broadway store still retains sufficient integrity to be eligible for listing in the NRHP. The property was determined eligible for listing on the National Register under Criteria 3S. The preliminary determination is that the Project would not adversely affect the Broadway Department Store**.** The SHPO must be coordinated with to conclude the effects determination for this resource.

The building is located at the southwest corner of the Crenshaw/Martin Luther King Jr. Boulevards intersection. The facility can be accessed from Stocker Street, Martin Luther King Jr. Boulevard, and Crenshaw Boulevard and has dedicated off-street parking. The proposed light rail line would be located underground along this segment, with a station located within the Crenshaw Boulevard and King Boulevard rights-of-way.

There is an alternate portal location on the southwest corner of the Crenshaw Boulevard/Martin Luther King Jr. Boulevard intersection, in front of the Broadway building. The portal would be located on landscaped frontage that was originally a frontage road that ran in front of the historic Broadway building. A portal in this location could also involve an underground connection into the basement of the department

store, which would also constitute a direct use of the property, as a permanent underground easement would be required in order to facilitate this connection.

Section 4(f) Evaluation

The effects of this direct use would be de minimis, as this connection would not create an adverse effect on the structural integrity of the building nor would it affect the above ground features and attributes of this Section 4(f) resource.

Constructive Use

Temporary Construction Effects. The Broadway building is not located within 21 feet of general construction activity for the Project under the LPA. All other construction activity would be temporary and not substantially diminish the features or attributes of the resource. Therefore, no constructive use of this resource would occur.

The alternative portal location adjacent to the Broadway building could also involve an underground connection into the basement of the department store, which would also constitute a direct use of the property, as a permanent underground easement would be required in order to facilitate this connection. This connection would not create an adverse effect on the structural integrity of the building nor would it affect the above ground features and attributes of this historic resource. Pending SHPO concurrence, FTA has preliminarily determined the effects of this direct use would be de minimis.

Construction activity would occur within the 21-foot criteria for vibration damage and could result in a constructive use. All other construction activity would be temporary and not substantially diminish the features or attributes of the resource.

Operation. Operation of the Project under the LPA would not require the use of any property from the Broadway building. Therefore, the Project would not result in a direct use of this resource.

The alternative portal location adjacent to the Broadway building could involve an underground connection into the basement of the department store, which would also constitute a direct use of the property, as a permanent underground easement would be required in order to facilitate this connection. This connection would not create an adverse effect on the structural integrity of the building nor would it affect the above ground features and attributes of this historic resource. Pending SHPO concurrence, FTA has preliminarily determined the effects of this direct use would be de minimis.

The alternative portal location adjacent to the Broadway building could also include a portal and associated kiosk structure adjacent to the Broadway Department Store building. This portal and associated kiosk structure will be designed to not visually obstruct or contrast with the features of the Broadway building. The portal and associated kiosk would not restrict access, generate pollutant emissions, or vibration or noise activity which would substantially impair the features of the Broadway building. Therefore, the alternate portal location would not result in a constructive use of the Broadway building.

Under the LPA, light rail operational activity would generate a vibration level of 57 VdB in the tunnel section adjacent to the Broadway property. This would be less than the FTA significance criteria of 65 VdB for the most sensitive land uses. Therefore, operational activity would not result in adverse vibration levels. The alignment is below-grade at the Broadway Building. Using the typical attenuation rate, the ground-borne noise levels would be approximately 22 dBA. This would not exceed the FTA ground-borne noise criteria of 40 dBA for institutional land uses with primarily day time use and operational noise would not result in an adverse impact. No substantial impairment of the use of the features would occur. Therefore, the LPA for the Project would not result in a constructive use of this resource.

Measures to Minimize Harm

The King Station has been designed with two possible station portal locations. As currently proposed, the station portal would be located on the southeast corner of the Crenshaw/Martin Luther King Jr. Boulevards intersection. The portal on the southwest corner of this intersection, adjacent to the historic building, is the alternate portal location. If the portal location adjacent to the Broadway building is selected, the structure for the portal will be designed to complement the Streamline Moderne style of the Broadway Department Store consistent with the Secretary of Interior Standards or as directed by agreement with SHPO.

The following mitigation measure would be implemented to ensure that vibration-related construction activity would not result in structural damage to the historic buildings.

CR2-For those historic properties and historical resources that have the potential to be affected or impacted by ground borne vibrations and/or differential settlement, Metro would use building protection measures such as underpinning, soil grouting, or other forms of ground improvement, as well as lower vibration equipment and/or construction techniques. If piles are required near historic properties and structures, they shall be cast in drilled hole (CDIH) piles. These techniques, combined with a geotechnical and vibration monitoring program, would help protect identified historic properties and historical resources. The historic property and historical resource protection measures as well as the geotechnical and vibration monitoring program would be reviewed by an architectural historian or historical architect who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) to ensure that the measures would adequately protect the properties/resources. A post construction survey would also be undertaken to ensure that no adverse effects or significant impacts had occurred to historic properties and historical resources.

Agency Coordination and Consultation

Metro has coordinated with the owners of the property, Capri Urban Baldwin, LLC and Capri Urban Crenshaw, LLC, who have expressed interest in the portal being located adjacent to their property. Metro is currently in the process of seeking SHPO consultation regarding the determination of de mininis use of the Broadway building.

Preliminary Section 4(f) Finding

The Project would cause a de minimis use of Broadway Department Store. The final Section 4(f) finding will be presented in the Final Section 4(f) Evaluation after further consultation and concurrence by the SHPO.

4.0 Determination of Section 4(f) Use

The Crenshaw/LAX Light Rail Transit Project would result in a de minimis use to one Section 4(f) resource. Pursuant to 23 CFR Part 774.3, the FTA has preliminary determined that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a de minimis impact, as defined in §774.17, on the property.

The SHPO shall be informed of the FTA's intent to make a de minimis impact finding. Comments received on this Draft Section 4(f) Evaluation shall constitute an opportunity for public review and comment as described in paragraph (b)(2)(i) §774.5. Pending concurrence from the SHPO in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, the FTA will conclude the Section 4(f) Evaluation.

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