Draft
ENVIRONMENTAL ASSESSMENT/ INITIAL STUDY
(VOLUME I)

WASCO CENTER

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AUGUST 2008

Draft
ENVIRONMENTAL ASSESSMENT/ INITIAL STUDY
(VOLUME I)

WASCO CENTER

(General Plan Amendment 08-02)
(Zone Change 08-06)
(Precise Development Plan 08-04)
(Vesting Tentative Tract Map No. 7127)
(Williamson Act Cancellation 08-02)

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AUGUST 2008

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B	**Air Quality Impact Assessment**
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E	**Phase I Environmental Site Assessment Report**
F	**Noise Impact Assessment**

NOTE: The sections below are included under separate cover in Volume II of this document.

G	**Traffic Impact Assessment**
H	**Wasco Center Preliminary Sewer Study**
I	**Wasco Center Preliminary Water Study**
J	**Water Supply Assessment for the Wasco Center**

1.0 INTRODUCTION

1.1 Document Purpose and Scope

This document provides an assessment of the potential environmental consequences that might result from the construction and subsequent occupancy of Wasco Center (the proposed project), a proposed 120-acre mixed use development project to be located along the northern frontage of State Route (SR) 46 in the northwest portion of the City of Wasco. Upon full build out, Wasco Center will comprise approximately 273,000 square feet of large box retail uses, a 105,000 square foot shopping center, a 75,000 square foot movie theater, a 100 key 4-story hotel, and 67,500 square feet of restaurant/office space. In addition, Wasco Center will also include 123 multi-family residential units with 11,900 square feet of attendant recreation buildings. Wasco Center will also include parking, various infrastructure improvements, extensive internal and perimeter landscaping and wall features, and a wide assortment of other site-wide pedestrian-oriented amenities. A detailed description of these and other project-related features is provided in *Section 2.0, Project Description* below.

The City of Wasco, in its capacity as Lead Agency for this project, has caused the preparation of this document in fulfillment of its environmental review obligations pursuant to the provisions of the California Environmental Quality Act (CEQA) of 1970, attendant State CEQA Guidelines, and the City's local CEQA implementation requirements, all as amended. Formally referred to as an Initial Study in the State CEQA Guidelines, it is a critical component of the environmental review process. It provides the City's decision-makers, other public agencies, and private groups and/or individuals with an objective assessment of whether significant environmental impacts may result from implementation of the proposed project. The findings of this document also serve as the primary basis for determining whether or not additional environmental documentation might be required (i.e. an Environmental Impact Report) in order to ensure that a proposed project's impacts on the environment are fully understood so that if necessary, suitable mitigation can be developed and then incorporated into, or required of, the project in an effort to minimize it's potential environmental effects.

It is hereby noted that although prepared with consultant support, all analyses, conclusions, findings and determinations made in this document fully represent the independent judgement and position of the Lead Agency.

1.2 Statutory Basis For This Document

The preceding generally described what this document contains and what role it plays in the Lead Agency's environmental review of the proposed project pursuant to CEQA. The paragraphs that follow provide a more formal context for, and description of, the City's environmental review process. It does so by presenting citations directly from the State CEQA Guidelines, as amended, with specific relevance in this regard. Please note that for brevity's sake, not all subsections of a particular State CEQA Guidelines citation may have been provided.

15063. Initial Study

(a) Following preliminary review, the Lead Agency shall conduct an Initial Study to determine if the project may have a significant effect on the environment. If the Lead Agency can determine that an EIR will clearly be required for the project, an Initial Study is not required but may still be desirable.

(1) All phases of project planning, implementation, and operation must be considered in the Initial Study of the project;

(3) An Initial Study may rely upon facts, expert opinion supported by facts, technical studies or other substantial evidence to document findings. However, an Initial Study is neither intended nor required to include the level of detail included in an EIR.

(b) Results

(2) The Lead Agency shall prepare a Negative Declaration if there is no substantial evidence that the project or any of its aspects may cause a significant effect on the environment.

(c) Purposes. The purposes of an Initial Study are to:

(1) Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration;

(2) Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration;

(4) Facilitate environmental assessment early in the design of a project;

(5) Provide documentation of the factual basis for the finding of a Negative Declaration that a project will not have a significant effect on the environment.

(g) Consultation. As soon as a Lead Agency has determined that an Initial Study will be required for the project, the Lead Agency shall consult informally with all Responsible Agencies and all Trustee Agencies responsible for resources affected by the project to obtain the recommendations of those agencies as to whether an EIR or a Negative Declaration should be prepared. During or immediately after preparation of an Initial Study for a private project, the Lead Agency may consult with the applicant to determine if the applicant is willing to modify the effects identified in the Initial Study.

***Discussion**: The purpose of this section is to describe the process, contents, and use of the Initial Study. This is a device not mentioned in the statute itself. The Initial Study is necessary in order to provide the factual and analytical basis for a Negative Declaration or to focus an EIR on the significant effects of a project. This section is also necessary to authorize and encourage the use of a number of efficiencies including using a Negative Declaration when the project proponent has changed his proposal in order to mitigate or avoid the significant effects identified in the Initial Study. The section also makes the point that the Initial Study can be used to determine whether a previously prepared EIR would adequately apply to the project at hand, or whether pursuant to a program EIR, tiering or other appropriate process on or more of the project's effects were adequately examined by an earlier EIR or Negative Declaration. These two provisions would result, respectively, in the use of an EIR from an earlier project pursuant to Section 15153 (Use of an EIR Substitute by a Responsible Agency) or in building upon a previous EIR or Negative Declaration as generally provided in Section 15152, Article 11 (commencing with Section 15160), or other provisions.*

***15064. Determining the Significance of the Environmental Effects Caused by a Project**.*

(f) The decision as to whether or project may have one or more significant effects shall be based on substantial evidence in the record of the Lead Agency.

(2) If the Lead Agency determines there is substantial evidence in the record that the project may have a significant effect on the environment but the Lead Agency determines that revisions in the project plans or proposals made by, or agreed to by, the applicant would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur and there is no substantial evidence in the light of the whole record before the Public Agency that the project, as revised, may have a significant effect on the environment, then a Mitigated Negative Declaration (MND) shall be prepared.

1.3 Organization of the Document

This Environmental Assessment-Initial Study is organized as follows:

Section 1.0 – INTRODUCTION introduces the proposed project and this document, describes the statutory basis for its preparation, identifies the Lead Agency for the proposed project, summarizes the organization of the IS/EA and describes the environmental review process.

Section 2.0 – PROJECT DESCRIPTION identifies the location of the proposed project from both a regional, area-wide and local perspective, describes the general environmental characteristics of the project site and its immediate environs, provides detailed descriptions of each discretionary entitlement application which collectively comprise the proposed project as a whole, and identifies any other permits that may be required in the future in order for the project to be implemented.

Section 3.0 – CITY OF WASCO ENVIRONMENTAL CHECKLIST FORM presents the City's actual environmental checklist form, identifies what environmental factors might be potentially affected by the proposed project, provides the City's actual determination and signature regarding the findings of the Initial Study and provides a matrix that summarizes the extent and types of potential environmental effects attributable to the proposed project.

Section 4.0 – ENVIRONMENTAL ASSESSMENT characterizes the existing environment, presents analyses that determine the extent of impact (if any) the proposed project addressed herein might cause, and establishes the basis for any mitigation measures required to minimize the occurrence of any identified potentially significant effects. It does this in the same sequence as the issues provided in the checklist form described above.

Section 5.0 – MITIGATION MEASURE SUMMARY presents the mitigation measures necessitated by the findings of analyses conducted in previous Section 4.0, *Environmental Assessment*.

Section 6.0 – REFERENCES/ORGANIZATIONS & PERSONS CONSULTED is self-explanatory.

Section 7.0 – **LIST OF PREPARERS** is self explanatory.

1.4 Future Disposition of this Document

Based on the substantial evidence provided herein, the Lead Agency has found that implementation of the proposed project is not expected to cause environmental effects that cannot be mitigated to a less than significant level. As such, the Lead Agency has determined that the preparation of an EIR will not be required and that a Mitigated Negative Declaration is warranted. Prior to finalizing and having the Mitigated Negative Declaration (MND) adopted by the Wasco Planning Commission and/or City Council, the proposed MND and Environmental Assessment-Initial Study for the proposed Wasco Center project will be circulated for public and agency review and comment for a period of not less than 30 days. After the circulation period has ended, all comments relating to the Environmental Assessment-Initial Study will be reviewed and considered by the City's decision-making bodies prior to adopting the MND. Pursuant to Section 15074 of the State CEQA Guidelines, as amended, the Wasco Planning Commission and City Council must first consider and approve the proposed MND prior to approving the proposed project.

2.0 PROJECT DESCRIPTION

2.1 Location and Boundaries

The site of the proposed project is located within the incorporated limits of the City of Wasco, a rapidly growing and economically diversifying community situated approximately 8 miles west of State Route 99 (SR 99) on State Route 46 (SR 46) (Paso Robles Highway) in north-central Kern County. East-west regional access to both the City of Wasco and project vicinity is provided via SR 46, while SR 99 which is aligned along the eastern portion of California's Central Valley affords the City regional access from the north and south. Local access to the project site is provided primarily via Paso Robles Hwy which borders the project on the south side and Central Avenue which runs through the site. The project site's northern boundary is Margalo Street. **Figures 1 and 2** (***Regional Location Map*** *and* ***Vicinity Location Map***, respectively) illustrate the location of the project site in both a regional and local context. **Figure 3**, (***Aerial Photo***) provides a plan view aerial photo of the project site and immediate vicinity.

The site can be found in the U.S. Geological Survey (USGS) 7.5-minute Wasco topographic quadrangle map T. 27 S., R. 24 E., Section 2. The Assessor's Parcel Numbers for the site are 487-010-04, 487-010-13, 487-010-37, 478-010-42, 487-290-01, 478-290-06, 478-290-14, 478-290-15, and 478-290-16.

2.2 Statement of Objectives

Based on information from the Applicant, the overarching goal and objective of the proposed Wasco Center Project is to create an commercial and residential developed environment that is consistent with the City of Wasco General Plan. Among the specific project goals and objectives are the following:

- To provide a Mixed Use Development which includes Retail, Shops, Restaurants, Movie Theater, and Hotel catering to the traveling public as well as the community's needs.
- To assist the City in meeting its goals to diversify housing opportunities within the City for its residents and fill an identified market need for multi-family housing by providing it on-site.
- To assist the City in maintaining its overall high level of circulation service, and increase neighborhood connectivity.
- To promote healthy community living that can allow for growth and development while also maintaining a sensitive focus to respecting the natural environment and improving upon the existing infrastructure.
- To enhance the use of State Route 46 as the circulation and commercial "spine" of the community.
- To promote a pedestrian-friendly environment, one that encourages visitors and residents alike to walk throughout the Wasco Center.

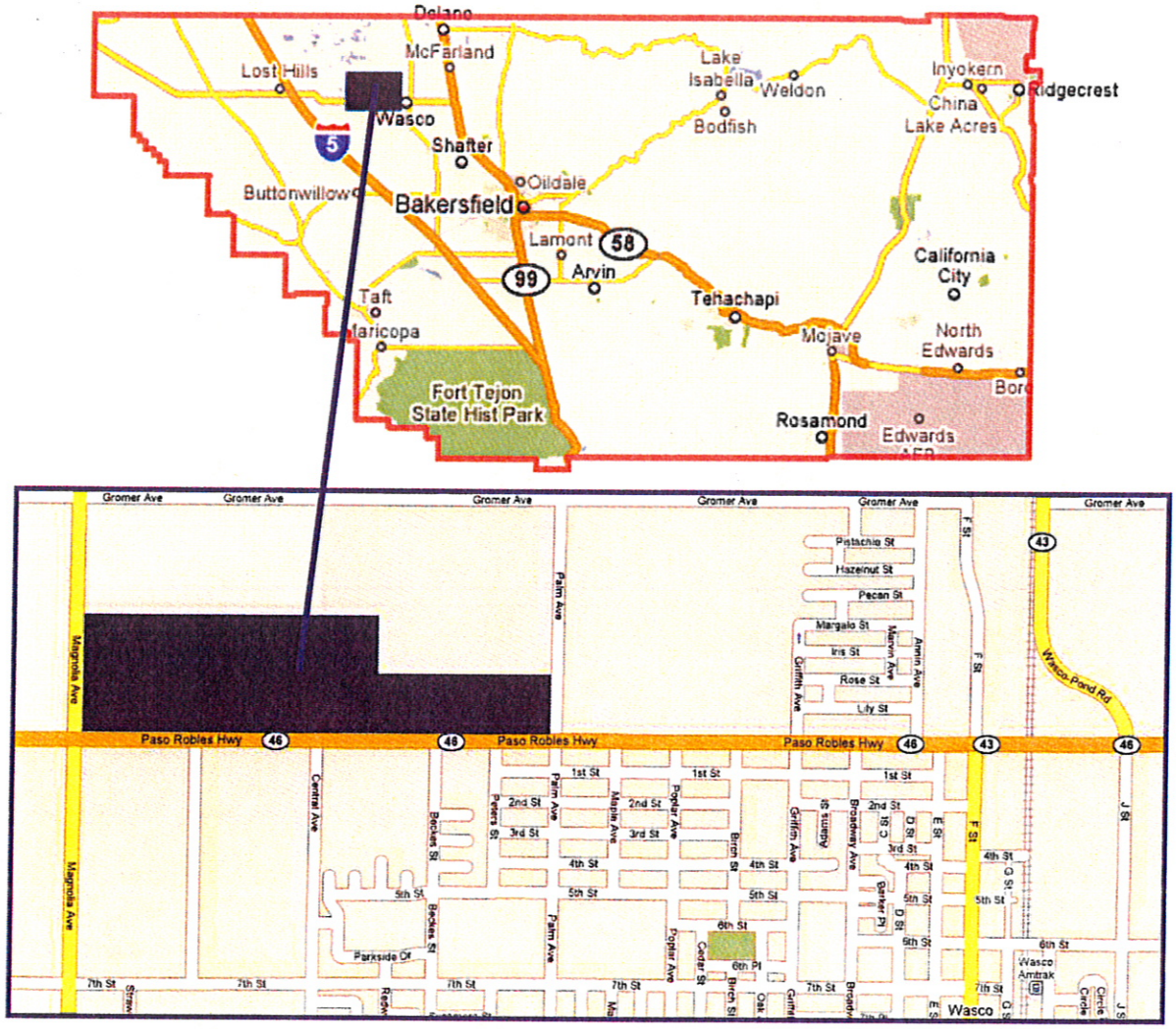


Figure 1 Regional Location Map

(Source: PSOMAS)

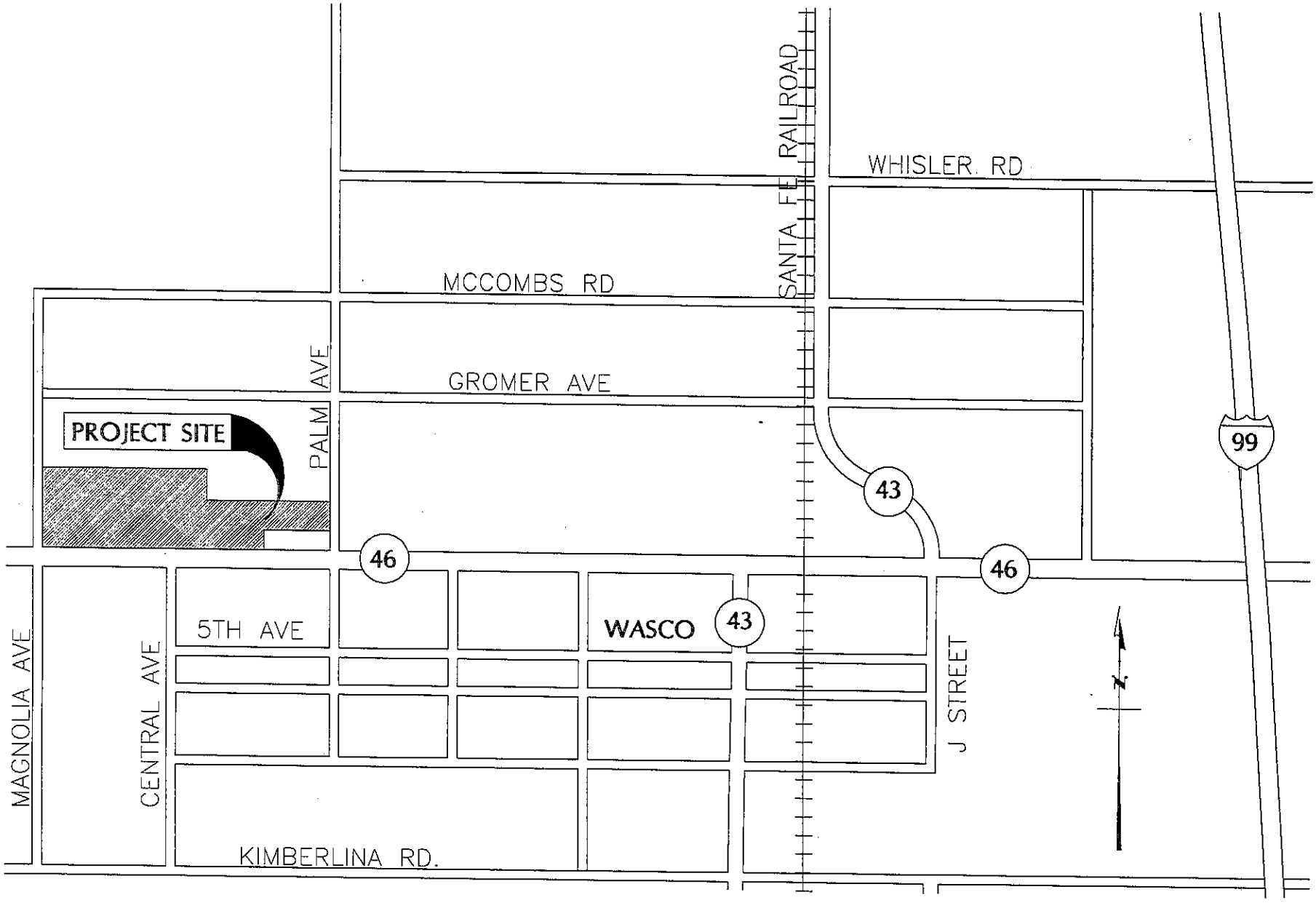
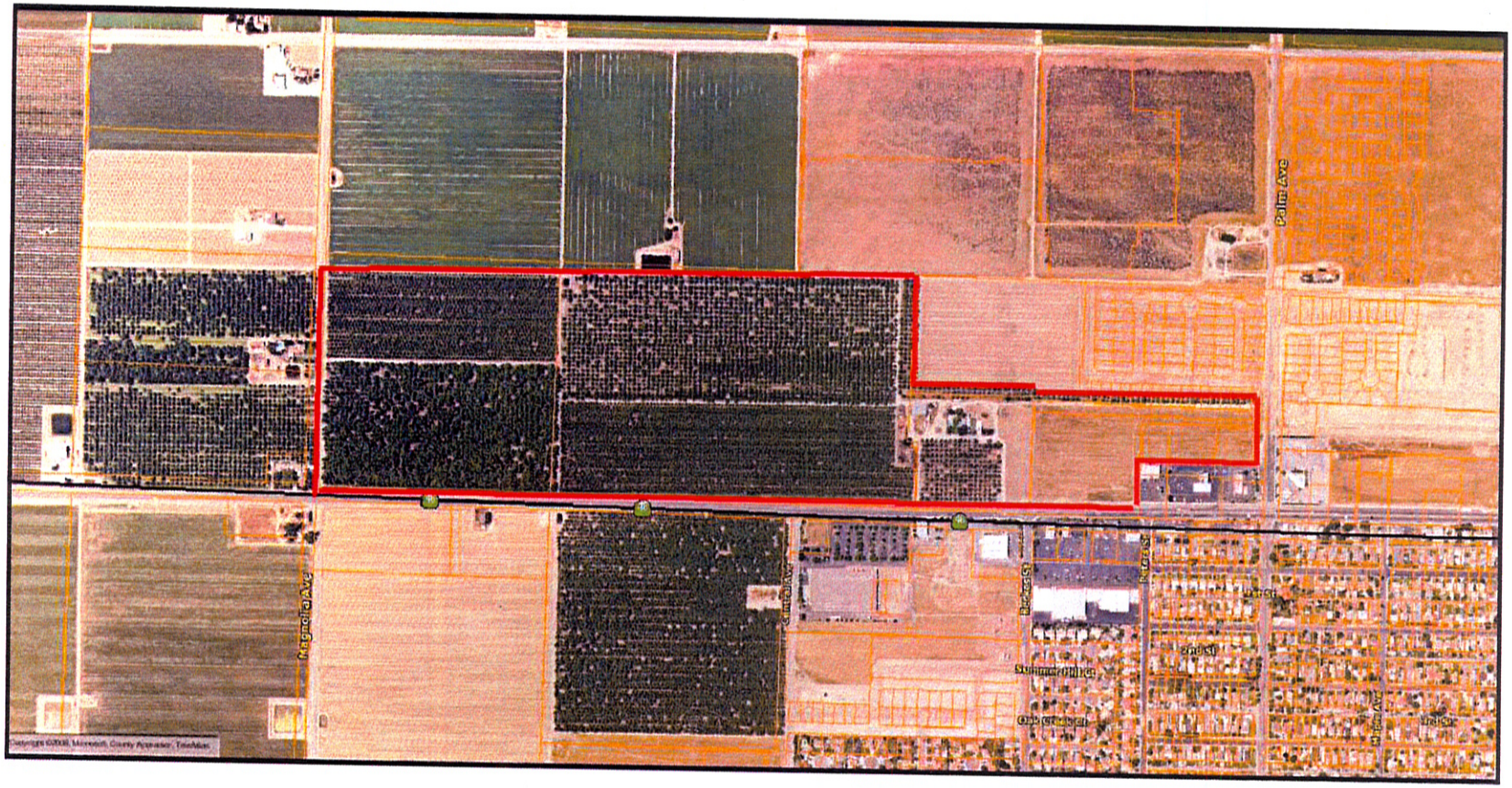


Figure 2 Vicinity Location Map

(Source: PSOMAS)



PSOMAS

N

500 ft

LandVision

Figure 3 Aerial Photo

(Source: PSOMAS)

2.3 General Site/Vicinity Environmental Setting

The project site comprises approximately 112-acres. The westernmost 97.6 acres of the project site are presently almond and walnut orchards. A small farm (9.4 ac) with a house and orchard is also located onsite (See previous **Figure 2**). The remainder of the site is vacant undeveloped land. Overall, the project site is relatively level with almost no notable slope orientation and devoid of any substantial topographic relief. Irrigation water for the 97.6 ac orchards is provided by the Shafter irrigation district. Irrigation for the small farm is via a private onsite well. The project site has an existing sewer force main located along the future alignment of Central Avenue. This force main discharges into a 12" gravity sewer approximately 780 feet north of State Route 46.

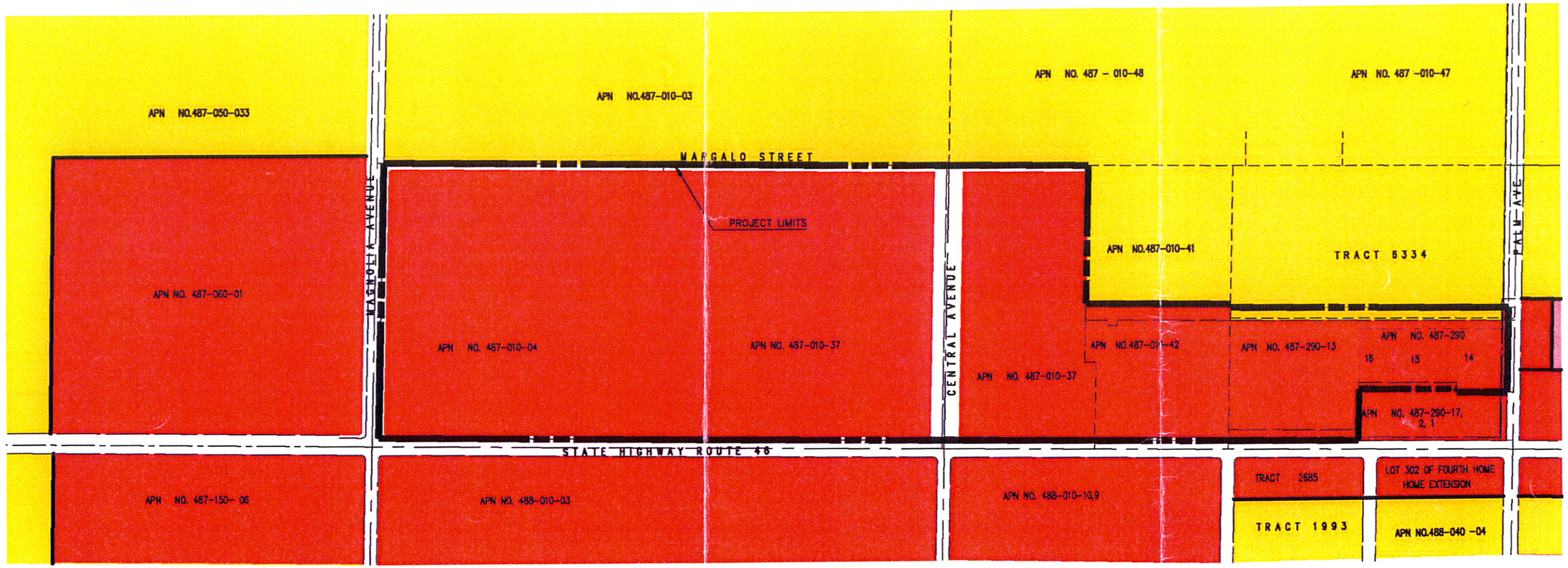
2.4 Project Relationship to Existing Land Use Plans, Policies and Controls

Figure 4 (***Wasco General Plan Land Use Designations - Project Site and Vicinity***) displays the spatial distribution of the Wasco General Plan land use designations for the project site and vicinity. As shown, the City of Wasco General Plan Land Use Map presently designates the project site with the following land use designations:

- ***Low Density Residential***
- ***Community Retail Commercial***

The portion of the project site designated as Low Density Residential is a small 1.7 acre strip of land on the site's east side. The remainder of the site is entirely designated as Community Retail Commercial. As discussed in greater detail below, the proposed project is comprised of a mix of land uses that is generally consistent with the intended mix of land uses currently envisioned by the Wasco General Plan for the project site, that is, commercial and residential uses. However, while generally consistent with regard to land use type, neither the amount of land currently designated for residential uses nor the type of residential development permitted under the current residential land use designation (single-family residential) would accommodate development of the proposed project. With regard to zoning, the entire project site is classified as C-R (Community Retail Commercial). As a consequence, at present the project site does not possess a zoning classification which would allow development of the residential land use component of the Wasco Center project. However, a City's General Plan land use designation for a particular area is always the ultimate determinant for that site's ultimate land use development, regardless of the zoning classification. As such, were the zoning for the project site be brought into conformity with the General Plan as required by State law, no issue of project inconsistency with any known current or future land use plans, policies and controls have been identified.

It is noted that the majority of the project site was once, but has since been removed from under being under the auspices of the Williamson Act. There presently exists an exception. The small 9.4-acre farm is presently under Williamson Act Contract. However, a non-renewal notice has been filed for the subject property. The site of the proposed project generally, and the subject property specifically, is in an area planned for urban expansion in the Wasco General Plan. Pursuant to Policy 12 of the Agricultural Element of the Wasco General Plan, the City encourages sites under Williamson Act Contract within such urban expansion areas to file for non-renewal. As a consequence, the non-renewal notice filed for the subject property was an action consistent with the urban expansion goals and objectives promulgated by the Wasco General Plan.



LEGEND

- COMMUNITY RETAIL COMMERCIAL
- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL

TRACT No. 7127

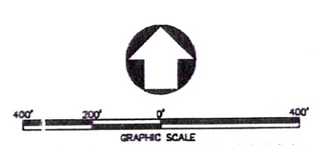


Figure 4 *(Source: PSOMAS)*
Wasco General Plan Land Use Designations - Project Site & Vicinity

2.5 Project Characteristics

Development of the Wasco Center project as currently planned first requires obtaining the approval of various discretionary entitlements from the Wasco City Council. These include:

- *General Plan Amendment No. 08-02*
- *Zone Change No. 08-06*
- *Precise Development Plan No. 08-04*
- *Vesting Tentative Tract Map No. 7127, and*
- *Williamson Act Cancellation No. 08-02*

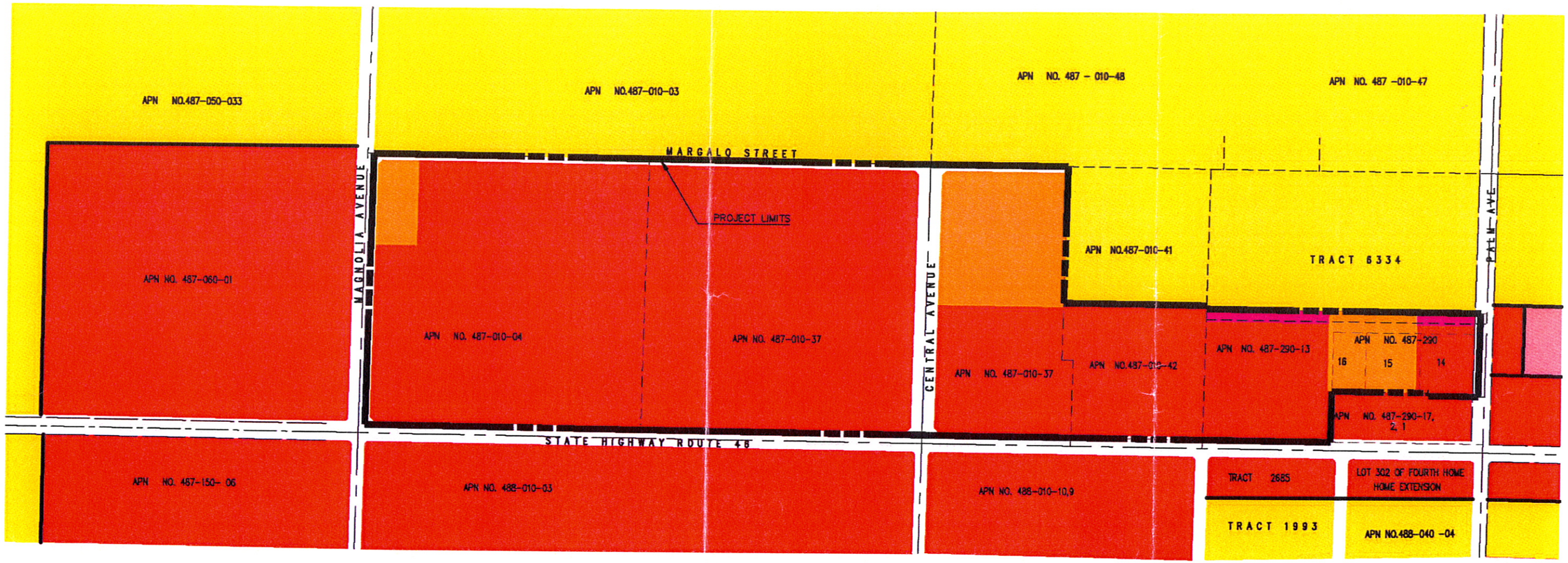
Each of the foregoing are discussed and described in greater detail on the pages that follow.

2.5.1 General Plan Amendment No. 08-02

Previous Section 2.4, *Project Relationship to Existing Land Use Plans, Policies and Controls*, textually described, and graphically depicted the spatial distribution of the General Plan land use designations (Community Retail Commercial and Low Density Residential) currently assigned to the site of the proposed project. In short, although the current General Plan land use designations identified for the project site would facilitate development of commercial and residential land uses onsite, the types, locations and intensities of commercial and residential land uses proposed as part of Wasco Center could not be accommodated. Based on the foregoing, the project proponent proposes to modify the amount, distribution and type of General Plan land use designations allocated to the project site in a manner exhibited in **Figure 5** (***Proposed Wasco General Plan Land Use Designations-Project Site***) and tabulated in **Table 1** (***Existing and Proposed Wasco General Plan Land Use Designations and Attendant Zoning Classifications***) below.

Table 1 - Existing and Proposed Wasco General Plan Land Use Designations and Attendant Zoning Classifications *(Source: PSOMAS, 2008)*

	Land Area (Existing)	Land Area (Proposed)
Wasco General Plan Land Use Designation		
Commercial Retail	**110.9**	**98.6**
High Density Residential	**-0-**	**14.0**
Low Density Residential	**1.7**	**-0-**
Zoning Classification		
Commercial Retail CR	**112.6**	**98.6**
Multi Family Dwelling R-3	**-0-**	**14.0**



LEGEND

- COMMUNITY RETAIL COMMERCIAL
- LIGHT DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- PROPOSED HIGH DENSITY RESIDENTIAL
- PROPOSED COMMUNITY RETAIL COMMERCIAL

TRACT No. 7127

400' 200' 0' 400'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

Figure 5
Proposed Wasco General Plan Land Use Designations - Project Site *(Source: PSOMAS)*

2.5.2 Zone Change 08-06

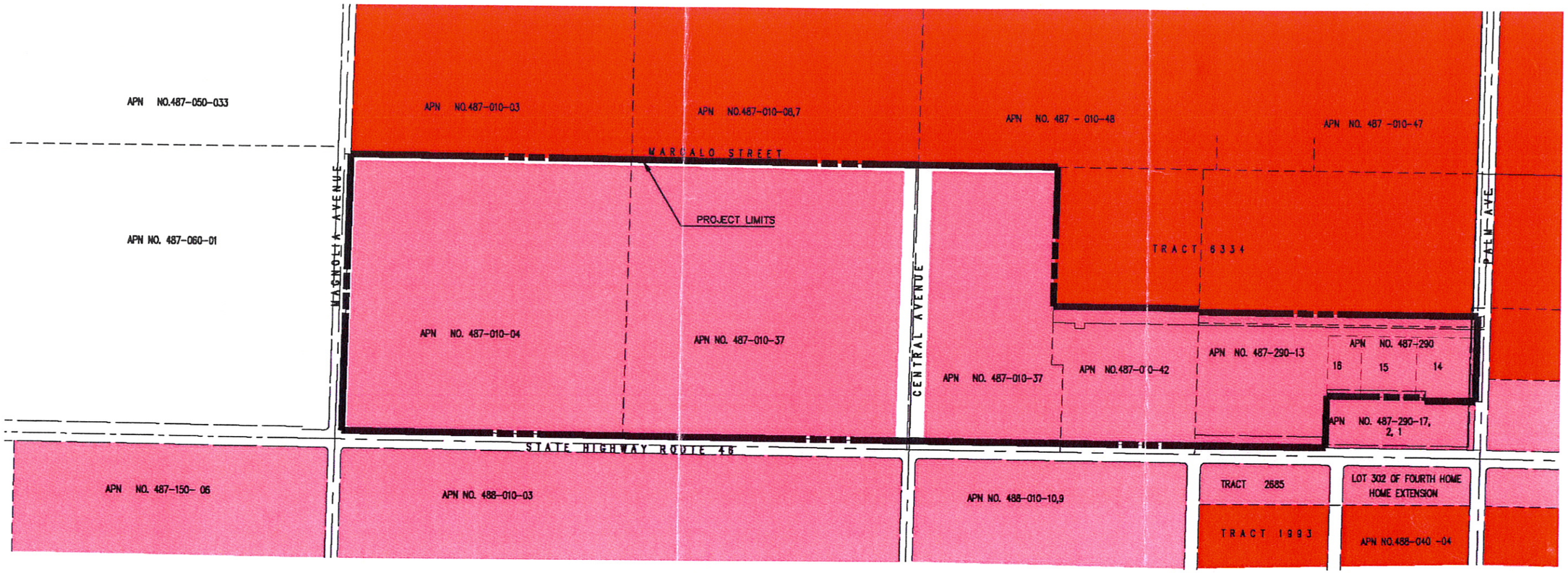
The site of the proposed project site is currently zoned C-R (Community Retail Commercial). **Figure 6** (***Existing Zoning Classifications – Project Site and Vicinity***) depicts the spatial arrangement of all current zoning classifications for the project site and vicinity. The project site is also part of the City of Wasco Design District 4 (DD4) Highway 46 Corridor. In order to implement the proposed project, the zoning classifications on the site of the proposed project would be required to be in conformance with the underlying Wasco General Plan land use designations for the project site. As such, the project proponent proposes to change the zoning classifications for the site of the proposed project as graphically depicted on **Figure 7** (***Proposed Zoning Classifications – Project Site)*** and as tabulated on previous **Table 1**.

2.5.3 Precise Development Plan 08-04

Development of the proposed Wasco Center Project will occur pursuant to specific site design parameters and controls memorialized in a precise development plan. The controls governing development on the project site have their roots in the City's Zoning Ordinance, General Plan, and in the case of the proposed project, the City of Wasco Design District 4 (DD4) Highway 46 Corridor. **Figure 8** (***Proposed Site Plan – Wasco Center)*** presents the site plan for the proposed Wasco Center project. **Table 2** ***(Statistical Development Summary – Wasco Center***) presents tabular data regarding the anticipated square footage at full build-out broken down by specific land use type. As indicated, the project proposes the development of 273,000 square feet of large box retail, a 105,000 square feet shopping center, a 75,000 square feet movie theater, a 100 key 4-story hotel, and 67,500 square feet of restaurant/office space. In addition, the project will include the development of 123 multi-family housing units, with 11,900 square feet of recreation buildings. While **Figure 8** presents the Wasco Center site plan in overview, the reader is referred to **Appendix A, Wasco Center Site Plan VTTM No. 7127**, in which can be found each of Wasco Center's development areas, with dimensioned access points, infrastructure improvements, street sections, parking locations and dimensions, and other project details on a lot by lot basis.

Table 2 – Statistical Development Summary – Wasco Center *(Source: JGM, 2008)*

Proposed Land Use	Square Feet / Units
Large Box Retail	273,000s.f.
Shopping Center	105,000s.f.
Movie Theater	75,000s.f.
Restaurants / Office	67,500s.f.
Community Retail	206,000s.f.
Recreation	11,900s.f.
Hotel	100 keys
Housing	123 units
Recreation buildings	11,900s.f.

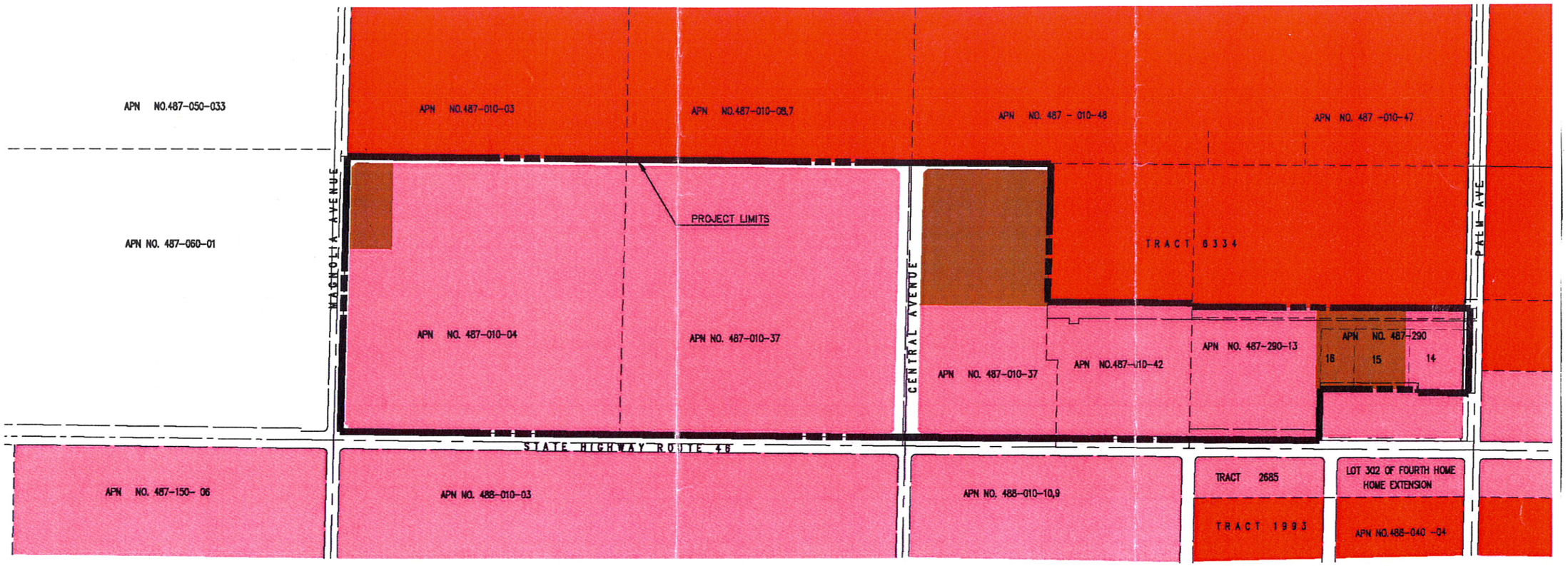


LEGEND

- C-R
- R-1-6
- DESIGN DISTRICT

TRACT No. 7127

Figure 6
Existing Zoning Classifications – Project Site and Vicinity *(Source: PSOMAS)*



LEGEND

- C-R
- R-1-6
- DESIGN DISTRICT
- PROPOSED R-3

TRACT No. 7127

Figure 7
Proposed Zoning Classifications – Project Site *(Source: PSOMAS)*

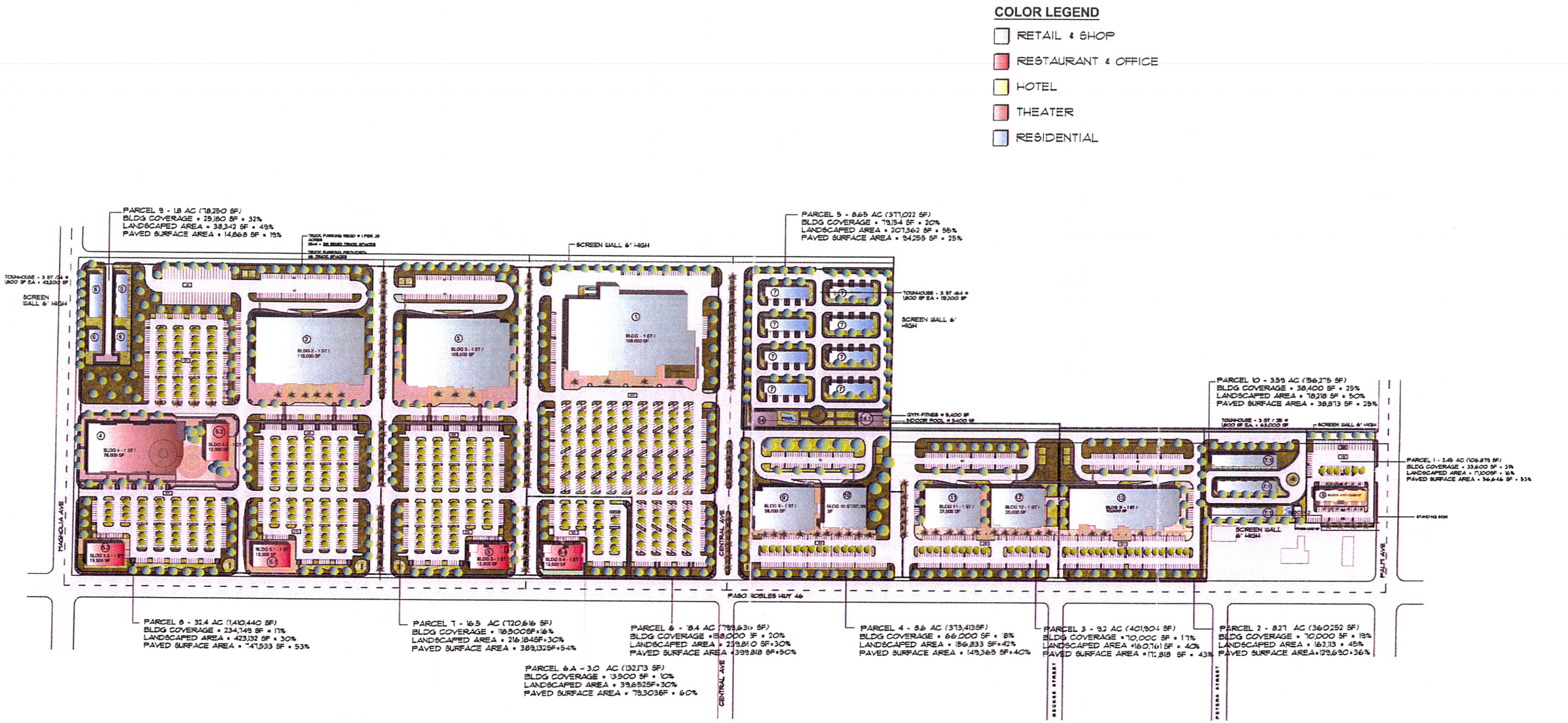


Figure 8
Proposed Site Plan – Wasco Center
(Source: Jenkins/Gales & Martinez, Inc)

As shown on **Figure 8**, the easternmost land use proposed for development on the project site will be a four-story, 100-key hotel. It will have a maximum roof height of 56 feet, 58 feet at the top of parapet, and take primary access from Palm Avenue. Immediately to the west, Wasco Center will include 35 multi-family residential units (townhomes). While, primary access to these residences will also occur from Palm Avenue, secondary access will be available from commercial areas planned further west. As also depicted on **Figure 8**, west of the aforementioned residences, Wasco Center will essentially be developed with a variety of commercial retail and other commercial uses along its entire Highway 46 frontage.

Between the residences and the proposed project's Central Avenue entrance, Wasco Center will be developed primarily with single-story commercial retail structures ranging in size from 27,000s.f. to 70,000s.f. Primary access to these commercial structures will occur via several driveways off of Highway 46. East of Central Avenue and north of westernmost single-story commercial retail structure, Wasco Center proposes to develop 64 townhouses in eight separate structures. Primary access to this component of Wasco Center will occur from Margalo Street which is aligned east-west along the project site's northwestern periphery.

Immediately west of Central Avenue, Wasco Center proposes the future development of one of its Large Box Retail structures. It has been programmed to comprise 158,000s.f. The parcel containing this structure will also include a restaurant pad immediately adjacent to Highway 46. Further to the west, Wasco Center will be developed with a 105,000s.f.shopping center. The parcel containing this shopping amenity will also include a restaurant pad immediately adjacent to Highway 46. Further west, Wasco Center proposes the future development of the second of its two proposed Large Box Retail structures. The second structure has been programmed to comprise 115,000s.f. and the parcel upon which it will be located, will also include a restaurant pad immediately adjacent to Highway 46. Furthest west on the site of the proposed project will be a movie theater with accompanying restaurant pad adjacent to Highway 46 as well as 24 additional townhouses with attendant recreation buildings to its north in the northwest corner of the project site. The residential component will have primary access from Margalo Street.

Overall, the proposed development meets or exceeds most requirements of the City of Wasco (P-D) Combining District, except for truck parking and the required number of trees in the parking lot areas. The exceptions are discussed below. The City's zoning ordinance has a requirement of 1 truck parking space for every quarter developed acre (zoning ordinance 17.51.05 - B.5). The project proponent maintains that this requirement is excessive and would generate a tremendous amount of unused pavement areas. In lieu of this truck parking requirement site-wide, the project proponent is proposing standard vehicle parking and additional landscaping. There are two proposed locations for truck parking envisioned on the Site. The proposed locations for the truck parking are the hotel parking lot and the north-west area of the site between the big box retail and the apartment buildings. In addition to the foregoing, it is noted that the proposed project exceeds the City requirements on setbacks, standard parking, and handicap parking by significant amounts.

With regard to landscaping, the proposed landscape average for the project site exceeds the City's 20% requirement. However, the number of trees required by the City of Wasco is 1 tree for every 3 parking spaces. It is the project proponent's contention that for a project of this size, this ratio of trees to spaces is excessive and not commensurate with industry standards. As a consequence, the project is proposing to plant trees at a ratio reflective of the industry standard. As part of the project's design features, green areas are utilized as potential drainage swales allowing drainage to percolate, thereby reducing runoff volumes. In addition the Wasco Center site is replacing above ground retention basins, which remain unused for a large part of the year with underground retention methods to control storm runoff. Additional control methods are being considered for the final design which will reduce the total retention volume.

2.5.4 Vesting Tentative Tract Map No. 7127

Figures 9a, 9b and 9c (***Proposed Vesting Tentative Tract Map No. 7127)*** display the spatial distribution of all development lots within the proposed Wasco Center Project boundaries. As shown, VTTM No. 7127 proposes the subdivision of the project site's 112.6 acres into 11 numbered lots. Of these, Lots 1, 3, 4, 5, 7, 8, 9 & 10 will be Commercial while lots 2, 6 and 11 will be Residential.

Phasing

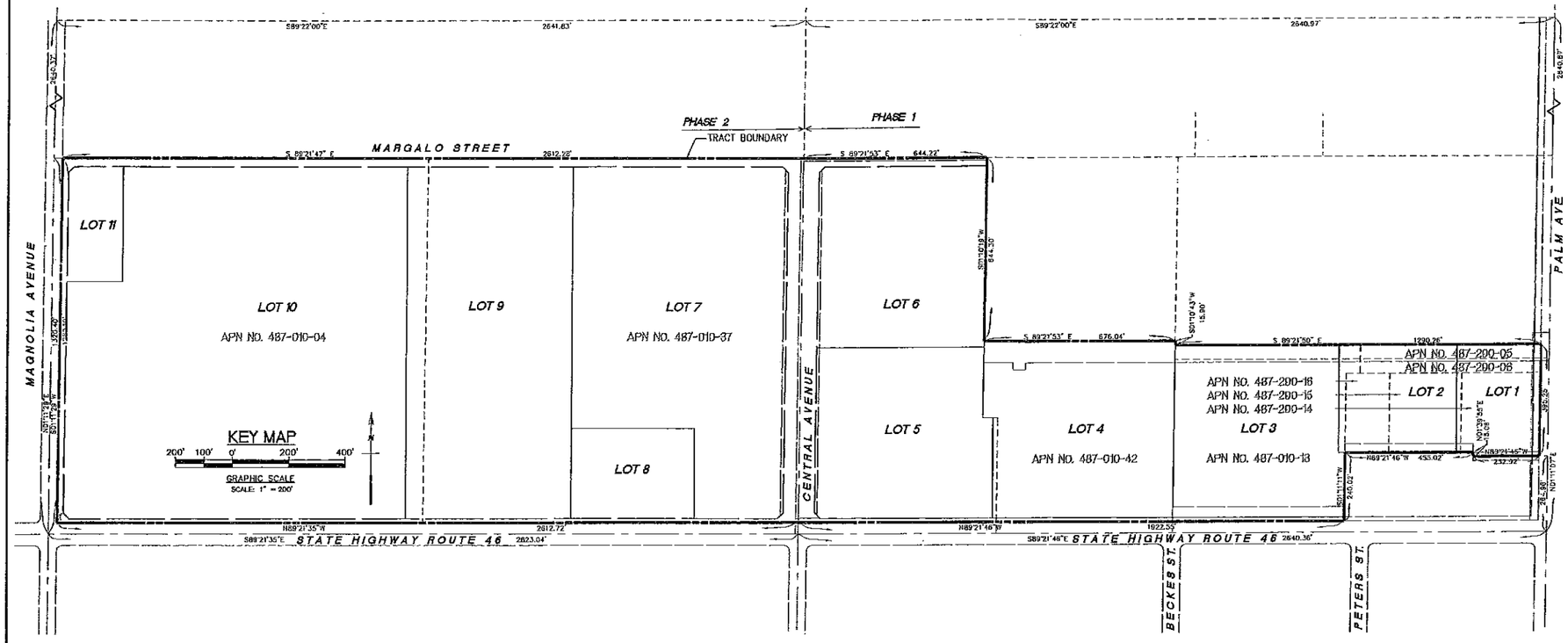
The subject proposed VTTM also indicates that two phases of development are proposed. Phase 1 of Wasco Center essentially encompasses all Wasco Center development east of the centerline of Central Avenue to Palm Avenue and would thus include the hotel, the adjoining townhomes, all of the single-story retail commercial structures, and the 64 townhomes adjoining and east of Central Avenue. Phase 2 would include all development west of the Central Avenue centerline. It is noted that while planned for two phases, incremental development within each phase will occur in response to market conditions.

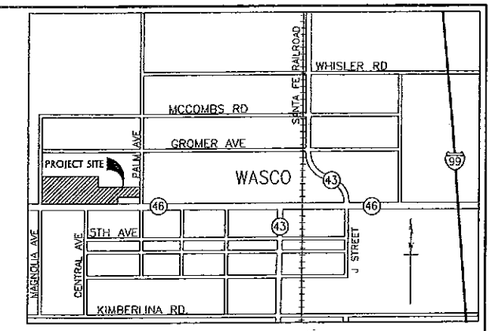
2.5.5 Williamson Act Cancellation 08-02

As indicated previously, the majority of the overall project site was once, but has since been removed from being subject to a land use contract or agreement pursuant to the Williamson Act. The one exception is Assessor's Parcel No. 487-010-42, a 9.43 parcel on which a small farm presently operates. However, on August 28, 2007 a Notice of Non-Renewal Land Contract or Agreement was filed regarding the subject parcel. **Figure 10 (*Assessor's Parcel No. 487-010-42)*** displays the location of the subject parcel in relation to the site of the proposed Wasco Center project. As a consequence of the foregoing, the project proponent is petitioning the City Council of Wasco for cancellation of all of an Agricultural Preserve Land Use Contract or Land use Agreement as authorized by the State Government Code pursuant to Kern County Board of Supervisors Resolution No. 72-69, dated January 25, 1972.

2.6 Other Permits Required

- Encroachment Permits (from CalTrans);
- Grading Permits (from the City of Wasco)
- Building Permits (from the City of Wasco)
- Easements and Dedications (Various Utilities/Agencies)





VICINITY MAP
NOT TO SCALE

GENERAL NOTES

1. THIS DEVELOPMENT WILL COMFORM WITH THE CITY OF WASCO SUBDIVISION STANDARDS
2. ASSESSOR'S PARCEL NUMBERS: 487-010-04, 487-010-13, 487-010-37, 487-010-42, 487-290-05, 487-290-06, 487-290-14, 487-290-15, 487-290-16
3. APROXIMATE ACREAGE: 112.6
4. NUMBER OF LOTS: 11 SEE PROPOSED USE BELOW
   LOTS 1,3,4,5,7,8,9 & 10 - COMMERCIAL
   LOTS 2,6, & 11 - RESIDENTIAL
5. WATER: CITY OF WASCO
6. SEWER; CITY OF WASCO
7. DRAINAGE IS IN CONFORMANCE WITH CITY OF WASCO SUBDIVISION STANDARDS
8. GAS: THE GAS COMPANY
9. ELECTRIC: PACIFIC GAS AND ELECTRIC COMPANY
10. TELEPHONE: SBC
11. CABLE T/V: BRIGHT HOUSE
12. EXISTING LAND USE; ORCHARDS AND VACANT LAND
13. PROPOSED LAND USE: COMMERCIAL RETAIL, AND RESIDENTIAL.
14. FIRE PROTECTION: IN CONFORMANCE WITH CITY OF WASCO FIRE DEPARTMENT STD'S.
15. CONTOUR INTERVAL: 1'
16. EXISTING ZONING: COMMERCIAL RETAIL
17. PROPOSED ZONING FOR LOTS 2,6, & 11
18. EXISTING GENERAL PLAN DESIGNATION: COMMERCIAL RETAIL
19. PROPOSED GENERA PLAN DESIGNATION FOR LOTS 2,6, & 11
20. PRIMARY ACCESS WILL BE PROVIDE ALONG HWY 46 AND CENTRAL AVENUE.
21. TOPOGRAPHIC SURVEY PREPARED BY PSOMAS ON 6-27-07.
22. SITE IS PLANTED IN ORCHARDS.
    ALL EXISTING TREES TO BE REMOVED WITHIN PROJECT BOUNDARY.

LEGEND

- PROPERTY BOUNDARY LINE
- STREET R/W LINE
- CURB LINE
- CENTER LINE
- FLOW LINE
- LOT LINE / PARCEL LINE
- EASEMENT LINE (WIDTH)
- ELEV — EXISTING CONTOUR LINE
- BUILDING FOOT PRINT LINE
- OVERHANG LINE
- EDGE OF DIRT ROAD
- EDGE OF ASPHALT PAVING
- MH: o — MANHOLE (SEWER, STORM DRAIN, POWER, TEL
- PP/TP — POWER POLE (P.P.) TELEPHONE POLE (T.P.)

LEGAL DESCRIPTION

PARCEL 1:
A.P.N. #487-010-04
THE SW 1/4 OF THE SW 1/4 OF SECTION 2, TOWNSHIP 27 SOUTH, RANGE 24 EAST, M.D.M., IN THE UNINCORPORATED AREA, COUNTY OF KERN, STATE OF CALIFORNIA, AS PER THE OFFICIAL PLAT THEREOF.
EXCEPT THE WEST 30 FEET AND THE SOUTH 40 FEET INCLUDED WITHIN PUBLIC ROADS.
ALSO EXCEPT ALL OIL, GAS, HYDROCARBON SUBSTANCES AND OTHER MINERALS WITHIN OR UNDERLYING SAID LAND.

PARCEL 2:
AN EASEMENT IN AND TO THE HEREINAFTER DESCRIBED PROPERTY AND IN AND TO THE EXISTING (AND ANY REPLACEMENT) WELL, WATER PUMPING EQUIPMENT AND FACILITIES, AND PIPELINES LOCATED THEREON, SUCH EASEMENT IS FOR THE BENEFIT OF AND APPURTENANT TO PARCEL 1 HEREIN ABOVE DESCRIBED AND IS (A) FOR WELL SITE AND WATER PIPELINE PURPOSES AND (B) FOR PURPOSES OF EXTRACTING WATER FROM SAID WELL (AND ANY REPLACEMENT WELL) AND DELIVERING SUCH WATER TO SAID PARCEL 1 IN UNLIMITED QUANTITIES FOR IRRIGATION AND OTHER USES ON SAID PARCEL 1. SUCH EASEMENT INCLUDES THE RIGHT TO ENTER UPON THE AREA OF SAID EASEMENT TO USE, OPERATE, REPAIR, REPLACE AND/OR MAINTAIN SAID WELL, WATER PUMPING EQUIPMENT AND FACILITIES, AND PIPELINES (INCLUDING ANY REPLACEMENTS THEREOF EXISTING THEREON FROM TIME TO TIME) FOR ALL OF SUCH PURPOSES. THE BURDEN AND BENEFIT OF SUCH EASEMENT SHALL RUN WITH THE LAND. THE LOCATION AND AREA OF SUCH EASEMENT IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:
ALL THAT PORTION OF PARCEL 1 OF PARCEL MAP 6156 IN THE CITY OF WASCO, COUNTY OF KERN, STATE OF CALIFORNIA, RECORDED DECEMBER 15, 1982IN BOOK 27, PAGE 82 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF SAID PARCEL, FROM WHICH POINT THE NORTHEAST CORNER OF SAID PARCEL BEARS NORTH 1°0'36" EAST, 644.32 FEET; THENCE ALONG SAID EAST LINE, SOUTH 1010'36" WEST, 75.88 FEET; THENCE NORTH 89°21'51" WEST, 528.27 FEET; THENCE SOUTH 00°38'09" WEST, 25.00 FEET; THENCE NORTH 89°21'51" WEST, 45.00 FEET; THENCE NORTH 00°38'09" EAST, 25.00 FEET; THENCE NORTH 89°21'51" WEST, 104.32 FEET TO THE WEST LINE OF SAID PARCEL; THENCE ALONG SAID WEST LINE, NORTH 1°10'09" EAST, 75.88 FEET; THENCE SOUTH 89°21'51" EAST, 676.06 FEET TO THE POINT OF BEGINNING.

PARCEL 3: A.P.N. #487-010-37
THE SW 1/4 OF THE SE 1/4 AND THE SE 1/4 OF THE SW 1/4 OF SECTION 2, TOWNSHIP 27 SOUTH, RANGE 24 EAST, M.D.M., IN THE UNINCORPORATED AREA, COUNTY OF KERN, STATE OF CALIFORNIA, AS PER THE OFFICIAL PLAT THEREOF.
EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA, BY DEED DATED JULY 31, 1928 AND RECORDED AUGUST 25, 1928 IN BOOK 262, PAGE 28 OF OFFICIAL RECORDS.
ALSO EXCEPTING PARCEL 1 OF PARCEL MAP 6156, AS PER MAP RECORDED DECEMBER 15, 1981 IN BOOK 27, PAGE 82 OF PARCEL MAPS.
ALSO EXCEPTING FROM THE ABOVE DESCRIBED LAND, 1/2 OF ALL OIL, GAS AND OTHER MINERAL AND MINERAL RIGHTS OF WHATEVER NATURE AND DESCRIPTION IN AND UNDER SAID LAND, AS RESERVED IN THE DEED EXECUTED BY SECURITY COMPANY AND RECORDED NOVEMBER 20, 1934 IN BOOK 544, PAGE 330 OF OFFICIAL RECORDS.

AN EASEMENT IN AND TO THE HEREINAFTER DESCRIBED PROPERTY AND IN AND TO THE EXISTING (AND ANY REPLACEMENT) WELL, WATER PUMPING EQUIPMENT AND FACILITIES, AND PIPELINES LOCATED THEREON, SUCH EASEMENT IS FOR THE BENEFIT OF AND APPURTENANT TO PARCEL 3 HEREIN ABOVE DESCRIBED AND IS (A) FOR WELL SITE AND WATER PIPELINE PURPOSES AND (B) FOR PURPOSES OF EXTRACTING WATER FROM SAID WELL (AND ANY REPLACEMENT WELL) AND DELIVERING SUCH WATER TO SAID PARCEL 3 IN UNLIMITED QUANTITIES FOR IRRIGATION AND OTHER USES ON SAID PARCEL 3. SUCH EASEMENT INCLUDES THE RIGHT TO ENTER UPON THE AREA OF SAID EASEMENT TO USE, OPERATE, REPAIR, REPLACE AND/OR MAINTAIN SAID WELL, WATER PUMPING EQUIPMENT AND FACILITIES, AND PIPELINES (INCLUDING ANY REPLACEMENTS THEREOF EXISTING THEREON FROM TIME TO TIME) FOR ALL OF SUCH PURPOSES. THE BURDEN AND BENEFIT OF SUCH EASEMENT SHALL RUN WITH THE LAND. THE LOCATION AND AREA OF SUCH EASEMENT IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:
ALL THAT PORTION OF PARCEL 1 OF PARCEL MAP 6156, IN THE CITY OF WASCO, COUNTY OF KERN, STATE OF CALIFORNIA, RECORDED DECEMBER 15, 1982 IN BOOK 27, PAGE 82 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT ON THE EAST LINE OF SAID PARCEL, FROM WHICH POINT THE NORTHEAST CORNER OF SAID PARCEL BEARS NORTH 1°0'36" EAST, 644.32 FEET; THENCE ALONG SAID EAST LINE, SOUTH 1°0'36" WEST, 75.88 FEET; THENCE NORTH 89°21'51" WEST, 528.27 FEET; THENCE SOUTH 00°38'09" WEST, 25.00 FEET; THENCE NORTH 89°21'51" WEST, 45.00 FEET; THENCE NORTH 00°38'09" EAST, 25.00 FEET; THENCE NORTH 89°21'51" WEST, 104.32 FEET TO THE WEST LINE OF SAID PARCEL; THENCE ALONG SAID WEST LINE, NORTH 1°10'09" EAST, 75.88 FEET; THENCE SOUTH 89°21'51" EAST. 676.06 FEET TO THE POINT OF BEGINNING.

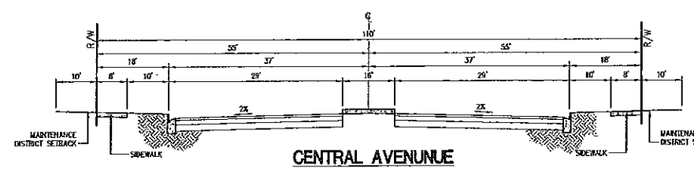
PARCEL 5: A.P.N. #487-290-13; 487-010-51
PARCEL 2 OF LOT LINE ADJUSTMENT NO. 05-03, AS PER CERTIFICATE OF COMPLIANCE RECORDED JUNE 15, 2005 AS INSTRUMENT NO. 0205153764 OF OFFICIAL RECORDS. MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEING A LOT LINE ADJUSTMENT OF ALL THAT PORTION OF THE SE 1/4 OF SECTION 2, TOWNSHIP 27 SOUTH, RANGE 24 EAST, M.D.M., IN THE CITY OF WASCO, COUNTY OF KERN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 2 IN TOWNSHIP 27 SOUTH, RANGE 24 EAST, MOUNT DIABLO MERIDIAN, IN THE CITY OF WASCO, COUNTY OF KERN, STATE OF CALIFORNIA.

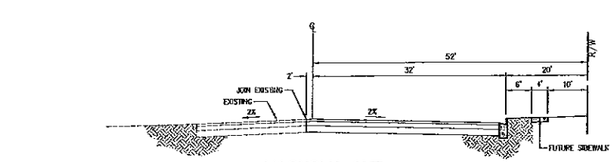
EXCEPTING THEREFROM THAT PORTION OF SAID LAND LYING WITHIN THE BOUNDARIES OF PARCEL MAP NO. 10669, AS PER MAP RECORDED MARCH 23, 2000 IN BOOK 51, PAGE 30 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF KERN COUNTY.
ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA, BY DEED DATED JULY 31, 1928 AND RECORDED AUGUST 25, 1928 IN BOOK 262, PAGE 28 OF OFFICIAL RECORDS.
ALSO EXCEPTING FROM THE ABOVE DESCRIBED LAND, 1/2 OF ALL OIL, GAS AND OTHER MINERALS AND MINERAL RIGHTS OF WHATEVER NATURE AND DESCRIPTION IN AND UNDER SAID LANDS, AS RESERVED IN THE DEED EXECUTED BY SECURITY COMPANY AND RECORDED NOVEMBER 20, 1934 IN BOOK 544, PAGE 330 OF OFFICIAL RECORDS.

PARCEL 6: A.P.N. #487-290-06; 487-290-05
THE SE 1/4 OF THE SE 1/4 OF THE SE 1/4 OF SECTION 2, TOWNSHIP 27 SOUTH, RANGE 24 EAST, M.D.M., IN THE CITY OF WASCO, COUNTY OF KERN, STATE OF CALIFORNIA, AS PER THE OFFICIAL PLAT THEREOF.
EXCEPT THEREFROM ANY PORTION LYING WITHIN PARCEL 1 OF PARCEL MAP 3161 FILED DECEMBER 6, 1989 IN BOOK 29, PAGE 114 AND 115 OF PARCEL MAPS.
ALSO EXCEPTING THEREFROM THAT PORTION LYING WITHIN PARCEL MAP 10498 FILED JULY 10, 1998 IN BOOK 49, PAGES 187 AND 188 OF PARCEL MAPS.
EXCEPTING THEREFROM THAT PORTION OF SAID LAND LYING WITH THE BOUNDARIES OF PARCEL MAP NO. 10669, AS PER MAP RECORDED MARCH 23, 2000 IN BOOK 51, PAGE 30 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF KERN COUNTY.
ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA, BY DEED DATED JULY 31, 1928 AND RECORDED AUGUST 25, 1928 IN BOOK 262, PAGE 28 OF OFFICIAL RECORDS.
ALSO EXCEPTING FROM THE ABOVE DESCRIBED LAND, 1/2 OF ALL OIL, GAS AND OTHER MINERALS AND MINERAL RIGHTS OF WHATEVER NATURE AND DESCRIPTION IN AND UNDER SAID LANDS, AS RESERVED IN THE DEED EXECUTED BY SECURITY COMPANY AND RECORDED NOVEMBER 20, 1934 IN BOOK 544, PAGE 330 OF OFFICIAL RECORDS.

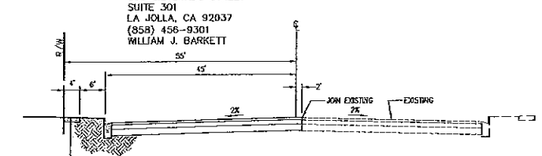
PARCEL 7: A.P.N. #487-290-14, 15, AND 16
PARCELS 2, 3, AND 4 OF PARCEL MAP 10669, IN THE CITY OF WASCO, COUNTY OF KERN, STATE OF CALIFORNIA, AS PER MAP RECORDED MARCH 23, 2000 IN BOOK 51, PAGE 30 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.
EXCEPTING FROM THE ABOVE DESCRIBED LAND, 1/2 OF ALL OIL, GAS AND OTHER MINERALS AND MINERAL RIGHTS



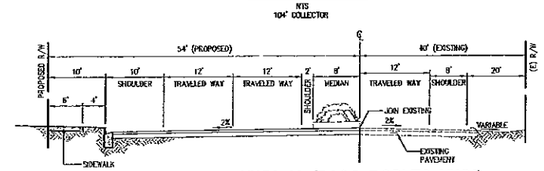
CENTRAL AVENUNUE
NTS
110' ARTERIAL NTS



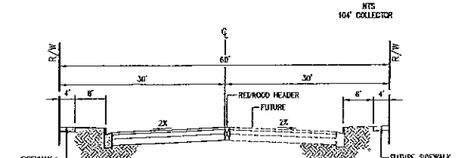
MAGNOLIA AVE
NTS
104' COLLECTOR



PALM AVENUE
NTS
104' COLLECTOR



HWY 46 (PASO ROBLES HWY)
NTS



MARGALO STREET
NTS
60' LOCAL COLLECTOR

OWNER:

WASCO INVESTMENT, LLC.
800 SILVERADO STREET
SUITE 301
LA JOLLA, CA 92037
(858) 456-9301
WILLIAM J. BARKETT

CAL VALLEY, LLC
800 SILVERADO STREET
SUITE 301
LA JOLLA, CA 92037
(858) 456-9301
WILLIAM J. BARKETT

ENGINEER

PSOMAS
4540 CALIFORNIA AVE
BAKERFIELD, CA 93309
661-631-2311
661-631-2782

SUBDIVIDER

WASCO INVESTMENT, LLC.
800 SILVERADO STREET
SUITE 301
LA JOLLA, CA 92037
(858) 456-9301
WILLIAM J. BARKETT

Figure 9a
Proposed Vesting Tentative Tract Map No. 7127
(Source: PSOMAS)

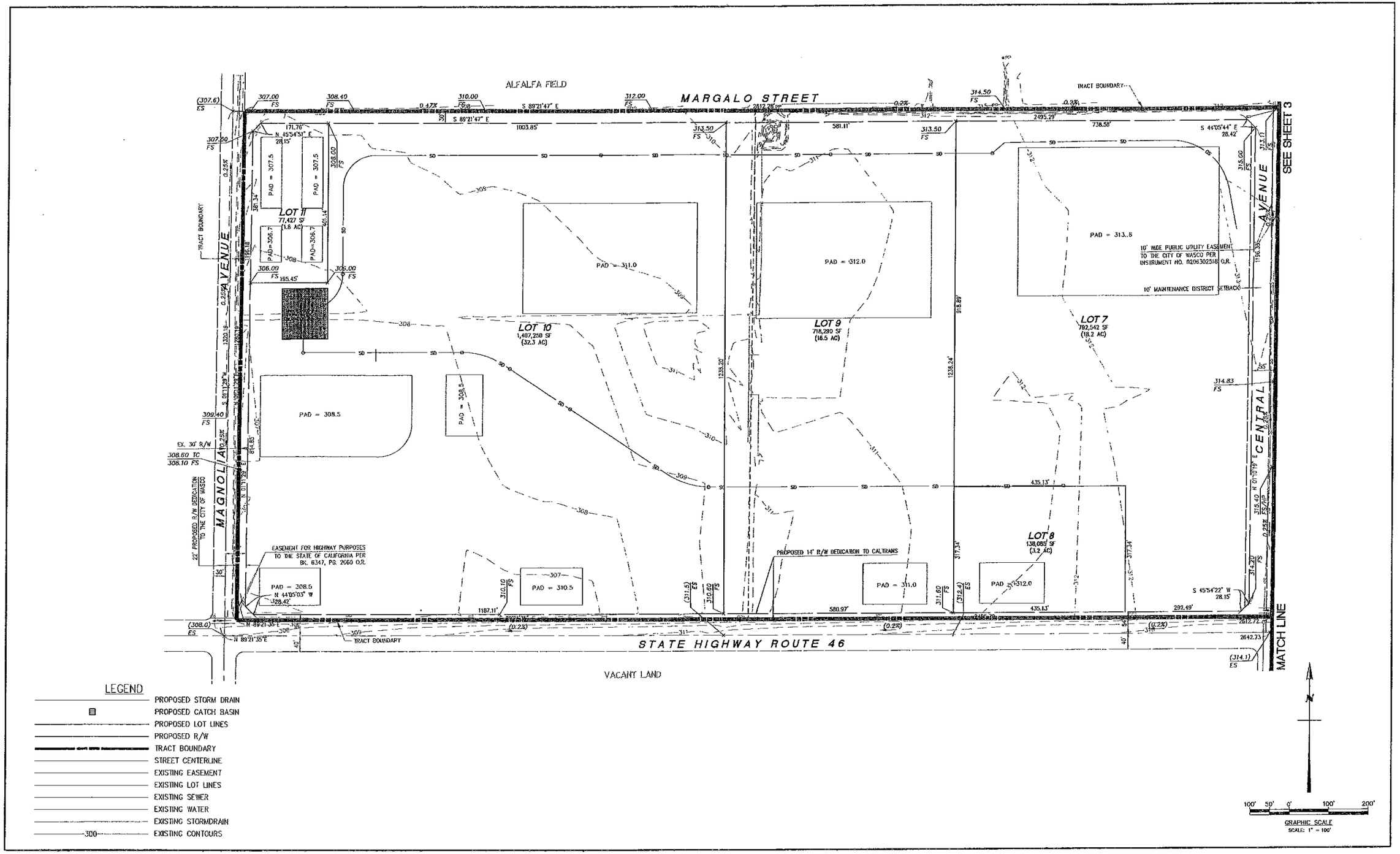


Figure 9b
Proposed Vesting Tentative Tract Map No. 7127
(Source: PSOMAS)

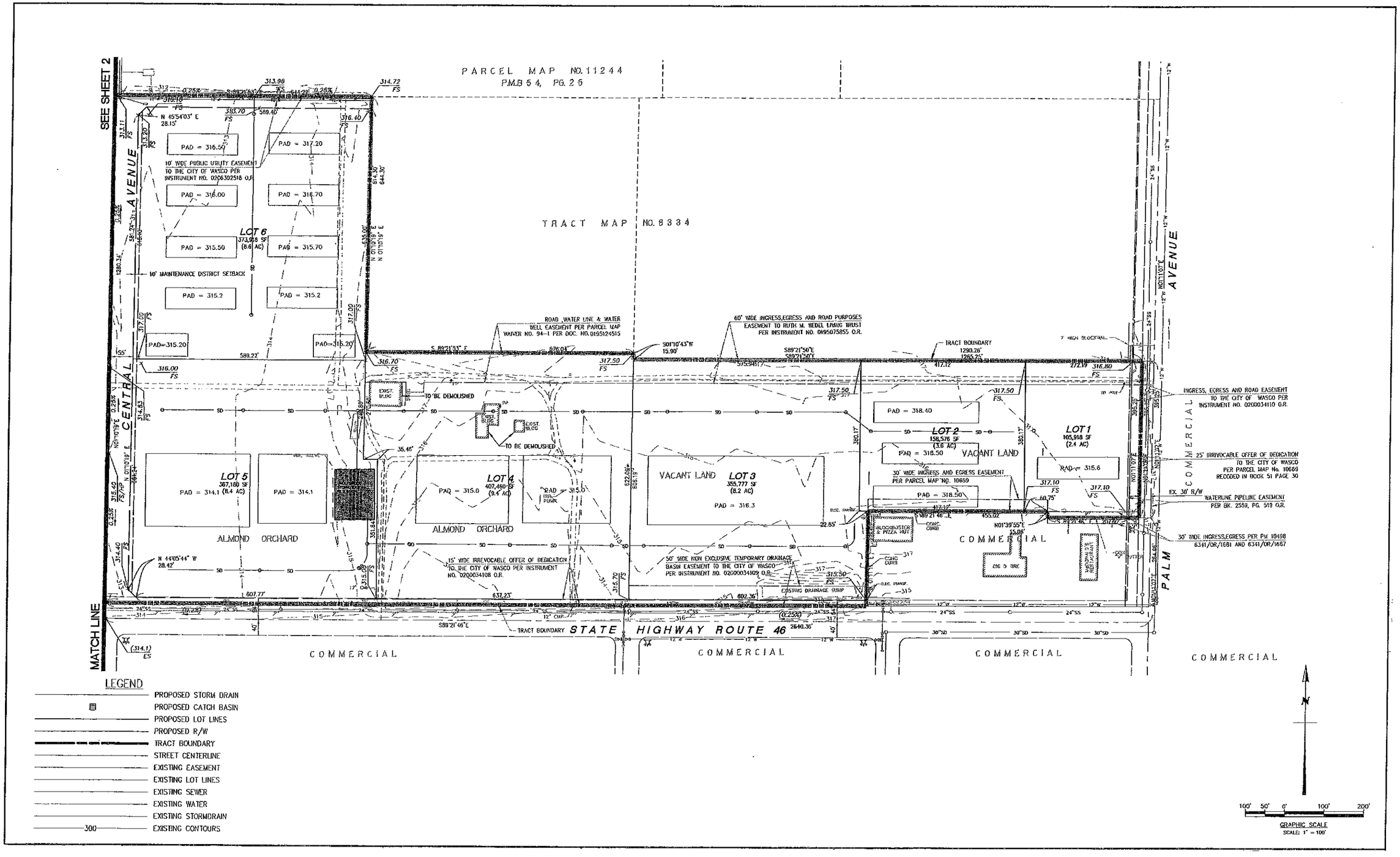


Figure 9c
Proposed Vesting Tentative Tract Map No. 7127 *(Source: PSOMAS)*

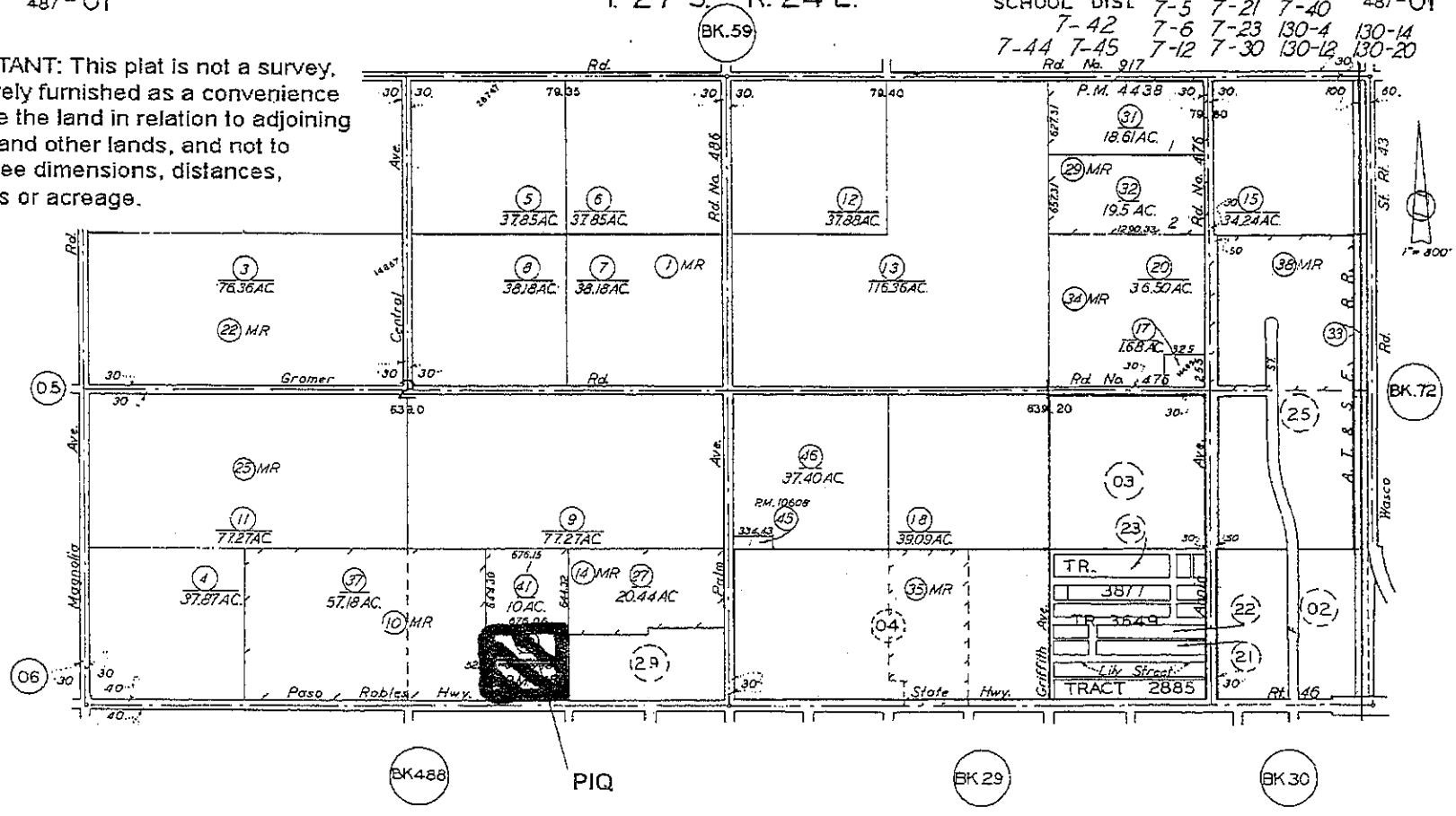
487 - 01

T. 27 S., R. 24 E.

SCHOOL DIST. 7-4 7-20 7-38 7-5 7-21 7-40 7-42 7-6 7-23 130-4 130-14 7-44 7-45 7-12 7-30 130-12 130-20

487-01

IMPORTANT: This plat is not a survey, it is merely furnished as a convenience to locate the land in relation to adjoining streets and other lands, and not to guarantee dimensions, distances, bearings or acreage.



See Bk 059 Pg 32 for Unit Mineral Rights.

Revised: May 21, 2002

Note: This map is for assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.

ASSESSORS MAP NO. 487-01
COUNTY OF KERN

Figure 10 Assessors Parcel No. 487-010-42

(Source: PSOMAS)

3.0 CITY OF WASCO ENVIRONMENTAL CHECKLIST FORM

3.1 ENVIRONMENTAL CHECKLIST INTRODUCTION

Project Title:
Wasco Center

Reference Application Numbers:
TBD

Lead Agency:
City of Wasco

Contact Person and Telephone No.:
Jake Raper 661.758.7211

Project Proponent and Address:
Wasco Investments, LLC and Cal Valley, LLC
800 Silverado Street, Suite 301
La Jolla, CA 92037

Contact Person and Telephone No.:
William Barkett 858.456.9301

Project Location:
Paso Robles Road, Wasco, California

Existing General Plan Designation:
Community Retail Commercial & Low Density Residential

Existing Zoning Classification:
CR Community Retail Commercial

Existing Site Conditions:
Please refer to Section 2.3 in this document.

Surrounding Land Uses:
Please refer to Sections 2.1 and 2.3 of this document.

Project Description:
Please refer to Section 2.0 of this document

Other Public Agencies Whose Approval is Required (Responsible or Trustee Agencies):
An Encroachment Permit from Caltrans may be required. No permits from Responsible or Trustee Agencies are required.

3.2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agricultural Resources	☒	Air Quality
☒	Biological Resources	☐	Cultural Resources	☐	Geology/Soils
☐	Hazards & Hazardous Materials	☐	Hydrology/Water Quality	☐	Land Use/Planning
☐	Mineral Resources	☒	Noise	☐	Population/Housing
☐	Public Services	☐	Recreation	☒	Transportation/Traffic
☐	Utilities/Service Systems	☒	Mandatory Findings of Significance		

3.3 Determination

On the basis of this initial evaluation:

1. I find that the project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared. ☐

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

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

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

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

Signature **Date**

Jake Raper Jr., AICP, Acting Planning Director **for the City of Wasco**

3.4 Evaluation of Environmental Impacts:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced, as discussed below).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identity the following:

   a. Earlier Analysis Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:
   a. the significance criteria or threshold, if any, used to evaluate each question; and
   b. the mitigation measure identified, if any, to reduce the impact to less than significance.

CHECKLIST OF ENVIRONMENTAL IMPACT ISSUES:

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	❒	❒	■	❒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	❒	❒	■	❒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	❒	❒	■	❒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	❒	❒	■	❒
II. AGRICULTURE RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	❒	❒	■	❒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	❒	❒	■	❒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	❒	❒	❒	■

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
III. AIR QUALITY -- Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	❒	❒	■	❒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	❒	■	❒	❒
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	❒	■	❒	❒
d) Expose sensitive receptors to substantial pollutant concentrations?	❒	■	❒	❒
e) Create objectionable odors affecting a substantial number of people?	❒	❒	■	❒
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	❒	■	❒	❒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	❒	❒	■	❒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	❒	❒	■	❒

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	❒	❒	■	❒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	❒	❒	❒	■
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	❒	❒	❒	■
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	❒	❒	❒	■
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	❒	❒	■	❒
c) Directly/indirectly destroy a unique paleontological resource, site, feature?	❒	❒	■	❒
d) Disturb any human remains, including those interred outside of formal cemeteries?	❒	❒	❒	■
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	❒	❒	❒	❒
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	❒	❒	■	❒
(ii) Strong seismic ground shaking?	❒	❒	■	❒
(iii) Seismic-related ground failure, including liquefaction?	❒	❒	■	❒

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
(iv) Landslides?	❒	❒	❒	■
b) Result in substantial soil erosion or the loss of topsoil?	❒	❒	■	❒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	❒	❒	■	❒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	❒	❒	■	❒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	❒	❒	❒	■
VII. HAZARDS/HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	❒	❒	■	❒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	❒	❒	■	❒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	❒	❒	❒	■
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	❒	❒	❒	■
e) for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	❒	❒	■	❒
f) or a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	❒	❒	■	❒

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❒	❒	■	❒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	❒	❒	■	❒
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	❒	❒	■	❒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	❒	❒	■	❒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	❒	❒	■	❒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	❒	❒	■	❒
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm-water drainage systems or provide substantial additional sources of polluted runoff?	❒	❒	■	❒
f) Otherwise substantially degrade water quality?	❒	❒	■	❒
g) Place housing within a 100-year flood hazardarea as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	❒	❒	❒	■

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	❒	❒	❒	■
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	❒	❒	❒	■
j) Inundation by seiche, tsunami, or mudflow?	❒	❒	❒	■
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	❒	❒	■	❒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	❒	❒	■	❒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	❒	❒	■	❒
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	❒	❒	❒	■
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	❒	❒	❒	■
XI. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	❒	❒	■	❒
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	❒	❒	■	❒

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	■	❒	❒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	■	❒	❒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	■	❒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	❒	■
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	❒	❒	■	❒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	❒	❒	■	❒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	❒	❒	■	❒
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with providing new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environ. impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	❒	❒	■	❒

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
Police protection?	❒	❒	■	❒
Schools?	❒	❒	■	❒
Parks?	❒	❒	■	❒
Other public facilities?	❒	❒	■	❒
XIV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	❒	❒	■	❒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	❒	❒	■	❒
XV. TRANSPORTATION/TRAFFIC – Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	❒	■	❒	❒
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	❒	■	❒	❒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	❒	❒	❒	■
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	❒	❒	■	❒

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
e) Result in inadequate emergency access?	❒	❒	■	❒
f) Result in inadequate parking capacity?	❒	❒	■	❒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	❒	❒	■	❒
XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	❒	❒	■	❒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	■	❒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	■	❒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	❒	❒	■	❒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	❒	❒	■	❒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	❒	❒	■	❒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	❒	❒	■	❒

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	❒	■	❒	❒
b) Does the project have impacts that are individually limited, but cumulatively considerable?	❒	■	❒	❒
("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	❒	■	❒	❒

4.0 ENVIRONMENTAL ASSESSMENT

I. AESTHETICS

Setting

The site of the proposed project is relatively flat as is the surrounding terrain. The project site is comprised primarily of orchards except at its eastern end. As was seen on previous **Figure 3**, uneven commercial development along Highway 46, residential development under construction immediately north of the project site, and various agricultural and vacant parcels in relatively close proximity to the project site make both the project site and surrounding area rather aesthetically unremarkable. This characterization is substantiated in a recently prepared IS/MND & EA/FONSI addressing Highway 46 improvements through Wasco including along the entire project site frontage. It characterizes the visual quality of the project site vicinity as follows: "The visual quality of Segment 2 is poor. The view shed has no unity with the surrounding agricultural area. The streetscape along this segment of State Route 46 is not intact……." It is noted that there are no federal, state or locally-designated scenic corridors or roadways adjacent to or near the project site. In addition to the foregoing, it is noted that distant views or scenic vistas from or in the vicinity of the project site are also largely unremarkable. This is due primarily to the relative distance to foothills or areas of higher elevation from the project site and the absence of topographic relief on the valley floor in between. The foothills of the Sierras to the east are more than 15 miles away while to the west, the Diablo Range foothills are more than 20 miles away.

Evaluation

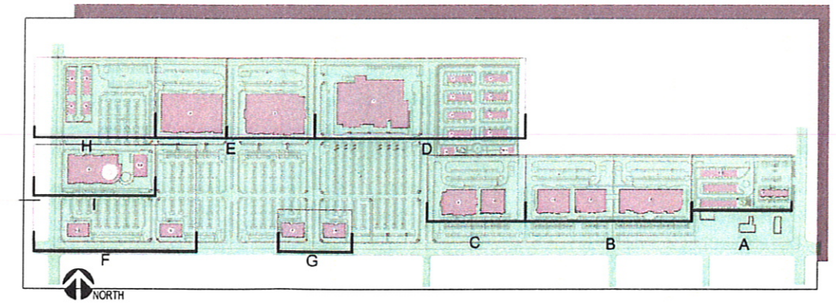
Threshold(s) of Significance

A project may have a significant effect on Aesthetics if it adversely affects a scenic vista or scenic highway; has a demonstrable negative aesthetic effect; or creates obtrusive light or glare.

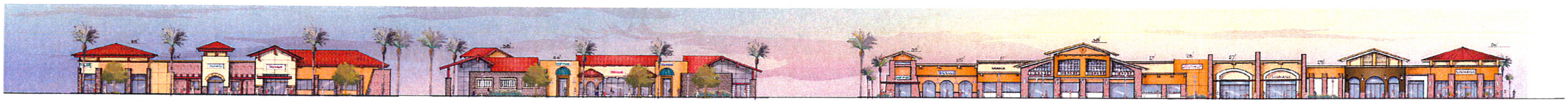
		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project have a substantial adverse effect on a scenic vista?	☐	☐	■	☐

The project site is not located within an area with qualities reflecting high visual quality and is neither within nor does it provide access to a scenic vista. As a consequence, development of the proposed project will not have a substantial adverse effect on a scenic vista. In fact, it is highly likely that the proposed project will serve as a positive visual focus for the immediate area, an enhancement of the area's overall scenic quality. This positive contribution will likely be derived from the addition of abundant landscaping throughout the site and along its perimeter, decorative landscaping and walls "buffering" the project site from surrounding areas, the addition of color associated with project structures, and the highly progressive architecture of the structures themselves. The foregoing project features have been purposefully combined in a manner specifically to attract the eye. To demonstrate this point, the reader is invited to view the graphic displays that follow. **Figure 11 (*Site Elevations A-D, Wasco Center)*** and **Figure 12 (*Site Elevations E-I, Wasco Center)*** provide at-grade visual cross-sections from various locations along the Highway 46 frontage. **Figure 13 (*Preliminary Landscape Plan – Wasco Center)***, illustrates the abundance of landscaping planned site-wide. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

ELEVATION A LOOKING NORTH
SCALE: 1/32"=1'

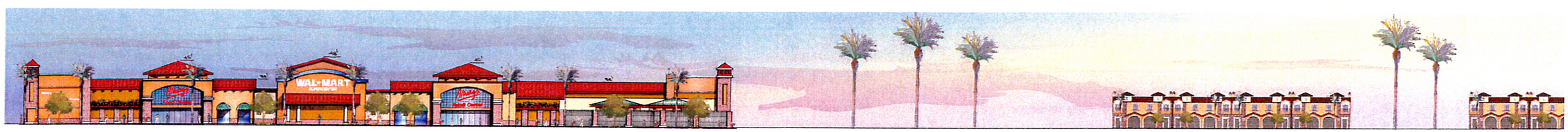


KEY PLAN-NO SCALE



ELEVATION B LOOKING NORTH
SCALE: 1/32"=1'

ELEVATION C LOOKING NORTH
SCALE: 1/32"=1'

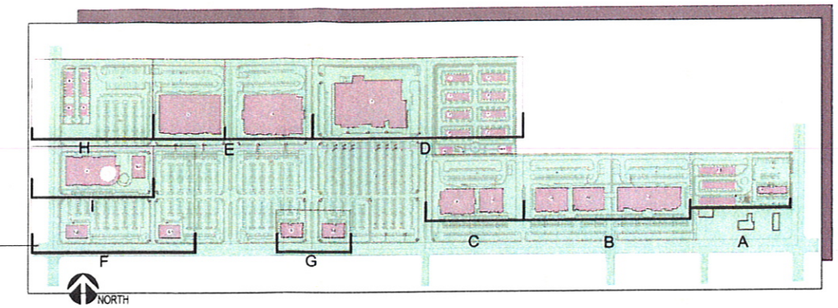


ELEVATION D LOOKING NORTH
SCALE: 1/32"=1'

SITE ELEVATIONS

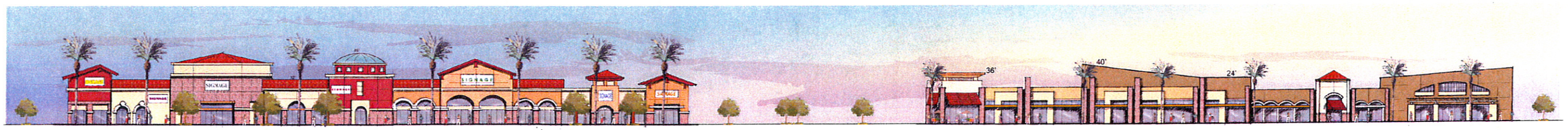
Figure 11
Site Elevations A-D, Wasco Center
(Source: Jenkins/Gales & Martinez, Inc)

ELEVATION I LOOKING NORTH
SCALE: 1/32"=1'

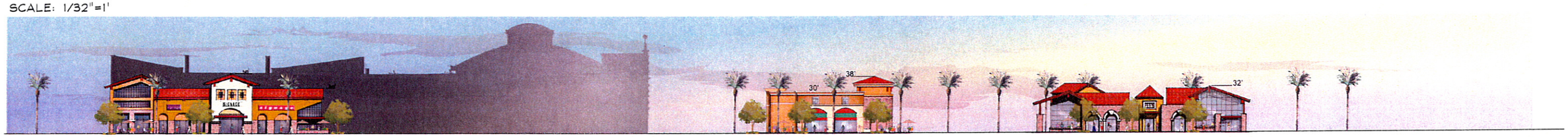


KEY PLAN-NO SCALE

ELEVATION H LOOKING NORTH
SCALE: 1/32"=1'



ELEVATION E LOOKING NORTH
SCALE: 1/32"=1'



ELEVATION F LOOKING NORTH
SCALE: 1/32"=1'

ELEVATION G LOOKING NORTH
SCALE: 1/32"=1'

SITE ELEVATIONS

Figure 12
Site Elevations E-I, Wasco Center
(Source: Jenkins/Gales & Martinez, Inc)

PSOMAS

JGM

PRELIMINARY LANDSCAPE PLAN
WASCO CENTER
WASCO, CALIFORNIA

COPLEY DESIGN COLLABORATIVE
LANDSCAPE ARCHITECTURE · PLANNING · URBAN DESIGN

NORTH
0 50 100 200
SCALE: 1" =100'
Date: JAN 21, 2008
Job No. 7130

Figure 13
Preliminary Landscape Plan – Wasco Center
(Source: JGM, Inc; Copley Design Collaborative; PSOMAS)

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	■	☐

As indicated immediately above, the project site is not located within an area with attributes representative of a scenic resource, including trees, rock outcroppings, or historic buildings within a state scenic highway. As a consequence, development of the proposed project will not substantially damage any scenic resources. Given this, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	■	☐

As indicated above, the project site and surrounding area are notably absent any visual attributes that would change any characterization of the area's overall visual character or quality as anything other than unremarkable. As a consequence, project development would not substantially degrade the area's existing visual quality or character. In fact, as was previously conjectured regarding scenic vistas in the project area, it is again highly likely that the proposed project will serve as a positive contributor to the area's overall visual quality. This positive contribution will likely be derived from the addition of abundant landscaping throughout the site and along its perimeter, the addition of color associated with project structures and site-wide pedestrian amenities, as well as display, advertising and security lighting and signage. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
d)	Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	■	☐

Development of the proposed project will add substantially to the extent of nighttime illumination presently experienced in the project vicinity. However, site development will comply with City development code lighting requirements, standards and controls through the precise development plan process. As a consequence, although the proposed project will create new sources of substantial light during the night time hours, the expected increase will not constitute a significant adverse effect. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

II. AGRICULTURE RESOURCES

Information in this section was in part derived from the following documents:

PSOMAS, *Wasco Center Project City of Wasco Submittal*, January 24, 2008

Kern, County of, *Kern County General Plan Elements*, as amended June 15, 2004

Wasco, City of, *City of Wasco General Plan Policies*, August 2002 (Amended November 2003)

The documents listed above are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA during normal business hours.

Setting

The site of the proposed project is designated Prime Farmland by the California Resources Agency. The westernmost 97.6 acres of the project site are presently almond and walnut orchards. In addition, a small farm (9.4 ac) with a house and orchard is also located onsite**.** The majority of the project site was once, but has since been removed from being subject to Land Use Contract provisions pursuant to the Land Conservation Act of 1965 (Williamson Act). The exception to this is the aforementioned farm. Its' 9.43 acres are presently still under Williamson Act Contract. However, a non-renewal notice has been filed for the subject property. The site of the proposed project generally, and the subject property specifically, is in an area planned for urban expansion in the Wasco General Plan. Pursuant to Policy 12 of the Agricultural Element of the Wasco General Plan, the City encourages sites under Williamson Act Contract within such urban expansion areas to file for non-renewal. As a consequence, the non-renewal notice filed for the subject property was an action consistent with the urban expansion goals and objectives promulgated by the Wasco General Plan.

Evaluation

Threshold(s) of Significance

A project would have a significant impact on Agriculture Resources if it were to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses, or conflict with existing zoning for agricultural use, or a Williamson Act contract.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	■	☐

As discussed previously, the City of Wasco General Plan Land Use Map presently designates the project site with the following land use designations: *Low Density Residential and Community Retail Commercial***.** Given the foregoing, it is evident that the ultimate mix of land uses envisioned by the Wasco General Plan for the project site in the long-term are commercial and residential in nature. The current zoning classification for the entire project site is (CR) *Commercial Retail*. This indicates that the Wasco General Plan and Zoning Ordinance have already committed the project site to long-term non-agricultural use. The proposed project, Wasco Center, merely seeks to modify the location and extent future commercial and residential land uses on the project site and, once having amended the General Plan and re-zoned the project site to facilitate the project design as currently planned, will do so in accord with provisions of the Wasco General Plan and Zoning Ordinance. As such, it is concluded that development of the proposed project would not have significantly adverse and material effect on the future conversion of the project site to non-agricultural use. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

b)	Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
		☐	☐	■	☐

Please refer to the discussion under Item a) immediately above. In that the project site is not zoned for agricultural use, the proposed project will in no way conflict with any agriculturally zoned property. As such, no further assessment of this issue is warranted and no mitigation measures are required. As has also been discussed previously, the majority of the project site was once, but has since been removed from being subject to Land Use Contract provisions of the Land Conservation Act of 1965 (Williamson Act) and that a non-renewal notice has been filed for the remaining 9.43-acres within the project site boundaries still under Williamson Contract. Previous Section 2.0, *Project Description*, further describes that the project proponent is petitioning the City Council of Wasco for cancellation of the Agricultural Preserve Land Use Contract for the subject parcel as authorized by the State Government Code pursuant to Kern County Board of Supervisors Resolution No. 72-69, dated January 25, 1972.

In the foregoing regard, the current project proponent's petition to the City Council is a logical continuation of a several year long and project site-wide process to terminate all Williamson Act contracts in order to facilitate the orderly development of the project site in manner consistent with the economic goals, policies and objectives of the Wasco General Plan. For this reason and the relatively minor amount of land to be withdrawn from its Williamson Act contractual status, it is determined that the proposed project would not conflict with any Williamson Act contract in a significant manner. As such, no further assessment of this issue is warranted and no mitigation measures are required.

c)	Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
		☐	☐	☐	■

The site of the proposed project is proposed for development in accordance with both the long-term land use character envisioned for this part of the City by the Wasco General Plan as part of the City's long-term economic growth strategy. In fact, none of the land area near and surrounding the site of the proposed project exhibit General Plan land use designations that are either commercial or residential in nature. No nearby land areas exhibit General Plan land use designations of an agricultural nature. As such, the project will not involve affecting physical changes in the existing environment which, due to their location or nature, would result in the conversion of additional Farmland to non-agricultural use. As such, no further assessment of this issue is warranted and no mitigation measures are required.

III. AIR QUALITY

Information in this section is primarily derived from the following technical report:

Chambers Group, Inc., *Air Quality Analysis Report, Wasco Center Project, Wasco, California*, April 2008

The foregoing report is provided in its entirety herein as **Appendix B**.

Setting

Methods and Assumptions

The above referenced air quality evaluation was prepared in to determine if significant air quality impacts are likely to occur in conjunction with the type and scale of development associated with the proposed Wasco Center Project. The impact analysis contained in this report was prepared in accordance with the methodologies provided by the San Joaquin Valley Air Pollution Control District (SJVAPCD) as included in its *Guide for Assessing and Mitigating Air Quality Impacts* (*GAMAQI*). Regional impacts for both construction and operation are assessed using the Urban Emissions model (URBEMIS2007, version 9.2.4) distributed by the California Air Resources Board (CARB).

Air quality impacts associated with the subsequent operation of the Wasco Center Project are also based on the URBEMIS2007 model using default traffic-projections provided in the Urbemis model, unless otherwise specified. The *URBEMIS* model utilized trip rates provided in the traffic impact assessment prepared for the proposed project. The *Traffic Impact Study for Wasco Center* prepared by Psomas in January 2008 estimated that the proposed project would add 21,082 average daily trips (ADT) to surrounding and area roadways at build out. The calculated emissions of the project are compared to Threshold(s) of Significance for individual projects using the GAMAQI *Threshold(s) of Significance* published by the SJVAPCD.

The proposed Wasco Center project evaluated in the air quality impact analysis is a mixed use commercial and residential development comprised of approximately 584,000 sf. of retail, 285,500 sf. of recreational, and 185,354 sf. of residential land uses. Projected air emissions are calculated using the Urban Emissions model (URBEMIS2007, version 9.2.4) distributed by the CARB. The URBEMIS2007 model uses EMFAC2007 emissions factors for vehicle traffic and OffRoad2007 for construction equipment. For the purposes of this analysis, construction is estimated to be completed in two phases. Phase I (development east of Center Street) is to begin in June 2008 with completion in December 2011, and Phase II (development west of Center Street) beginning in January 2012 with completion in December 2015 (approximately 7.5 years). Although actual construction of Phase II will begin in January 2012, grading will be conducted at the same time as grading for Phase I.

Affected Environment

The site of the proposed project is subject to the rules and regulations imposed by the SJVAB; however, the SJVAB reports to the CARB and all emissions are also governed by the California Ambient Air Quality Standards (CAAQS) as well as the National Ambient Air Quality Standards (NAAQS). Topographical features which affect the transport and diffusion of pollutants in the project area include the mountain ranges to east, south and west that prevent the transport of pollutants. Air quality in the Basin generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

The quality of the ambient air is affected by pollutants emitted into the air from stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources consist of one or more emission sources at a facility with an identified location and are usually associated with manufacturing and industrial processing plants. Area sources are widely distributed and produce many small emissions, such as residential water heaters. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either

on-road or off-road. On-road sources are a combination of emissions from automobiles, trucks, and indirect sources.

Indirect sources are sources that by themselves may not emit air contaminants; however, they indirectly cause the generation of air pollutants by attracting vehicle trips or consuming energy. Examples of indirect sources include an office complex or commercial center that generates commuter trips and consumes energy resources through the use of natural gas for space and water heating. Indirect sources also include actions proposed by local governments, such as redevelopment districts and private projects involving the development of either large buildings or tracts. In addition, indirect sources include those emissions created by the distance vehicles travel. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as "criteria air pollutants" and are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_X), sulfur dioxide (SO_2), and most fine particulate matter (PM_{10}, $PM_{2.5}$) including lead (Pb) and fugitive dust; are primary air pollutants. Of these CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reaction in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

Federal and State Ambient Air Quality Standards (AAQS)

The Federal Clean Air Act Amendment of 1971 (CAA) established national Ambient Air Quality Standards (AAQS) with states retaining the option to adopt more stringent standards or to include other pollution species. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Both the State of California and the federal government have established health based AAQS for six air pollutants.

As shown in **Table 3** (***Ambient Air Quality Standards for Criteria Pollutants)***, these pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM_{10}, $PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. In addition to primary and secondary Ambient AAQS, the State of California has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health.

Areas that meet the ambient air quality standards are classified as "attainment" areas while areas that do not meet these standards are classified as "non-attainment" areas. The severity of the classifications for ozone non-attainment include: marginal, moderate, serious, severe, and extreme. The State and Federal attainment status for the Basin are included in **Table 4** (***Attainment Status for the Basin)***.

The Basin is also designated as in attainment of the California Ambient Air Quality Standards (CAAQS) for SO_2, lead, vinyl chloride, and sulfates. Areas that are designated as Severe for the ozone standard must meet attainment of the 8-hour standard by 2021 (2024 if reclassified to Extreme). Areas considered

as serious non-attainment of the PM_{10} standards must have reached attainment by the end of 2006, or as expeditiously as possible. The $PM_{2.5}$ attainment date is to be met in the year 2015.

Existing Air Quality

Existing levels of ambient air quality and historical trends and projections in the project area are best documented by measurements made by the SJVAB. The project is located within Kern County and the closest air monitoring station is located at 578 Walker St, Shafter, California. The Shafter station only monitors for NO_2 and O_3, therefore data from the next two closest stations (Oildale and Bakersfield-Golden) were used to obtain data for CO, PM_{10}, and $PM_{2.5}$. Data from these monitoring stations is summarized in **Table 5 (*Ambient Air Quality Monitoring Summary*)**.

Table 3
Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070	0.08 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Average	*	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.25 ppm	*	
Sulfur Dioxide (SO_2)	Annual Average	*	0.03 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	*	
	24 hours	0.04 ppm	0.14 ppm	
Suspended Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	50 $\mu g/m^3$	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	50 $\mu g/m^3$	150 $\mu g/m^3$	
Suspended Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	*	65 $\mu g/m^3$	
Lead (Pb)	Monthly	1.5 $\mu g/m^3$	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	*	1.5 $\mu g/m^3$	
Sulfates (SO_4)	24 hours	25 $\mu g/m^3$	*	Industrial processes.

ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
**** = standard is not used for this pollutant/duration by this entity.***

Table 4
Attainment Status for the Basin

Pollutant	State Status	Federal Status
Ozone (1-hour)	Nonattainment/Severe	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment/Serious
PM_{10}	Nonattainment	Nonattainment/Serious
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment/Unclassified	Attainment/Unclassified
NO_2	Attainment	Attainment/Unclassified

The data show recurring violations of both the State and Federal ozone standards and no clear trend is apparent. The data also indicate that the area regularly exceeds the State PM_{10} and Federal $PM_{2.5}$ standards. Neither CO nor NO_2 standards have been violated in the last three years.

Table 5
Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations		
	2004	2005	2006
***Ozone*[1]**			
State 1-Hour ≥ 0.09 ppm	3	14	20
State 8-Hour ≥ 0.07 ppm	-	-	-
Federal 1-Hour > 0.12 ppm	0	0	0
Federal 8-Hour > 0.08 ppm	3	15	23
Max. 1-Hour Conc. (ppm)	0.100	0.104	0.106
Max. 8-Hour Conc. (ppm)	0.092	0.096	0.099
***Carbon Monoxide*[2]**			
State 8-Hour > 9.0 ppm	0	0	0
Federal 8-Hour ≥ 9.5 ppm	0	0	0
Max 1-Hour Conc. (ppm)	-	-	-
Max. 8-Hour Conc. (ppm)	2.60	2.10	2.19
***Nitrogen Dioxide*[1]**			
State 1-Hour ≥ 0.25 ppm	0	0	0
Max. 1-Hour Conc. (ppm)	0.074	0.063	0.100
***Inhalable Particulates (PM_{10})*[3]**			
State 24-Hour > 50 $\mu g/m^3$	17	14	19
Federal 24-Hour > 150 $\mu g/m^3$	0	0	1
Max. 24-Hour Conc. ($\mu g/m^3$)	82.0	109.0	162.0
***Inhalable Particulates ($PM_{2.5}$)*[2]**			
Federal 24-Hour > 65 $\mu g/m^3$	1	4-	2
Max. 24-Hour Conc. ($\mu g/m^3$)	66.6	83.6	76.4

[1] – Data obtained from the Shafter monitoring Station.
[2] – Data obtained from the Bakersfield-Golden monitoring station.
[3] – Data obtained from the Oildale monitoring station.

ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
Source: California Air Resources Board Ambient Air Quality Data Summaries Database

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential areas are considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present.

Schools are also considered as sensitive receptors as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution because exercise places a high demand on respiratory functions, which can be impaired by air pollution. The closest sensitive receptor is existing residential properties located within 40 meters of the western, and 160 meters from the southeastern Project boundaries.

Evaluation

Threshold(s) of Significance

The State CEQA Guidelines suggest, from an "air quality" perspective, that a project would normally be judged to produce a significant or potentially significant effect on the environment if the project were to:

- *Conflict with or obstruct implementation of the applicable air quality plan.*
- *Violate any air quality standard or contribute substantially to an existing or projected air quality violation.*
- *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standards.*
- *Expose sensitive receptors to substantial air pollutant concentrations.*
- Create objectionable odors affecting a substantial number of people.

As indicated in Section 15064(i)(1) of the State CEQA Guidelines, "cumulatively considerable" is defined to mean "that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In order to determine whether or not a proposed project would cause a significant effect on the environment, the impact of the project must be determined by examining the types and levels of emissions generated and its impacts on factors that affect air quality. To accomplish this determination of significance, the SJVAPCD has established air pollution thresholds against which a proposed project can be evaluated and assist lead agencies in determining whether or not the proposed project is significant. If the thresholds are exceeded by a proposed project, then it should be considered significant.

While, the final determination of significance thresholds is within the purview of the lead agency pursuant to the State CEQA Guidelines, the SJVAPCD recommends that the following air pollution thresholds be used by lead agencies in determining whether the construction or operational phase of a proposed project is significant. If the lead agency finds that the proposed project has the potential to exceed any of the air pollution thresholds, the project should be considered significant. These threshold factors are included below.

Regional Threshold(s) of Significance

Table 6 (Regional Operational Thresholds of Significance) presents significance thresholds for air quality established by the SJVAPCD on an annual basis for construction and operations emissions. During construction or operation, if any of the identified daily air pollutant thresholds are exceeded by the proposed project, then the project's air quality impacts may be considered significant. The SJVAPCD indicates in that it considers a project to be mitigated to a level of insignificance if it complies to the construction mitigation Regulation VIII indicated in the GAMAQI, and its operational effects are mitigated below the thresholds provided. In addition to the foregoing, the SJVAPCD also recommends that "additional indicators" be used as screening criteria with respect to air quality. Additional factors relevant to the project at hand include the following significance criteria..."Interference with the attainment of the federal or State ambient air quality standards by either violating or contributing to an existing or projected air quality violation".

Table 6
Regional Operational Threshold(s) of Significance

Pollutant	*Operational Emissions (Tons/yr)*
ROG	**10**
NO_X	**10**
CO	**-**
PM_{10}	**-**
$PM_{2.5}$	**-**
SO_X	**-**

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐

The adopted Air Quality Attainment Plans for the SJVAB set forth comprehensive programs that will lead the SJVAB into compliance with all federal and state ambient air quality standards. The Attainment Plans control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with the Southern California Association of Governments. Accordingly, conformance with the Attainment Plans for development projects is determined by demonstrating compliance with local land use plans, population projections, and SJVAPCD Regulations.

The proposed project comprises the construction and operation of a mixed use development with commercial and residential uses. The proposed project would not be growth-inducing or cause an

exceedance of an established population growth projection. Furthermore, with the imposition of the mitigation measures described later in this section, the proposed project is forecast to not generate significant quantities of criteria pollutants during either construction or operations. Finally, the proposed project is also projected to not cause any significant localized air quality impacts. As such, the proposed project is not anticipated to conflict with or obstruct implementation of the applicable air quality plan. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	■	☐	☐

Air quality impacts may occur during demolition, site preparation, grading, and construction activities required for project implementation. Major sources of emissions during construction include exhaust emissions generated during site preparation, grading, and the subsequent construction of the structures, fugitive dust generated as a result of soil and material disturbance during site preparation, grading, and excavation activities, and the emission of reactive organic compounds during site paving and painting of the structures. The site of the proposed project will ultimately include approximately 584,000 sf. of retail, 285,500 sf. of recreation and visitor-serving commercial, and 185,354 sf. of residential land uses at full build-out. Construction would occur in two phases over a period of approximately seven and a half years with approximately 10.00 acres of the site graded and/or disturbed on any given day.

The SJVAPCD does not have Threshold(s) of Significance for construction-related air emissions. However, even with the relatively nominal daily grading volumes assumed during project construction, it is expected that the overall volume of project construction-related emissions will be substantial. In order to ensure that construction-related emissions will not violate any air quality standard or contribute substantially to an existing or projected air quality violation, a variety of mandated construction-related emissions reduction measures will be required of the proposed project. These mitigation measures are identified as **AQC1, AQC2** and **AQC3** in Section 5.0, *Mitigation Measure Summary*, found later in this document.

The major source of long-term air quality impacts is that associated with the emissions produced from project-generated vehicle trips. Stationary sources also add to these values. Emissions generated by project-related trips are based on the URBEMIS2007 computer model using EMFAC2007 to calculate mobile on-road emission rates. Stationary source emissions were calculated using the URBEMIS2007 model. When the resultant total operations-related emissions volumes were compared to SJVAPCD regional emissions volumes significance thresholds, it was determined that significance thresholds would be exceeded for $NO_{X,}$ ROG and $PM_{10.}$ As a consequence, a variety of operations-related mitigation measures will be required of the proposed project to preclude the occurrence of significant long-term operations-related impacts on air quality. These mitigation measures are identified as **AQO1, AQO2 and AQO3** in Section 5, *Mitigation Measure Summary*, found later in this document.

Based on the foregoing, assuming project adherence to the mitigation measures identified herein, no significant construction (short-term) or operations-related (long-term) impacts on air quality are anticipated.

c)	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ■	Less than Significant Impact ☐	No Impact ☐

The project area is designated as a non-attainment area for ozone and PM_{10}. The project-specific evaluation of emissions presented in the preceding analysis supports a conclusion that with mitigation and ISR Fee, the air quality impacts for the proposed project are less than significant on an individual project basis. CEQA Section 21100 (e) addresses evaluation of cumulative effects allowing the use of approved land use documents in a cumulative impact analysis. CEQA Guidelines Section 15064 (i)(3) further stipulates that for an impact involving a resource that is addressed by an approved plan or mitigation program, the lead agency may determine that a project's incremental contribution is not cumulatively considerable if the project complies with the adopted plan or program. In addressing cumulative effects for air quality, the Attainment Plans are the most appropriate documents to use because the Attainment Plans set forth a comprehensive programs that will lead the SJVAPCD, including the project area, into compliance with all federal and state air quality standards and utilizes control measures and related emission reduction estimates based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Since the proposed project is in conformance with the Attainment Plans and the project is not significant on an individual basis, it is appropriate to conclude that the project's incremental contribution to criteria pollutant emissions is not cumulatively considerable.

d)	Would the project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ■	Less than Significant Impact ☐	No Impact ☐

As discussed above, project construction has the potential to raise local ambient pollutant concentrations. This in turn could affect the occurrence of a significant impact if these concentrations were to exceed the Ambient Air Quality Standards included in previous **Table 3** at sensitive receptor locations. Similar findings regarding high emissions volume concentrations in the vicinity of sensitive receptors have also been calculated. Without mitigation, the net impact of the proposed project on regional air quality would be significant. However, with the implementation of previously identified mitigation measures **AQC1, AQC2**, **AQC3**, **AQO1, AQO2 and AQO3** any project-related impacts on sensitive receptors associated with high pollutant concentrations during both project construction and operations will be less than significant.

e)	Would the project create objectionable odors affecting a substantial number of people?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ■	No Impact ☐

Project construction would involve the use of heavy equipment creating exhaust pollutants from on-site earth movement and from equipment bringing concrete and other building materials to the site. With regards to nuisance odors, any air quality impacts will be confined to the immediate vicinity of the equipment itself. By the time such emissions reach any sensitive receptor sites away from the project site, they will be diluted to well below any level of air quality concern. An occasional "whiff" of diesel

exhaust from trucks accessing the site from public roadways may result. Such brief exhaust odors may be adverse, but not a significant air quality impact. Additionally, some odor would be produced from the application of asphalt, paints, and coatings. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required to address objectionable odors.

IV. BIOLOGICAL RESOURCES

Information in this section is primarily derived from the following technical report:

Chambers Group, Inc., *Results of the Biological Reconnaissance Survey for the Wasco Center Development Project in the City of Wasco, Kern County, California*, December 12, 2007

The aforementioned technical report is provided in its entirety herein as **Appendix C.**

Setting

The project site is located on the U.S. Geological Survey (USGS) 7.5-minute quadrangle topographic map, Wasco NW, just north of Highway 46 between Magnolia Avenue and Palm Avenue in the City of Wasco, Kern County, California. Current vegetation types present onsite include cultivated orchards, developed, ruderal vegetation, and barren ground.

Prior to performing field surveys, existing documentation relevant to the project site was reviewed including, but not limited to: the California Natural Diversity Database (CNDDB 2007) and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI 2007). These databases contain records of reported occurrences of federal- or state-listed endangered or threatened or proposed endangered or threatened species, former Federal Species of Concern (FSC), California Species of Special Concern (CSC), or otherwise sensitive species or habitat that may occur within or in the immediate vicinity of the project site. Following is a compendium of the various codes used in the foregoing databases to indicate the nature and extent to which a particular species or habitat has been classified if in some manner deemed worthy of special attention by one or more of the public agencies or private groups.

STATUS CODES

Federal

FE	=	Federally listed; Endangered
FT	=	Federally listed; Threatened
FC	=	Federal Candidate for listing
FSC	=	Federal Species of Special Concern

State

ST	=	State listed; Threatened
SE	=	State listed; Endangered
RARE	=	State-listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
CSC	=	State Species of Special Concern

CNPS

List 1A = Plants presumed extinct in California.
List 1B = Plants rare and endangered in California and throughout their range.
List 2 = Plants rare, threatened or endangered in California but more common elsewhere in their range.

Extensions

0.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat).
0.2 = Fairly endangered in California (20-80% occurrences threatened).
0.3 = Not very endangered in California (<20% of occurrences threatened).

Based on the results of the above database searches, the following sensitive species have the potential to occur on the project site:

Plant Species

- Heartscale (*Artiplex cordulata*) – CNPS 1B.2;
- Earlimart orache (*Atriplex erecticaulis*) – CNPS 1B.2;
- Subtle orache (*Atriplex subtilis*) – CNPS 1B.2;
- California jewel-flower (*Caulanthus californicus*) – FE; SE; CNPS 1B.1;
- Slough thistle (*Circium crassicaule*) – CNPS 1B.1;
- Recurved larkspur (*Delphinium recurvatum*) – CNPS 1B.2;
- Munz' tidy-tips (*Layia munzii*) – CNPS 1B.2;

Wildlife Species

- San Joaquin antelope squirrel (*Ammospermophilus nelsoni*) – ST;
- burrowing owl (*Athene cunicularia*) – CSC;
- Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*) – FE, SE;
- blunt-nosed leopard lizard (*Gambelia sila*) – FE, SE;
- Coast (California) horned lizard (*Phrynosoma coronatum*) – CSC;
- Le Conte's thrasher (*Toxostoma lecontei*) – CSC;
- San Joaquin kit fox (*Vulpes macrotis mutica*) – FE, ST.

Field Survey Results (Vegetation)

The survey area of the project site encompassed approximately 121 acres. The site is primarily comprised of cultivated orchards with patches of ruderal vegetation occurring along their margins. Other areas on the site are either barren or developed. The majority of the site is actively cultivated as a walnut and almond orchard. A dense layer of leaf litter is present in the understory of the orchards. Occasional weedy annuals were observed including horseweed (*Conyza canadensis*), broad-lobed filaree (*Erodium botrys*), Palmer's amaranth (*Amaranthus palmeri*), Mexican sprangletop (*Leptochloa uninervia*), and cheeseweed (*Malva parviflora*). Cultivated areas account for approximately 94.5 acres of the project site.

Ruderal areas consist of early successional habitats that are dominated by pioneering herbaceous species that readily colonize disturbed ground. The soils in ruderal areas are typically characterized as heavily compacted or frequently disturbed. The vegetation in these areas is adapted to living in compacted areas where water does not readily penetrate the soil. Typically, ruderal vegetation communities are dominated by species of the Centaurea, Brassica, Malva, Salsola, Eremocarpus, Amaranthus, and Atriplex genuses. Areas with ruderal vegetation are present on the project site. They primarily occur along the margins of the orchards. Ruderal plant species found on the project site include

Russian thistle (*Salsola tragus*), barnyard grass (*Echinochloa* sp.), red-stemmed filaree (*Erodium cicutarium*), horseweed, cheeseweed, Bermuda grass (*Cynodon dactylon*), and flax-leaved horseweed (*Conyza bonariensis*). This vegetation community comprised approximately 1.6 acres of the project site.

A portion of the project site has been altered by humans and is comprised of developed or barren areas. Developed areas display man-made structures such as houses; paved roads, buildings, parks, and other maintained areas; and barren areas are completely void of vegetation. Developed and barren areas comprise 22.2 acres of the project site. A water catch basin is located toward the north end of the project site. The basin was empty at the time of the visit, and vegetation had begun to grow in the bottom. Plant species observed in the basin include Palmer's amaranth, yellow cress (*Rorippa palustris*), red-stemmed filaree, tall cyperus (*Cyperus eragrostis*), and cheeseweed. The catch basin covers approximately 0.1 acres of the project site. ***No sensitive plant species were observed during the survey.***

All seven of the sensitive plant species identified in the literature review have habitat requirements characteristic of chenopod scrub, pinyon-juniper woodland, meadows and seeps, riparian scrub, or valley and foothill grassland communities that were not present onsite. Due to the lack of suitable habitat and the disturbed state of the property, these species are considered absent from the project site and require no further investigation.

Field Survey Results (Wildlife)

Wildlife species observed or detected during the site survey were characteristic for the conditions encountered. Populations of the Le Conte's thrasher within Kern County are restricted to the southwestern corner of the San Joaquin Valley in the Taft-Maricopa area (CDFG 1983). Because the project site occurs well outside the known range of the Le Conte's thrasher and no habitat exists onsite, this species is considered absent from the project site. Three of the seven sensitive wildlife species identified in the literature review, California horned lizard, San Joaquin antelope squirrel, and the Tipton kangaroo rat, require the presence of scattered shrubs and low to moderate ground cover of grasses and forbs. Because only marginal, low quality habitat exists along the borders of the project site, these species are considered to have a low potential to occur on the project site.

Burrowing owls are yearlong residents of short grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial and open areas (Haug et al., 1993). They may also use golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas and university campuses, fairgrounds, abandoned buildings, and irrigation ditches (Haug et al., 1993). This species requires large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. They primarily utilize modified rodent or other small mammal burrows for roosting and nesting cover. When burrows are scarce, they may use man-made structures such as openings beneath cement or asphalt pavement, pipes, culverts, and nest boxes (Robertson, 1929).

Potential foraging and nesting habitat for burrowing owl exists along the outer edges of the orchards and within the cleared area on the east end of the project. Although no burrowing owl sign was detected during the survey, ground squirrel activity was detected on the site and historical records for burrowing owl exist within 5 miles of the site. Therefore, the site has a moderate potential to support this species.

The blunt-nose leopard lizard inhabits sparsely vegetated plains, alkali flats, low foothills, grasslands, canyon floors, large river washes and arroyos and seeks cover in mammal burrows and under shrubs or structures. They do not excavate their own burrows (CDFG 2000). Although historical records for this species exist within 3.5 miles of the project site, only marginal habitat for this species exists near the existing structures and debris piles on site, and the majority of the site has been used for agriculture, which is a contributing factor in the decline of the blunt-nose leopard lizard population. Therefore, this species is considered to have a low potential to occur within the project site.

The San Joaquin kit fox occurs in native valley and foothill grasslands and chenopod scrub communities of the valley floor and surrounding foothills from southern Kern County north to Los Baños, Merced County (CDFG 2000). Historical records for this species occur within 3.5 miles of the project site and potential sign was found within the project site boundary. Sign included the presence of burrows, scat, and partial carcass. Due to the condition of the carcass, identification as San Joaquin kit fox was deemed probable but not absolute. Therefore, this species is considered to have a high probability to occur within areas of the site bordering the orchards.

Under the California Endangered Species Act (CESA), Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project caused losses of listed species populations and their essential habitats. Additionally, Section 9 of the Endangered Species Act (ESA) of 1973 prohibits the “take” of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the ESA, take means “…..to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat (USFWS 1999).

Evaluation

Threshold(s) of Significance

A project has a significant effect on Biological Resources if it will result in a loss of individuals, populations, or habitat of a federal or state designated threatened, endangered, or rare species; a loss of locally designated species, such as heritage trees; a loss of locally designated natural communities, such as vernal pools; a loss of wetland habitat; or an interference with wildlife dispersal or migration corridors. Project actions are also evaluated in terms of impacts to species that do not fall into one of the above categories, but which nevertheless are protected by federal or state regulations. Most often such cases involve nests of birds such as red-tailed hawks that are not rare, but are still protected under the federal Migratory Bird Treaty Act and the California Department of Fish and Game Code.

The term “rare” species is usually interpreted to mean species that are on lists prepared by federal, state, or private organizations but are of lower sensitivity status than threatened or endangered species. Thus, the term “rare” refers to species listed by the California Native Plant Society, federal/state Species of Special Concern, or species considered sensitive by a local jurisdiction. Evaluation of significance is typically different between threatened/endangered species as compared to non-listed or rare species. Any loss of threatened or endangered species or their habitat is considered a significant impact in relation to federal and state endangered species regulations. However, Threshold(s) of Significance for loss of rare species have not been codified in federal or state regulations. Generally, the term is interpreted in terms of whether the project action would jeopardize the continued persistence or viability of individuals or populations of the species in question.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and game or U.S. Fish and Wildlife Service?	☐	■	☐	☐

Although the majority of the project site is actively cultivated as a walnut and almond orchard and lacks the habitat requirements for many of the sensitive plant and wildlife species identified in the literature review, two sensitive wildlife species, burrowing owl, a California Species of Special Concern, and San Joaquin kit fox, a Federally Endangered and State Threatened species, have been identified as having a moderate or high potential to occur on the project site. In order to ensure that neither of the subject species would be significantly impacted by the proposed project, the proposed project will be required to comply with several mitigation measures. These are identified as mitigation measures **BIO1** and **BIO2** in Section 5, *Mitigation Measure Summary*, later in this document.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	■	☐

A field survey of the project site did not identify the occurrence of on-site riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. As a consequence, the proposed project has no potential to cause a substantial adverse effect to either. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	■	☐

As indicated above, a field survey undertaken at the project site indicated federally protected wetlands as defined by Section 404 of the Clean Water Act are not present within its boundaries. As a consequence, the proposed project has no potential to cause a substantial adverse effect on such wetlands. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
d)	Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	■	☐

A field survey of the project site did not identify the presence of any migratory fish or wildlife species or any established native resident or migratory wildlife corridors. As a consequence, the proposed project has little or no potential to adversely effect any of these biological resources. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
e)	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■

The City of Wasco does not have an ordinance or General Plan policy specifically directed at the protection of biological resources or trees. As a consequence, the proposed project will not conflict with such local policies or ordinances. Given this, no further assessment of this issue is warranted and no mitigation measures are required.

f)	Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ☐	No Impact ■

The site of the proposed project is not subject to the provisions of a known adopted HCP, NCCP or other approved local, regional or state HCP. As a consequence, the proposed project will not conflict with any provisions of same. Given this, no further assessment of this issue is warranted and no mitigation measures are required.

V. CULTURAL RESOURCES

Information in this section is primarily derived from the following technical report:

Chambers Group, Inc., *Cultural Resources Inventory for Wasco Center Development Project, Wasco, Kern County, California*, February 2008

The aforementioned technical report is provided in its entirety herein as **Appendix D**.

Setting

The foregoing report addressed archaeological, historical and paleontological resources. With regard to archaeological and historical resources, the results of the review of the survey reports and site records obtained from the Southern San Joaquin Valley Archaeological Information Center indicated that two previous cultural resources investigations had occurred within a one-half mile radius of the project area (McManus and Schuster (1986), and Thomas and Ptomey (2001), respectively). Both followed Highway 46 and included the majority of the Wasco Center project site. In short, the record search revealed that no previously recorded cultural resources occur within a one-half mile radius of the project site.

As a related effort, a search of the Sacred Lands File by the Native American Heritage Commission (NAHC) failed to indicate the presence of Native American cultural resources in the immediate project area. However, a list of tribes, organizations, and/or individuals with traditional ties to the area was included in the NAHC response.

Results of the search of the paleontological files and database conducted with the San Bernardino County Museum on January 9, 2008 (Scott 2008) indicate that the project area is located on Holocene (recent) alluvial fan deposits (unit Qf). These sediments have no potential to contain paleontological resources. However, the data indicates that there are isolated locations within Holocene alluvial fan deposits on the valley floor where there has developed a thin sedimentary veneer overlying older and potentially fossil bearing sedimentary rock units (Scott 2008). These older rock units would have high potential to contain significant nonrenewable paleontological resources. The latter condition is not expected on the site of the proposed project, however. In short, the paleontological records search indicated that no known paleontological resource localities have been recorded within a one-mile radius of the Wasco Center project site.

After completing the aforementioned literature reviews, an intensive pedestrian field survey of the project site and periphery was undertaken. No archaeological sites or isolates were found within or adjacent to the project area. It was noted that the entire area has been heavily disturbed through agricultural activities which probably included mechanical leveling of the ground.

Evaluation

Threshold(s) of Significance

A project may significantly impact Cultural Resources if it disrupts or adversely affects a prehistoric or historic archaeological site or a property of historic significance to a community, ethnic or social group, or a paleontological site except as part of a scientific study.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	■

As indicated above, the site of the proposed project is devoid of any known historical resources. As a consequence, the proposed project has no potential to cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	■	☐

As was the case with historical resources as described above, the site of the proposed project is also devoid of any known archaeological resources. As a consequence, the proposed project has no potential to cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required. However, in that site earth movement activities have the potential to uncover previously unknown or identified subsurface archaeological deposits or even human remains, two measures will be required of the proposed project to ensure that the integrity and potential significance of such resources or discoveries are addressed accordingly. These measures are identifiable as **CUL1** and **CUL2** in Section 5, *Mitigation Measure Summary*, found later in this document.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	■	☐

As with cultural resources, the site of the proposed project is also devoid of any known paleontological resources. As a consequence, the proposed project has no potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required. However, in the unlikely event that any older sedimentary rocks are encountered during site earth movement activities, the proposed project will be required to comply with a measure designed to protect and ensure the integrity and potential significance of such resources or discoveries are addressed accordingly. This measure is identified as **CUL3** in Section 5, *Mitigation Measure Summary*, found later in this document.

d)	Would the project disturb any human remains, including those interred outside of formal cemeteries?	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
		☐	☐	☐	■

As indicated above, the site of the proposed project is devoid of any known resources of Native American cultural significance including formal and informal cemeteries. As a consequence, the proposed project has no potential to cause a substantial adverse effect to such resources. However, mitigation measure **CUL2** discussed under Item b) above addresses the accidental discovery of human remains on-site. Given the foregoing, no further assessment of this issue is warranted and no further mitigation measures are required.

VI. GEOLOGY/SOILS

Information in this section is primarily derived in part from the following documents.

Wasco, City of, *Draft Environmental Impact Report – Wasco General Plan Update – 2002,* July 2002 (by Quad Knopf)

BSK Associates, *Phase I Environmental Site Assessment Report, 111-Acre Orchard Site, Northwest of Highway 46 and Palm Avenue, Wasco, California*, February 16, 2007

Kern, County of, *Kern County General Plan,* as amended March 13, 2007

The first and third documents listed above are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours. The second report listed above is also identified elsewhere in this document and is provided herein in their entirety as **Appendix E**.

Setting

The project site is located in the southern San Joaquin Valley, which is part of the Central Valley and the Great Valley geomorphic province. The region persisted as a lowland or shallow marine embayment during the entire Cenozoic and at least the Mesozoic. In the late Cenozoic, much of the area was occupied by shallow brackish and freshwater lakes, particularly in the San Joaquin Valley which has had interior drainage in its southern third since the Pliocene. The San Joaquin Valley is an asymmetrical structural trough bound by the Sierra Nevada and Coast Ranges of California sloping westward to its greatest depth near the western margin of the valley. The San Joaquin Valley has been filled with several thousand feet of sedimentary deposits.

Sediments in the valley, derived from erosion of the Sierra Nevada have deposited sands with lesser silts, minor clays, and gravel by major to minor west-flowing drainages and their tributaries. The sedimentary deposits in the region form large coalescing alluvial fans with gradual slopes. The project site itself is evidence of this as it has a slope of less than one percent and is devoid of any topographic relief. Soils in the general project vicinity include Wasco sandy loam, McFarland loam, and Panoche loam. Slopes of these soils range from zero to five percent and McFarland and Panoche clay loams are comprised of 18 to 35 percent clay.

Significant faults within Kern County include the San Andreas, Garlock, and Sierra Nevada. The San Andreas fault extends the length of the western edge of the County and is the boundary between the North American Plate and the Pacific Plate. The Garlock fault crosses the southeast part of the County and the Sierra Nevada fault extends into the northeast portion of the County. All three of these faults are defined as active based on historic surface rupture in the California Division of Mines and Geology

Special Publication 42. Other active faults include the Edison, Pond-Poso, and White Wolf faults. These active faults within the County and surrounding areas can generate large earthquakes. The Kern County GIS database indicates that the City of Wasco is approximately 7 miles southwest from the Pon-Poso fault to the north. The site of the proposed project is not located in an Alquist-Priolo Fault Zone and no fault traces are known to exist in the immediate project vicinity.

Groundwater movement within the San Joaquin Valley generally flows from the flanks of the valley to the median of the trough on the western side of the valley and subsequently toward the San Joaquin-Sacramento Delta area. The San Joaquin Valley is an area of substantial groundwater withdrawal and recharge due to municipal, industrial and agricultural use. The project area is also located on the edge of the Tulare-Wasco land subsidence area. In the past, land subsidence in the general area has occurred as a result of groundwater overdraft. Below the site of the proposed project, the 2003 (Spring) *Lines of Equal Elevation Map* issued by the California Department of Water Resources indicates a depth to groundwater of approximately 255 feet beneath the site with a regional flow direction to the west.

Evaluation

Threshold(s) of Significance

A project may have a significant effect in relation to Geology and Soils if it will expose people or occupied structures to geologic or soils hazards (including fault rupture, ground shaking, liquefaction, subsidence, landslides, erosion, and/or expansive soils) or facilitate damage to, or the destruction of, unique geologic features.

a)	Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ■	No Impact ☐

The site of the proposed project is not located within any fault zone delineated on the most recent Alquist-Priolo Earthquake Zoning Map issued by the State Geologist. The nearest fault in this regard is the San Andreas fault zone located approximately 13 miles to the east. No faults or fault traces are known to exist either on or in the immediate vicinity of the proposed project. As such, the proposed project is not anticipated to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault. Given the foregoing, no further assessment of potential fault rupture-related effects associated with the proposed project is warranted and no mitigation measures are required.

ii) Strong seismic ground shaking?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ■	No Impact ☐

In the event of a substantial seismic event along one of the significant active faults in the Central Valley portion of Kern County, i.e. the San Andreas, Garlock or Sierra Nevada faults, or even the more proximal, yet active Pond-Poso fault, moderate to strong seismic ground-shaking can be expected on the site of the proposed project. However, project implementation require strict adherence to the City's development and building codes and site construction protocols. In this regard, prior to the issuance of grading permits, the project proponent is required to prepare and submit for the City's review and approval soils and geotechnical hazards investigation reports for the entire project site. Once submitted and approved by the

City, if warranted, all ensuing site preparation activities will be required to comply with any requisite site stabilization and/or remedial measures such reports may include. Finally, the proposed project is not anticipated to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground-shaking since all habitable structures and commercial buildings proposed for development as part of the proposed Wasco Center project will be constructed in full compliance with UBC Seismic Zone 4 requirements. Given the foregoing, no further assessment of potential strong seismic ground-shaking related effects associated with the proposed project is warranted and no mitigation measures are required.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	☐	☐	■	☐

Liquefaction is a temporary loss of soil bearing strength that is usually triggered by an earthquake. This phenomenon usually occurs in loosely consolidated sands and silts that have a shallow water table or in poorly engineered, saturated fill. As indicated above, the 2003 (Spring) *Lines of Equal Elevation Map* issued by the California Department of Water Resources indicates that depth to groundwater beneath the site of the proposed project is approximately 255 feet. As a consequence, the proposed project is not anticipated to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to liquefaction. Given the foregoing, no further assessment of seismically induced liquefaction is warranted and no mitigation measures are required.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
iv) Landslides?	☐	☐	☐	■

The site of the proposed project has a slope of less than one percent and is devoid of any topographic relief. The surrounding land area exhibits similar slope and topographic attributes. As a consequence, the proposed project is not anticipated to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to landslides. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b) Would the project result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐

Erosion is the general process where soil or rocks are worn down, removed by weathering, and deposited in other places by water or air. Erosion can be a gradual process or rapid process such as wind and flood events. With regard to the site of the proposed project, its' relatively level terrain, historical agricultural use, the onsite location of both a City-owned drainage sump and private agriculturally related drainage pond, and location outside a designated FEMA 100-year floodplain indicate that the project site is prone to neither air nor water erosion influences. Project implementation encompasses earth movement and other site preparation activities. All such activities would be undertaken pursuant to a grading permit issued by the City. It is the City which would also ensure that all site grading and other preparation activities are undertaken in strict compliance with city construction protocols. Included among them would be features such as having temporary drainage facilities in place during any site earth movement activities that might occur during the rainy season; keeping exposed areas of the project site watered to minimize airborne erosion and fugitive particulates, and a variety of other palliative measures aimed specifically at erosion control. Once site preparation has been completed, site improvement and building

construction will ensue. The attendant over-covering of most of the project site with relatively impervious materials will preclude any future potential for substantial soil erosion or loss of topsoil. Proposed VTTM No. 7127 identifies a complete system of drainage improvements for the project site. When in place, said improvements will preclude any water related erosion from occurring on-site. Previous **Figures 9a, 9b and 9c** display the aforementioned on-site drainage system. In light of the foregoing, the proposed project is not anticipated to cause nor be affected by any soil erosion or loss of topsoil. As such, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	■	☐

Project implementation encompasses earth movement and other site preparation activities. All such activities would be undertaken pursuant to a grading permit issued by the City which was itself developed based on a combination of the site's development objectives and the findings and recommendations provided in the previously referred to soils and geotechnical hazards investigation studies to be prepared for the proposed development. Given the foregoing, it is anticipated that any remedial grading that might be required would stabilize any geologic instabilities that might occur on-site. Once site preparation has been completed, site improvement and building construction will ensue. Given that site stability has been facilitated via earlier site grading combined with the fact that the buildings proposed on-site seem to be typical with regard to their apparent load bearing requirements and will not comprise any subterranean elements, it is anticipated that on-site building construction will be undertaken without the need for specialized footings or foundations. Given the foregoing, it is concluded that the proposed project would not create onsite geologic or soils conditions that would become unstable as a result of the project, or that project implementation would potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. As such, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
d)	Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	■	☐

Soils in the general project vicinity include Wasco sandy loam, McFarland loam, and Panoche loam. Slopes of these soils range from zero to five percent and McFarland and Panoche clay loams are comprised of 18 to 35 percent clay. The relatively high clay content of these soils potentially makes them subject to expansion. In turn, expansion of soils on the site of the proposed project could result in significant impacts to structures in the area. Under such a circumstance, the City of Wasco requires project conformance to state standards set forth in the Dangerous Building Code contained in the most current edition of the Uniform Building Code. It is the Lead Agency's position that adherence to this policy would mitigate any potentially significant soils expansion related impacts to a less than significant level. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
e)	Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

The proposed project proposes connection to the City's sanitary sewer system. As a consequence, no assessment of this issue is warranted and no mitigation measures are required.

VII. HAZARDS AND HAZARDOUS MATERIALS

Information in this section is primarily derived from the following technical report:

BSK Associates, *Phase I Environmental Site Assessment Report, 111-Acre Orchard Site, Northwest of Highway 46 and Palm Avenue, Wasco, California*, February 16, 2007

The aforementioned technical report is provided in its entirety herein as **Appendix E**.

Additional information in this section was also derived in part from the following documents:

Wasco, City of, *Draft Environmental Impact Report – Wasco General Plan Update – 2002,* July 2002 (by Quad Knopf)

Kern, County of, *Airport Land Use Compatibility Plan,* as amended June 2006

The above two documents are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours.

Setting

Historically, and to some extent even today, the majority of the site of the proposed project has been in agriculture, namely as walnut and almond orchards. Based on a thorough search of regulatory agency records, interviews/contacts with other appropriate regulatory officials, and a comprehensive pedestrian survey inspection of the project site and adjoining lands, the foregoing environmental site assessment concludes that the project site neither contains, nor is influenced by, any known environmental condition with regard to hazardous and/or toxic materials.

The site of the proposed project is not located in or adjacent to an area identified by the City of Wasco as a wild land fire hazard area. However, the Wasco General Plan does indicate that wild land fire hazards threaten life and property within the Wasco vicinity and that resulting from either manmade or natural causes they occur primarily in brush, or grasslands, primarily in sparsely developed or existing open space lands.

Wasco-Kern County Airport is located approximately 1.5 miles north of the site of the proposed project. This general aviation airport comprises approximately 158 acres of fee land owned by the County of Kern. The airport is bound by Palm Avenue to the east, McCombs Avenue to the south and, Central Avenue to the west. Figure 4-76 of the County's Airport Land Use Compatibility Plan (ALUCP) presents a "comprehensive land use plan" for the subject airport and environs. It displays the airport and has identified around it a radius segmented into various "lettered" zones (B1, C and D*). These zones are based on Table 2A, *Compatibility Criteria*, at Page 2-2 of the aforementioned ALUCP. The site of the proposed project, although within the radius only to a small extent (perhaps 10 acres or less) is situated within Zone D*. According to the subject table, this means that there is negligible risk of encountering an aviation related crash or other hazard and that there may be instances of occasional annoyance from over flights. It is noted that while all other zones establish some form of residential dwelling unit density, or population/user, per acre development restriction or a percentage open space requirement, there exist no such development restrictions within Zone D*.

Evaluation

Threshold(s) of Significance

A project may cause significant Hazards and Hazardous Materials impacts if it will create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected; interfere with emergency response plans or

emergency evacuation plans, increase the safety hazard for people working at a site within two miles of a private airport, or expose people or structures to a significant risk of loss, injury or death involving wild land fires.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐

The site of the proposed project at present is unlikely to contain businesses/tenants that have the routine transport, use or dispose of hazardous materials as a major aspect of their operations. However, in the event this circumstance changes, the entity involved with such activities shall only do so in full compliance with all applicable federal, state and local requirements and regulations. Consultations with the Kern County Fire and Environmental Health Departments will be affected as warranted. Given the foregoing, the project is not expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, no further assessment of the issue is warranted, and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐

As with the transport, use or disposal of hazardous materials, the proposed project is unlikely to have tenants/businesses that due to their possession or use of hazardous materials would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of such hazardous materials. As discusses under item a) above, any entity employing hazardous materials of any type either onsite or in their operations, shall do so only in full compliance with all applicable federal, state and local requirements and regulations regarding hazardous and toxic materials. Consultations with the Kern County Fire and Environmental Health Departments will be affected as warranted. Given the foregoing, the project is not expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As such, no further assessment of this issue is warranted, and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■

See items a) and b) above. Therein it is stated that any project tenant/business employing hazardous materials of any type either onsite or in their operations, shall do so only in full compliance with all applicable federal, state and local requirements and regulations regarding hazardous and toxic materials. In any event, no existing or proposed schools occur within one-quarter mile of the project site. Given the foregoing, no assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
d)	Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■

As indicated previously, based on a thorough search of regulatory agency records, interviews/contacts with other appropriate regulatory officials, and a comprehensive pedestrian survey inspection of the project site and adjoining lands, the foregoing Phase I Environmental Site Assessment concluded that the project site neither contains, nor is influenced by, any known environmental condition with regard to hazardous and/or toxic materials. This conclusion encompasses any site on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	■	☐

As discussed above, Wasco-Kern County Airport is located approximately 1.5 miles north of the site of the proposed project. Figure 4-76 of the County's Airport Land Use Compatibility Plan (ALUCP displays the airport and has identified around it a radius segmented into various "lettered" zones (B1, C and D*). These zones are based on Table 2A, *Compatibility Criteria*, at Page 2-2 of the aforementioned ALUCP. The site of the proposed project, although within the radius only to a small extent (perhaps 10 acres or less) is situated within Zone D*. According to the subject table, this means that there is negligible risk of encountering an aviation related crash or other safety hazard. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
f)	Would the project for a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	■	☐

Please refer to Item e) above. The Wasco-Kern County Airport discussed in that section. A review of aerial photographs of the City of Wasco and environs revealed no other airstrips of any kind in the vicinity of the proposed project. Given the foregoing, no further assessment of this issue is warranted.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
g)	Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐

State Highway 46 is a major east-west transportation corridor through the City of Wasco and an obvious route for both emergency response and emergency evacuation purposes. Caltrans has plans to improve Highway 46 to a full 4-lane facility through the City, including along the entire project frontage, a distance of approximately one mile. Improvement of this roadway will only serve to enhance its effectiveness as a route for both emergency response and emergency evacuation purposes. In that the proposed project will provide its fair share of improvements to State Highway 46 in the vicinity of the project site, the proposed project is not expected to impair the implementation of, or physically interfere with, any known adopted emergency response or evacuation plans in the City of Wasco. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

h)	Would the project 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?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ■	No Impact ☐

The site of the proposed project is not located in or adjacent to an area identified by the City of Wasco as a wild land fire hazard area. However, the Wasco General Plan does indicate that wild land fire hazards threaten life and property within the Wasco vicinity and that resulting from either manmade or natural causes they occur primarily in brush, or grasslands, primarily in sparsely developed or existing open space lands.

VIII. HYDROLOGY AND WATER QUALITY

Information in this section is primarily derived in part from the following documents.

Wasco, City of, *Draft Environmental Impact Report – Wasco General Plan Update – 2002,* July 2002 (by Quad Knopf)

Kern, County of, *Kern County General Plan,* as amended March 13, 2007

PSOMAS, *Wasco Center Preliminary Water Study VTTM 7127, City of Wasco*, January 22, 2008

The first two documents listed above are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours. The third document cited is discussed in greater detail in Section XVI, *Utilities and Service Systems*, later in this report.

Setting

Regulatory Environment

In the State of California, groundwater and surface water quality is regulated by the State Water Resources Control Board (State Water Board) pursuant to the Porter-Cologne Act which established the State Water Board and defined its responsibilities. The State Water Board has jurisdiction over the nine existing Regional Water Quality Control Boards including the Regional Board responsible for the Wasco area, the Central Valley Board. The Central Valley Regional Board has adopted the Tulare Lake Basin Water Quality Control Plan which establishes criteria for the maintenance of water quality in the Wasco area. Complimentary to the responsibilities of the State Water Board, are those of the California Department of Health Services which regulates the quality, reliability and safety of drinking water under the authority of the Safe Drinking Water Act and related laws.

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program and in connection therewith has prepared Flood Insurance Rate Maps (FIRM) which designates flood-prone areas and their respective flood frequency and severity. The site of the proposed project is not located within a FEMA designated 100-year flood zone. Current FEMA maps indicate that the area of the City that is within a 100-year flood zone is adjacent to the north-south aligned Burlington Northern/Santa Fe Railroad tracks, approximately a mile east of the easternmost portion of the site of the proposed project.

Geohydrology

The Wasco area is located within the Tulare Lake Basin hydrologic area, specifically the Kern County Groundwater subbasin. The Tulare Lake Basin hydrologic area comprises the drainage area of the San Joaquin Valley south of the San Joaquin River and encompasses approximately 17,650 square miles.

The Kern County Groundwater subbasin portion of the Tulare Lake Basin area is bounded on the north by the Kern County line and the Tule Groundwater subbasin, on the east and southeast by granitic bedrock of the Sierra Nevada foothills and Tehachapi mountains, and on the southwest and west by the marine sediments of the San Emigdio Mountains and Coast Ranges.

The average subbasin water level is essentially unchanged from 1970 to 2000, after experiencing cumulative changes of approximately a 15-foot decrease through 1978, a 15-foot increase through 1988, and an 8-foot increase through 1997. However, net water level changes in different portions of the subbasin were quite variable through the period 1970-2000. These changes ranged from increases of over 30 feet at the southeast valley margin and in the Lost Hills/Buttonwillow areas to decreases of over 25 and 50 feet in the Bakersfield and McFarland/Shafter areas, respectively. Kern County Water Agency estimates the total water in storage to be 40,000,000 AF and dewatered aquifer storage to be 10,000,000 AF. It appears that these calculations consider areas of the subbasin which are known to overlay useable groundwater, which they report to be about 1,000,000 acres.

Groundwater quality throughout the region is suitable for most urban and agricultural uses with only local impairments. The primary constituents of concern are high TDS, nitrate, arsenic, and organic compounds. The eastern Kern County subbasin contains primarily calcium bicarbonate waters in the shallow zones, increasing in sodium with depth. Bicarbonate is replaced by sulfate and lesser chloride in an east to west trend across the subbasin. West side waters are primarily sodium sulfate to calcium-sodium sulfate type. The average TDS of groundwater is 400-500 mg/L with a range of 150 - 5,000 mg/L. Shallow groundwater presents problems for agriculture in the western portion of the basin. High TDS, sodium chloride, and sulfate are associated with the axial trough of the subbasin. Nitrate, DBCP, and EDB concentrations exist in some areas associated with lakebed deposits.

City of Wasco Groundwater Supplies

The City of Wasco draws 100 percent of its water supply from groundwater and the existing water system consists of eight wells (only seven currently operate) and a distribution system. The system has two pressure zones with the dividing line along Magnolia Avenue. One well, Well #6, is currently inactive due to high concentrations of nitrate and DBCP concentrations that exceed drinking water standards. A second well, Well #2, is currently only operated to supply irrigation water to the Valley Rose Golf Course due to its location. It is located on the lower most elevation zone, west of Magnolia Avenue, and it would over pressurize the system if maintained under constant operation. Water supply for domestic service and fire flow is currently supplied from the remaining six active wells.

In the City of Wasco, all active wells are sampled and tested for general mineral, general physical, bacteriological, inorganic, and organic chemical analyses in compliance with Title 22 requirements. The overall water quality for the active wells meets the water quality criteria, however the Department of Public Health (DPH) has delineated three contaminants of concern for the City's wells including nitrate, Dibromochloropropane (DBCP) and Ethylenedibromide (EDB). There are also some bacteriological issues associated with some of the wells.

Surface Waters

Principal rivers and streams in the general Wasco area include the Kern River and Poso Creek. The Kern River is the nearest substantive natural surface water feature to the City of Wasco. It flows from the northeast in the Sierra Nevada to the southwest in the Central Valley, northeast of Bakersfield. Man-made surface water features in the general area include the Central Valley Project (CVP) and the State Water Project (SWP). CVP water is delivered to Kern County through the Friant-Kern Canal. SWP water is supplied from the Sacramento/San Joaquin Delta area and delivered to Kern County through the California Aqueduct. Surface drainage and the City's storm drain system are discussed in Section XVI, *Utilities and Service Systems*, later in this report.

Evaluation

Threshold(s) of Significance

A project may be deemed to have a significant effect on Hydrology and Water Quality if it will significantly affect absorption rates, drainage patterns, the rate and amount of surface runoff, the quality and/or quantity of surface or public water supply, the course or direction of surface and/or groundwater movements or would expose people or property to water-related hazards such as flooding. Threshold(s) of Significance with regard to water quality are typically interpreted in relation to specific water quality standards of regional, state, and/or federal agencies.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project violate any water quality standards or waste discharge requirements?	☐	☐	■	☐

Implementation of the proposed project will also alter the composition of surface runoff due to construction, the development of impervious surfaces (e.g. streets, roofs, parking areas, etc.) and by the irrigation of landscaped areas. Paved surfaces generate pollutants such as atmospheric pollution, tire-wear residues, petroleum products, fertilizer and pesticide wash-offs from landscaped areas, litter, animal droppings, and other pollutants. Because such runoff is a non-point source of pollutants, it is difficult to quantify pollution through flow measurements, sampling, and other analytic techniques. Because this type of urban runoff contributes to the incremental degradation of downstream water quality, the EPA has identified paved area runoff as the primary source of urban pollution. Pollutants are washed off of paved surfaces by rainfall. The amount of pollution depends on the amount of contaminants on the surface and the amount of rainfall. The EPA has determined that 0.5 inches of rainfall over a one-hour period is sufficient to remove 90 percent of the total accumulated pollutants on a paved surface.

During construction, the project site will prepare and follow specific NPDES and SWPPP plans that will be reviewed and approved by the City of Wasco. Through the use of best management practices, there will be controls for erosion, sediment, spills and other construction-related sources of pollutants. In light of the foregoing, the proposed project is not expected to violate any water quality standards or waste discharge requirements. As such, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	■	☐

The proposed project is consistent with the City's overall growth-related goals, policies and objectives as advanced by the Wasco General Plan, particularly with regard to encouraging and facilitating development designed specifically to expand the City's economic base and secure long-term economic vitality. With regard to groundwater supplies, the City of Wasco has never experienced a severe shortage of water supply, and anticipates that this condition will remain in the following years. The City's local groundwater, which is the sole source of its supply, has reliably allowed the City to meet its historical water demands. The local aquifer yields are good and can be readily recharged by percolation in the Kern River channel and other sites.

The City of Wasco water source is 100 percent groundwater, drawn from seven active production wells. Existing agricultural water demand on the site of the proposed project constitutes a net removal of 207 AFY from the local groundwater aquifer. The preliminary water study prepared for the proposed project indicates that upon full build-out, the proposed project will add approximately 419 AFY to the City's projected demand for groundwater. However, at that same time, when considering the cessation of any further agriculture-related demand emanating from the project site (minus 35% return flow), add the increased return flow from recycled wastewater generated by the proposed project, as well as the 35% return flow from the proposed project's irrigation demand, the overall net impact of the proposed project in terms of demand for water from local groundwater resources is an estimated 69 AFY, a negligible amount. Given the foregoing, the proposed project is not expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. As such, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site.	☐	☐	■	☐

The site of the proposed project is relatively level and naturally drains in a southeast to northwest direction. Most surface runoff sheet flows across the project site except where orchard maintenance pathways have incised the surface soils. As described elsewhere in this document, most storm water within the City flows east to west within the street system which ultimately directs storm flows into subsurface storm drain lines at key points throughout the City. Storm water is then conveyed to a system of holding ponds in the vicinity of the City's wastewater treatment facility. In addition, several smaller retention basins are also located within the City. One such facility is currently located on the site of the proposed project at its southeastern corner adjacent to Highway 46.

Development of the Wasco Center project will result in cut and fill on the site that may result in short-term, construction related erosion and sedimentation. Project grading will expose soils thereby creating a potential impact on local drainage courses, although there are no defined stream courses on or near the project property. Pursuant to requirements of the State Water Resources Control Board, a NPDES construction permit is required for all construction on the site that is over five acres. Construction activities include clearing, grading, or excavation. It is anticipated that construction of the proposed project will occur pursuant to City of Wasco construction site performance protocols. These requirements and standards, along with any other regulations of federal, state and county governments applicable at the time of plan review, reduce potential impacts to water quality from project construction activities to a level that is less than significant.

With regard to project operations, the design of the proposed project incorporates features with the specific intent of precluding or minimizing any surface runoff related erosion or siltation. Presently, the proposed project utilizes onsite green areas as potential drainage swales allowing drainage to percolate and reduce runoff volumes. In addition the Wasco Center site is replacing above ground retention basins, which remain unused for a large part of the year with underground retention methods to control storm runoff. Additional control methods are being considered for the final design which will reduce the total retention volume.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
d)	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	☐	☐	■	☐

Please refer to Item c) above. It indicates that development of the Wasco Center project will result in cut and fill on the site that may result in short-term, construction related erosion and sedimentation. Project grading will expose soils thereby creating a potential impact on local drainage courses, although there are no defined stream courses on or near the project property. The section goes on to say that it is anticipated that construction of the proposed project will occur pursuant to City of Wasco construction site performance protocols and that these requirements and standards, along with any other regulations of federal, state and county governments applicable at the time of plan review, reduce potential impacts to water quality from project construction activities to a level that is less than significant. The same rationale is also applicable to the on-site control and retention of surface runoff and the resultant ability to preclude the occurrence of flooding either on- or off-site. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

e)	Would the project create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ■	No Impact ☐

As discussed previously, the design of the proposed project incorporates features with the intent of precluding or minimizing any surface runoff related erosion or siltation and on- or off-site flooding. In addition to these features, surface runoff generated on the site of the proposed project will be retained in on-site underground storm water retention facilities. Said facilities have been designed to accommodate a 100-year rainfall event. Given the foregoing, although project development will create additional surface runoff volumes, planned onsite storm runoff retention facilities will ensure that project-related surface runoff will not exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

f)	Would the project otherwise substantially degrade water quality?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ■	No Impact ☐

Items a) thru g) above have in various ways addressed how the proposed project would be constructed and operated in a manner that will clearly preclude on- or off-site erosion, siltation, flooding and the occurrence of significant effects on water quality. It is unknown how the proposed project night otherwise substantially degrade water quality. As a consequence, no further assessment of this issue will be undertaken and no mitigation measures are required.

g)	Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ☐	No Impact ■

The site of the proposed project is not located within a FEMA designated 100-year flood zone. Current FEMA maps indicate that the area of the City that is within a 100-year flood zone is adjacent to the north-south aligned Burlington Northern/Santa Fe Railroad tracks, approximately a mile east of the easternmost portion of the site of the proposed project. In light of the foregoing, since the proposed project will not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, no impacts in this regard would be expected to occur. As a consequence, no further assessment of this issue will be undertaken and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
h)	Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■

Please refer to the discussion under item g) above. It indicates that the site of the proposed project is not located within a 100-year flood hazard area. As a consequence, the proposed project will not place within a 100-year flood hazard area structures which would impede or redirect flood flows and as a result, no further assessment of this issue will be undertaken and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
i)	Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	■

The site of the proposed project is not located in flood hazard area nor within the inundation area of a levee or dam. As a consequence, the proposed project will not expose people or structures to a significant risk of loss, injury or death involving flooding. As a result, no further assessment of this issue will be undertaken and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
j)	Would the project cause or expose people and structures to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

The site of the proposed project is not located in an area subject to seiche, tsunami or mudflow hazards. As a result, no further assessment of this issue will be undertaken and no mitigation measures are required.

IX. LAND USE AND PLANNING

Information in this section is primarily derived in part from the following documents.

Wasco, City of, *City of Wasco General Plan Policies*, August 2002 (Amended November 2003)

Wasco, City of, *Municipal Code,* Revised June 5, 2007

The documents listed above are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours.

Setting

Previous **Figure 4** displayed the spatial distribution of the Wasco General Plan land use designations for the project site and vicinity. As shown, the City of Wasco General Plan Land Use Map presently designates the project site with the following land use designations: *Low Density Residential* and *Community Retail Commercial.* The portion of the project site designated as Low Density Residential is a small 1.7 acre strip of land on the site's east side. The remainder of the site is entirely designated as Community Retail Commercial. Also evident on previous **Figure 4** is the fact that the City of Wasco General Plan Land Use Map presently also designates all parcels either abutting the site of the proposed project or facing it from across Highway 46 as *Low Density Residential* and *Community Retail Commercial.* With regard to zoning, the entire project site is classified as C-R (Community Retail Commercial). This was illustrated on previous **Figure 6**. This illustration also displayed the zoning

classifications for all parcels either abutting the site of the proposed project or facing it from across Highway 46. North of the project site, all abutting parcels carry the zoning classification R-1-6 (Single-Family Residential, 6du/acre) while the parcels facing the project site across Highway 46 are all zoned C-R (Community Retail Commercial).

Evaluation

Threshold(s) of Significance

A project may have a significant effect on Land Use and Planning if it will conflict with adopted general plans, policies, goals and/or zoning ordinances, be incompatible with surrounding land uses or physically divide or disrupt an existing community.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project physically divide an established community?	☐	☐	■	☐

Previous **Figure 3** is an aerial photo of the project site and vicinity. To the south, the project site has approximately one mile of frontage along State Highway 46. To the northeast of the project site residential tract development is currently underway. Generally, urban development along this reach Highway 46 is relatively uncoordinated, spot oriented and highly variable with regard to age, architecture and type of business. The general area is, however, undergoing a slow but methodical transformation in accord with the long-range development goals, policies and objectives promulgated by the Wasco General Plan. Given the foregoing, however, the proposed project will not physically divide an established community. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	■	☐

The consistency of the proposed project with the Wasco General Plan and Zoning Ordinance was previously discussed in Section 2.4, *Project Relationship to Existing Land Use Plans, Policies and Controls.* In addition, the consistency of the proposed project with adopted Air Quality Attainment Plans was also previously discussed in Section 4.III, *Air Quality*, under Item a). No other applicable land use plans, policies or regulations of an agency with jurisdiction over the project has been identified. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	■	☐

Please refer to the discussion under Item b) above. The statement that no other applicable land use plans, policies or regulations of an agency with jurisdiction over the project had been identified also encompassed any applicable habitat conservation plans or natural community conservation plans. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

X. MINERAL RESOURCES

Information in this section is primarily derived in part from the following documents.

Wasco, City of, *City of Wasco General Plan Policies*, August 2002 (Amended November 2003)

Wasco, City of, *Draft Environmental Impact Report – Wasco General Plan Update – 2002,* July 2002 (by Quad Knopf)

Kern, County of, *Kern County General Plan Elements*, as amended June 15, 2004

The documents listed above are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours.

Setting

Neither the Wasco General Plan nor the Kern County General Plan identify the site of the proposed project as a known mineral resource location.

Evaluation

Threshold(s) of Significance

A project may have a significant effect on Mineral Resources if it will result in the loss of a known mineral resource of value to the state or region, or the loss of a locally important mineral resources recovery site delineated on a local general plan.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■

As indicated above, the Wasco and Kern County General Plans do not identify the site of the proposed project as a known mineral resource location. As a consequence, implementation of the proposed project will not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan other land use plan?	☐	☐	☐	■

As indicated above, the Wasco and Kern County General Plans do not identify the site of the proposed project as a known mineral resource location. As a consequence, implementation of the proposed project will not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

X. NOISE

Information in this section is primarily derived from the following technical report and public document:

Chambers Group, Inc., *Noise Impact Analysis Report, Wasco Center Project, Wasco, California*, April 2008

The above document is provided herein in its entirety as **Appendix F.**

Wasco, City of, *City of Wasco General Plan Policies*, August 2002 (Amended November 2003)

Kern, County of, *Airport Land Use Compatibility Plan,* as amended June 2006

The above documents are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours.

Setting

Noise Terminology

Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance and, in the extreme, hearing impairment. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA. Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling a traffic volume, would increase the noise level by 3 dBA; a halving of the energy would result in a 3 dBA decrease.

Table 7 (*Sound Levels of Typical Noise Sources and Noise Environments*) shows the relationship of various noise levels to commonly experienced noise events. Average noise levels over a period of minutes or hours are usually expressed as dB L_{eq}, or the equivalent noise level for that period of time. For example, $L_{eq(3)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed. Noise standards for land use compatibility, which are addressed in the City of Wasco General Plan Policies Statement, are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (Ldn). CNEL is a 24-hour weighted average measure of community noise. The computation of CNEL adds 5 dBA to the average hourly noise levels between 7 p.m. and 10 p.m. (evening hours), and 10 dBA to the average hourly noise levels between 10:00 p.m. and 7:00 a.m. (nighttime hours). This weighting accounts for the increased human sensitivity to noise in the evening and nighttime hours. Ldn is a very similar 24-hour weighted average that weights only the nighttime hours and not the evening hours. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increases or decreases; that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud (Caltrans 1998).

Existing Noise Levels

The project site is currently predominantly agricultural in nature. Land uses immediately adjacent to the project site are designated as residential, commercial, and agricultural. The dominant noise source in the vicinity of the proposed project is vehicular traffic from Highway 46, Magnolia Avenue, Central Avenue, and Palm Avenue. **Table 8 *(Existing Noise Levels on Area Roadway Segments)*** provides estimates of the current noise levels along various roadway segments in the vicinity of the proposed project. As shown, existing traffic volumes on State Highway 46 along the project site frontage generates a noise level of between 63 dBA and 64 dBA CNEL.

Table 7

Sound Levels of Typical Noise Sources and Noise Environments

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

Evaluation

Threshold(s) of Significance

The City of Wasco has adopted the following noise standards:

- *Areas shall be recognized as noise impacted if exposed to existing or projected future noise levels at the exterior of buildings which exceed 65 dB L_{dn} (or CNEL).*
- *Noise sensitive land uses should be discouraged in noise impacted areas unless effective mitigation measures are incorporated into the specific design of such projects to reduce exterior noise levels to 65 dB L_{dn} (or CNEL) or less and 45 dB L_{dn} (or CNEL) or less within interior living spaces. Noise sensitive land uses include hospitals, residences, schools, churches, and other uses of a similar nature as determined by the Planning Director.*

Table 8

Existing Noise Levels on Area Roadway Segments

ROADWAY SEGMENT	EXISTING NOISE LEVEL (dBA CNEL)*
Highway 46 west of Magnolia	64.49
Highway 46: Magnolia to West Driveway 1	64.65
Highway 46: West Driveway 1 to West Driveway 2	N/A
Highway 46: West Driveway 2 to West Driveway 3	N/A
Highway 46: West Driveway 3 to Central Avenue	64.61
Highway 46: Central Avenue to East Driveway	63.60
Highway 46: East Driveway to Beckas Street	63.54
Highway 46: Beckas Street to Palm Avenue	63.78
Highway 46: Palm Avenue to Griffith	64.03
Highway 46: Griffith Avenue to F Street/South Hwy 43	63.54
Highway 46: F Street to J Street/North Highway 43	61.46
Highway 46: East of J Street	60.97
Magnolia Avenue: South of Highway 46	52.87
Magnolia Avenue: Highway 46 to South Driveway	48.70
Magnolia Avenue: South Driveway to North Driveway	N/A
Magnolia Avenue: North Driveway to Margalo	N/A
Magnolia Avenue: North of Margalo	N/A
Central Avenue: South of Highway 46	53.41
Central Avenue: Highway 46 to Margalo	N/A
Beckas Street: South of Highway 46	60.11
Palm Avenue: South of Highway 46	57.49
Palm Avenue: Highway 46 to South Driveway	58.16
Palm Avenue: South Driveway to North Driveway	N/A
Palm Avenue: North of North Driveway	N/A
F Street: North of Highway 46	57.81
Highway 43: South of Highway 46	63.73
Highway 43: North of Highway 46	61.23
J Street: South of Highway 46	61.23

Source: CGI 2008

*Measured from roadway centerline to approximate location of the closest edge of residential property lines or school grounds, or to door of nearest commercial/industrial site. Where applicable sound walls were included in the modeling.

- *Industrial, commercial or other noise generating land uses (including roadways, railroads, and airports) should be discouraged if resulting noise levels will exceed 65 dB L_{dn} (or CNEL) at the boundary areas of planned or zoned noise sensitive land uses.*

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	■	☐

Development of the proposed project will require site preparation (i.e., potential demolition, land clearing, grading, excavation and trenching) and subsequent construction of site improvements and buildings. These activities typically involve the use of heavy equipment, such as graders, backhoes, and cranes. Trucks would be used to deliver equipment and building materials, and to haul away waste materials. Smaller equipment, such as air compressors, pneumatic tools, plate compactors, and concrete vibrators would also be used throughout the site during its development. The noise levels associated with these different equipment and machinery types vary greatly. **Table 9 (*Noise Associated with Typical Construction Equipment*)** lists noise levels for equipment that would typically be used during construction of the proposed project. Construction activities are carried out in discrete steps, each of which has a unique mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise levels surrounding the construction site as work progresses.

Table 9

Noise Associated with Typical Construction Equipment

Type of Equipment	Maximum Noise Levels Measured (dBA at 50 feet)
Grader	89
Backhoe	90
Pneumatic Tools	88
Air Compressor	86
Crane	83
Plate Compactor	89
Concrete Vibrator	85
Trucks	87

Source: Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, BBN 1971.

The residential area most likely to be subjected to project-related construction is located adjacent to the northeastern project boundary. Depending on the equipment and vehicle mix present onsite during project construction, maximum 1-hour exterior noise levels at that location could occasionally exceed 89 dBA CNEL. Important to note, however, is that while audible and perhaps even loud, construction-related noise is generally intermittent and of a limited duration. Given this, it can be concluded that any significant construction related noise while potentially annoying or irritating, its intermittent nature, limited duration, and likely occurrence during daylight hours in compliance with the City's construction site work guidelines and operational protocols, net construction related noise impacts have been determined to be less than significant. However, while determined to be less than significant, it is further determined that adding another mitigation measure with which the proposed project will be required to comply, will serve to minimize even further the extent to which construction noise effects might be noticeable. This measure is identified as **NOI1** in Section 5, *Mitigation Measure Summary*, found later in this document.

b)	Would the project expose people to or generate excessive groundborne vibration or groundborne noise levels?	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
		☐	☐	■	☐

Another potential type of noise that often occurs during the construction phase of a project is referred to as ground borne vibration or ground borne noise. Sources of perceptible ground borne vibrations may include, but not be limited to, blasting operations, pile driver operations, and the like. However, as of the this writing no prospective known construction-related operation, or equipment type use that could be the source of ground borne vibrations or ground borne noise are anticipated to be used during construction of the proposed project. As such, the proposed project will not expose people to or generate excessive ground borne vibration or ground borne noise levels. Given the foregoing no further assessment of this issue is warranted and no mitigation measures are required.

c)	Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
		☐	■	☐	☐

As indicated previously, traffic on area roadways is currently the dominant noise source in the vicinity of the proposed project. Upon full build out, Wasco Center will be a substantial contributor to traffic volumes on area roadways. These project-induced traffic volume increases will affect a concomitant increase in noise levels. **Table 10 *(Existing and Future Noise Levels on Area Roadway Segments)*** demonstrates the progression in traffic and attendant noise levels from current levels, to those projected to occur in the year 2030 without the proposed project and then again in the year 2030 with the proposed project. As indicated, current traffic volumes on all existing area roadway segments all yielded attendant noise levels below 64.6 dBA CNEL at 50 feet from the roadway centerline. As a consequence, no sensitive receptors located along any of the roadway segments analyzed experience outdoor noise levels attributable to area traffic in excess of the City Standard (65.0 dBA CNEL).

Under a scenario of future traffic volumes and attendant calculated noise levels on area roadway segments without the proposed project, while all roadway segments analyzed experienced traffic volume and thus noise level increases, only one roadway segment (Highway 46 segment between Beckas Street and Palm Avenue) was estimated to have a calculated noise level in excess of 65.0 dBA CNEL. However, when adding traffic attributable to the proposed project to future traffic volumes on area roadway segments, eleven (11) of the roadway segments analyzed were projected to experience traffic volume increases that in turn would affect noise levels that exceeded 65.0 dBA CNEL at 50 feet from the roadway centerline. Of these, three would occur proximal to sensitive receptors. The three area roadway segments in this regard are Highway 46 segments from Beckas Street to Palm Avenue, Palm Avenue to Griffith, and Griffith Avenue to F Street/South Hwy 43. The projected traffic related noise levels at these three locations were 68.65, 66.99 and 65.78 dBA CNEL, respectively. Mitigation measures will be required of the proposed project in order to ensure the preclusion of a significant noise-related impact on the environment. These measures are identified as mitigation measures **NOI2, NOI3** and **NOI4** in Section 5, *Mitigation Measure Summary*, found later in this document.

In addition to roadway noise impacts, an analysis of potential noise impacts upon proximal residential land uses attributable to on-site operations was also conducted. The primary sources of noise onsite include vehicles in the parking lot, delivery vehicle activity, public address system, the band classroom, and rooftop air conditioning/heating and ventilation units (ACHV). Some noise sources such as the delivery activities, use of the public address system, and band class will be periodic, while others such as ACHV units will be fairly constant throughout the day. The operational noise analysis indicated that at full build out, on-site activities would generate noise levels approximating 66.57 dBA CNEL at the property line in close proximity to abutting residential uses. A mitigation measure will be required of the proposed project in order to ensure the preclusion of a significant operations-related noise impact on the

environment. This measure is identified as mitigation measure **NOI5** in Section 5, *Mitigation Measure Summary*, found later in this document.

Table 10
Existing and Future Noise Levels on Area Roadway Segments

	NOISE LEVEL (dBA CNEL)				
ROADWAY SEGMENT	Existing	Future without project	Future With Project	Change from Future Without Project	Sensitive Land Use on Roadway Segment
Highway 46 west of Magnolia	64.49	64.84	**65.92**	1.08	None
Highway 46: Magnolia to West Driveway 1	64.65	64.99	**67.58**	2.60	None
Highway 46: West Driveway 1 to West Driveway 2	N/A	N/A	**67.76**	N/A	None
Highway 46: West Driveway 2 to West Driveway 3	N/A	N/A	**67.88**	N/A	None
Highway 46: West Driveway 3 to Central Avenue	64.61	64.92	**68.05**	**3.12**	None
Highway 46: Central Avenue to East Driveway	63.60	63.94	**67.34**	**3.40**	None
Highway 46: East Driveway to Beckas Street	63.54	63.90	**67.53**	**3.63**	None
Highway 46: Beckas Street to Palm Avenue	63.78	**65.69**	**68.65**	2.96	Residential
Highway 46: Palm Avenue to Griffith	64.03	64.37	**66.99**	2.62	Residential
Highway 46: Griffith Avenue to F Street/South Hwy 43	63.54	64.02	**65.78**	1.75	Residential
Highway 46: F Street to J Street/North Highway 43	61.46	61.80	62.71	0.92	None
Highway 46: East of J Street	60.97	61.31	61.62	0.31	None
Magnolia Avenue: South of Highway 46	52.87	53.28	58.73	5.45	Residential
Magnolia Avenue: Highway 46 to South Driveway	48.70	48.83	60.39	11.55	Residential
Magnolia Avenue: South Driveway to North Driveway	N/A	N/A	58.62	N/A	None
Magnolia Avenue: North Driveway to Margalo	N/A	N/A	53.69	N/A	Residential
Magnolia Avenue: North of Margalo	N/A	N/A	51.84	N/A	None
Central Avenue: South of Highway 46	53.41	53.77	57.26	3.49	Residential
Central Avenue: Highway 46 to Margalo	N/A	N/A	59.71	N/A	Residential
Beckas Street: South of Highway 46	60.11	60.47	62.04	1.56	Residential
Palm Avenue: South of Highway 46	57.49	57.84	60.54	2.70	Residential
Palm Avenue: Highway 46 to South Driveway	58.16	58.51	61.91	3.41	Residential
Palm Avenue: South Driveway to North Driveway	N/A	N/A	61.45	N/A	Residential
Palm Avenue: North of North Driveway	N/A	N/A	60.32	N/A	Residential
F Street: North of Highway 46	57.81	58.18	60.40	2.22	None
Highway 43: South of Highway 46	63.73	64.08	**65.94**	1.86	None
Highway 43: North of Highway 46	61.23	62.55	62.88	0.33	None
J Street: South of Highway 46	61.23	61.57	62.55	0.98	None

Source: CGI 2008

*Measured from roadway centerline to approximate location of the closest edge of residential property lines or school grounds, or to door of nearest commercial/industrial site. Where applicable sound walls were included in the modeling.

d)	Would the project cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ■	Less than Significant Impact ☐	No Impact ☐

Depending on the equipment and vehicle mix present onsite during project construction, maximum 1-hour exterior noise levels at that location could occasionally exceed 89 dBA CNEL. Important to note, however, is that while audible and perhaps even loud, construction-related noise is generally intermittent and of a limited duration. Given this, it can be concluded that any significant construction related noise while potentially annoying, irritating and possibly even physically discomforting would be of an intermittent nature, of limited duration, and likely to occur only during daylight hours in compliance with the City's construction guidelines and operational protocols, the net construction related noise impacts have been determined to be acceptable.

e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ■	No Impact ☐

The aforementioned Kern County Airport Land Use Compatibility Plan indicates that the site of the proposed project is well outside the 65 dBA noise contour identified by airport operations. As a consequence future project site residents, tenants, users and others will not be exposed to excessive airport related noise levels. Given the foregoing no further assessment of this issue is warranted and no mitigation measures are required.

f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	Potentially Significant Impact ☐	Potentially Significant Impact Unless Mitigated ☐	Less than Significant Impact ☐	No Impact ■

Please refer to Item e) above. The Wasco-Kern County Airport discussed in that section. A review of aerial photographs of the City of Wasco and environs revealed no other airstrips of any kind in the vicinity of the proposed project. Given the foregoing, no further assessment of this issue is warranted.

XII. POPULATION AND HOUSING

Information in this section is primarily derived from the following public documents:

Wasco, City of, *City of Wasco Draft Municipal Service Review*, June 2005 (by LSA Associates, Inc)

Wasco, City of, *City of Wasco General Plan Policies*, August 2002 (Amended November 2003)

The above documents are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours.

Setting

According to the U.S. Census Bureau, the population of Wasco in 1990 stood at 12,412. At the same time, the City comprised 3,597 housing units. This indicates that the City's 1990 average household size was 3.45. By 2000, the U.S. Census found that the City's population had almost doubled—to 22,746, but indicated that 6,187 of this total were prison inmates. As a consequence, Wasco's non-prison population

grew 33% between1990 to 2000. At the same time, the City's housing stock increased in number to 3,983. This indicates that by the year 2000, the City's average household size increased from 3.45 to 3.79. By 2005, the California Department of Finance (CDF) estimated that the City of Wasco had a total population of 23,708, of which 6,441 were prison inmates. The number of housing units estimated by CDF to exist in Wasco in 2005 was 4,720. This indicates that by the year 2005, the City's average household size changed from 3.79 to 3.66. However, the CDF-reported household size for the City of Wasco in 2005 was 3.92. The Proposed Project site is currently agricultural land or vacant and contains one single-family residence.

Evaluation

Threshold(s) of Significance

A project may be deemed to have a significant effect on Population and Housing if it will induce substantial growth or concentration of population, or, displace a large number of people.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project 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 proposed project includes the development of up to 123 townhouses. Based on an average household size of 3.92, up to 482 new Wasco residents can be expected as a result of project development. Both the number of dwelling units and attendant new population attributable to project development are within year 2030 Wasco population and housing unit estimates provided in the April 2002 Adopted Growth Forecast prepared by the Kern Council of Governments.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	■	☐

The site of the proposed project presently contains one dwelling unit and two onsite residents. Project implementation will affect the demolition of the subject residence and displacement of its two occupants. The displacement of the one on-site dwelling unit and two site residents due to project implementation is not considered a significant population and housing related effect.

XIII. PUBLIC SERVICES

Information in this section is primarily derived from the following public documents:

Wasco, City of, *City of Wasco Draft Municipal Service Review*, June 2005 (by LSA Associates, Inc)

Wasco, City of, *City of Wasco General Plan Policies*, August 2002 (Amended November 2003)

Wasco, City of, *Draft Environmental Impact Report – Wasco General Plan Update – 2002,* July 2002 (by Quad Knopf)

The above documents are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours.

Setting

Fire Protection

The City of Wasco contracts with Kern County for fire protection services. The Kern County Fire Department provides services to the Wasco area from its base at Station 31 located at 2424 7th Street, in the City of Wasco. This facility is located approximately 2,900 feet from the site of the proposed project. The fire station has two Type 1 Engines, (one front line and one reserve) one ICS Type 4, four-wheel drive wild land Patrol, and one Type 1 water tender. As confirmed with staff at the station, the station continues to operate as described in the Wasco General Plan, with nine firefighters assigned to the station who work in three-man shifts. The total response area is 157.4 square miles. The maximum response time to any emergency within the City of Wasco is approximately four minutes. As such, the Pacific Fire rating Bureau has given Wasco a fire insurance rating of five, indicating a relatively low probability for severe fire losses. The City of Wasco employs a standard of one fire-company for every 10,000 residents to evaluate fire protection services.

Police Protection

The City of Wasco also contracts with Kern County for law enforcement services. The City is patrolled on a 24-hour basis by the County Sheriff's Department from its Wasco Substation located at 748 F Street in the City of Wasco. This facility is located approximately one mile from the site of the proposed project. The Sheriff's Department staffing for this substation is presently 2 sergeants, 18 deputies, 4 senior deputies, the area commander, six clerks, and an aide who handles civil process. In 2005, the station responded to 15,489 service calls. Standards for determining the need for additional staffing are 1 officer for every 1,000 residents.

Schools

Public educational services within the City of Wasco are provided by the Wasco Union High School District (WUHSD) and the Wasco Union Elementary School District (WUESD). The WUESD educates more than 3,120 pre-kindergarten through eighth grade students. The WUESD has prepared for the anticipated growth of the Wasco community and according to District Superintendent Gary Bray, "the district Board of Trustees has developed plans for additional facilities that will meet the demand for the yearly 5 percent to 8 percent growth the district has experienced in recent years". Recently the district has been involved with modernization projects of older school facilities.

Currently there are three elementary schools (John L. Prueitt, Karl F. Clemens and Palm Avenue) and one middle school (Thomas Jefferson) in the district. The WUHSD includes two high schools: Wasco High School, which is a traditional high school, and Independence High School, an alternative High School, which was established in 1996 to serve those students who have a difficult time thriving in a traditional classroom setting. Independence High School is considered a continuation school and is also home to the district's adult education program.

The district student enrollment has grown steadily since 2000. Enrollment grew from 1,126 students during the 2000-01 school year to more than 1,550 students during the 2005-06 school year. In 2004 the district prepared a facilities master plan which calls for a three phased expansion of Wasco Union High School. This expansion will include the addition of new modular classrooms, new basketball courts, a sports complex, and possibly a new cafeteria, gymnasium, and a multipurpose room. The district also plans to construct a second comprehensive high school to accommodate future growth although no specific location or projected date of construction have been established to date.

Parks

There are four parks currently located within the City of Wasco: Cormack Park (a County service park, 7 acres), Westside Park (16 acres), Frank Barker Memorial Park (20 acres) and Southgate Park (0.34 acres). Together, these four parks total approximately 43.34 acres. All city parks are maintained by the Wasco Recreation and Parks District, a Kern County Special District. Along with these four parks, the city also has the Wasco Historical Museum, swimming pools, and Veteran's Memorial Building. There is also a cooperative agreement between the City and the School District which allows school facilities to be used as open space and recreation facilities. Thus, the 27 acres of school facilities are part of the City's park inventory. The City Standard for park and recreation area is six (6) acres for every 1,000 people.

Evaluation

Threshold(s) of Significance

A project may significantly impact Public Services if it results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any or the public services

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any or the public services: Fire protection? Police protection? Schools? Parks? Other public facilities?	☐	☐	■	☐

Implementation of the Wasco Center project as currently proposed will increase the demand for fire and police protection. As indicated previously, the site of the proposed project is located within one mile of both the Kern County Sheriff Wasco Substation and Kern County Fire Department Station 31. Discussions with representatives of each agency indicate that development of the proposed project will not impair their ability to serve and respond to emergency calls within four minutes after first notification. Based on a student generation factor of 0.5 enrollments/dwelling unit, when all residential units associated with the proposed project have been constructed and occupied, the proposed project may generate as many as 61 new enrollments to school facilities of the Wasco Union High School and Wasco Union Elementary School Districts. Currently available enrollment capacities within both school districts indicate that the impact of project development on Wasco school facilities will not constitute a significant adverse effect. The infusion of approximately 480 new residents to the general Wasco vicinity will increase localized demands for the above and other public services and facilities. However, the proposed project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities. Based on the foregoing, it is determined that the proposed project, while slowly affecting a broad increase in demand for the aforementioned public services, will not do so in manner and extent unlikely to result in significant adverse Public Services impacts.

XIV. RECREATION

Information in this section is primarily derived from the following public documents:

Wasco, City of, *City of Wasco Draft Municipal Service Review*, June 2005 (by LSA Associates, Inc)

Wasco, City of, *Draft Environmental Impact Report – Wasco General Plan Update – 2002,* July 2002 (by Quad Knopf)

The above documents are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco, CA, during normal business hours.

Setting

As described above, there are four parks currently located within the City of Wasco: Cormack Park (a County service park, 7 acres), Westside Park (16 acres), Frank Barker Memorial Park (20 acres) and Southgate Park (0.34 acres). Together, these four parks total approximately 43.34 acres. All city parks are maintained by the Wasco Recreation and Parks District, a Kern County Special District. Along with these four parks, the city also has the Wasco Historical Museum, swimming pools, and Veteran's Memorial Building. There is also a cooperative agreement between the City and the School District which allows school facilities to be used as open space and recreation facilities. Thus, the 27 acres of school facilities are part of the City's park inventory.

Evaluation

Threshold(s) of Significance

A project may have a significant effect on Recreation if it increases demand for neighborhood parks, regional parks, or other recreational facilities; or affects existing recreational opportunities. The criteria for determining the adequate ratio of recreational land is 6 acres per 1,000 residents.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	■	☐

The approximately 480 new Wasco residents who may reside at the site of the proposed project at full build out will increase the use of existing neighborhood and regional parks as well as other recreational facilities. The extent to which this demand increase will occur is likely to be very gradual and over a period of years. Given this, the anticipated project-related increase the use of existing neighborhood and regional parks or other recreational facilities will not occur in a manner such that substantial physical deterioration of the facility would occur or be accelerated. The foregoing and the fact that the three residential development nodes on the project site will be provided a variety of onsite recreation amenities including a fitness gym and indoor pool, indicate that the proposed project will not result in any significant adverse Recreation impacts.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse effect on the environment?	☐	☐	■	☐

As mentioned immediately above, the proposed project will construct an array of recreational amenities for use by future onsite residents. the three residential development nodes on the project site will be provided a variety of onsite recreation amenities including a fitness gym and indoor pool. Construction of these facilities will occur during the first phase of site development and is not anticipated to adversely affect the environment. Additionally, it is noted that the proposed project does not involve the expansion of any existing recreational facilities and as such, significant adverse impacts on the environment would also not be expected under such circumstances. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

XV. TRANSPORTATION/TRAFFIC

The information in this section is derived primarily from information in the following technical report:

PSOMAS, *Traffic Impact Study for Wasco Center, Wasco, California*, January 2008

The foregoing report is provided in its entirety herein as **Appendix G.**

Setting

The traffic study identified above addresses the impacts of the proposed Wasco Center project on the local and area circulation system. In that the proposed project is planned to be constructed in two phases, the subject traffic impact assessment evaluates the impacts of the proposed project at two separate out years, 2010, which is coincident with the completion of Phase I of the proposed Wasco Center project, and 2015, which is coincident with current plans regarding the timing and completion of Wasco Center Phase II. **Table 11** ***(Wasco Center – Planned Development by Phase)*** identifies the components of Wasco Center planned to be developed in each project phase. In essence, Phase I of the proposed project includes all development east of the Central Avenue centerline north of State Route 46. Correspondingly, Phase II of Wasco Center would include all development currently planned for development west of the Central Avenue centerline. The foregoing can be viewed on **Figure 14** ***(Wasco Center – Illustrative Development Phasing Plan and Circulation Network).***

Existing Roadway Network

The Wasco Center will have direct access onto Magnolia Avenue, Central Avenue, Palm Avenue, Margalo Street, and Highway 46. The other roadways in the study area include Beckes Street, Poplar Avenue, Griffith Avenue, Highway 43 South/F Street North, and Highway 43 North/J Street. Each of the foregoing roadways is briefly described below.

- ***Highway 46*** begins at the junction of Route 1 in San Luis Obispo County and continues east for 118 miles, intersecting Interstate 5 and terminating at State Route 99 east of Wasco. The highway functions as a significant interregional route for agricultural products and recreational traffic to and from the Central Coast/Central Valley. The segment included in this study extends from PM 49 (Magnolia Avenue) to PM 51.2 (Highway 43 North / J Street) and was classified as an urban other principal arterial by the Federal Highway Administration (FHWA) in 2007[1].

- ***Magnolia Avenue*** is a two-lane roadway in the project area, and was classified as an urban minor arterial south of Highway 46 by the FHWA in 2007. North of Highway 46, Magnolia Avenue was classified as an urban local street by the FHWA. The roadway does not have paved shoulders or exclusive turn lanes within the project area.

- ***Central Avenue*** is a two-lane roadway that currently dead-ends at Highway 46 from the south. The roadway provides access into the City of Wasco, and was classified as an urban minor arterial by the FHWA in 2007.

Table 11
Wasco Center – Planned Development by Phase

	Land Use	Size	Unit
	PHASE 1 - 2010 Projected Opening		
7	Apartments	64	Dwelling Units
7.1	Apartments	35	Dwelling Units
8	Hotel	100	Rooms
9	Retail	39,000	Square Feet
10	Retail	27,000	Square Feet
11	Retail	37,000	Square Feet
12	Retail	33,000	Square Feet
13	Retail	70,000	Square Feet
14	Fitness Centers/Recreation (3)	11,900	Square Feet
	PHASE 2-2015 Projected Opening		
1	Large Retail	158,000	Square Feet
2	Large Retail	115,000	Square Feet
3	Shopping Center	105,000	Square Feet
4	Movie Theater	75,000	Square Feet
5	Restaurants (5)	67,500	Square Feet
6	Apartments	24	Dwelling Units

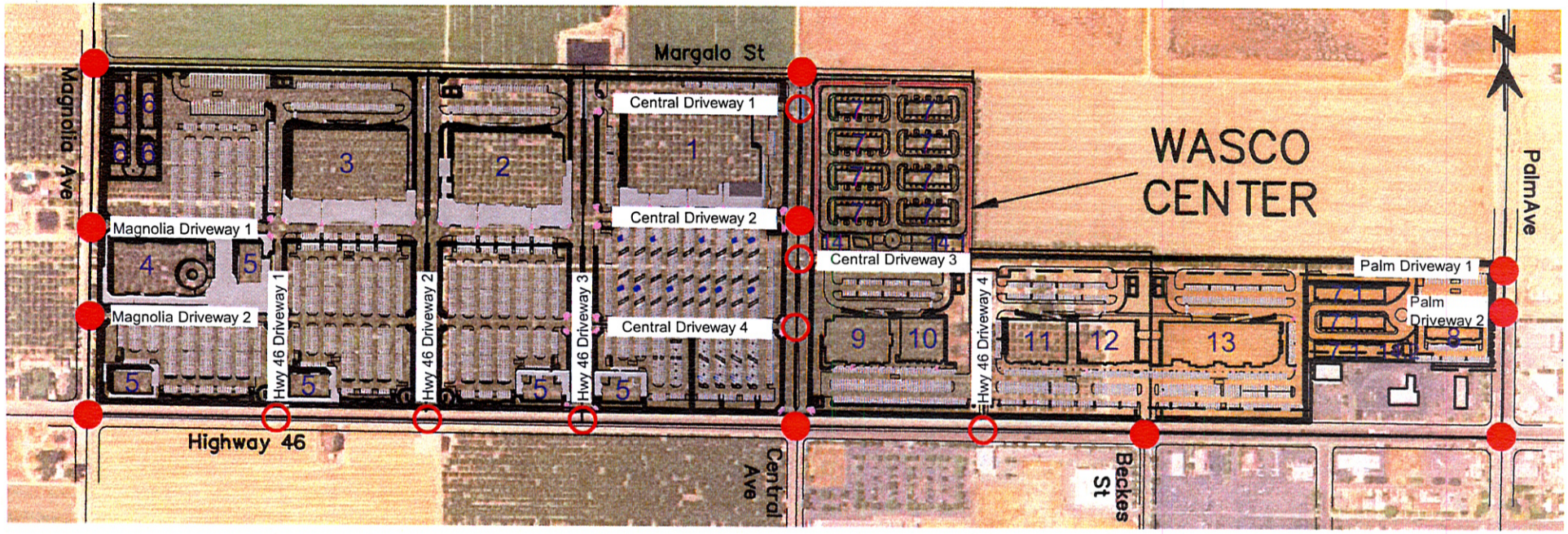
- ***Beckes Street*** is a two-lane roadway that currently dead-ends at Highway 46 from the south. The roadway provides access into the City of Wasco and serves both commercial and residential land uses.

- ***Palm Avenue*** is a two-lane roadway, but portions of it have been widened to four lanes north of Highway 46. The widened areas are located along the frontage of the Hidden Grove subdivision, which is currently under construction, and immediately north of the Highway 46 intersection. Palm Avenue was classified as an urban minor arterial by the FHWA in 2007 and has a speed limit of 35 mph south of Highway 46.

- ***Poplar Avenue*** is a two-lane roadway that currently dead-ends at Highway 46 from the south. The roadway provides access into the City of Wasco, and was classified as an urban collector by the FHWA in 2007.

- ***Griffith Avenue*** is a two-lane roadway, with parking allowed south of Highway 46. South of Highway 46, the roadway was classified as an urban collector by the FHWA in 2007, and north of Highway 46 was classified as an urban local street.

- ***F Street/Highway 43 South*** is a two-lane highway in the project area. South of Highway 46, the roadway is State Route 43 South, classified as an urban other principal arterial by the FHWA in 2007. Continuing north of Highway 46, the roadway becomes F Street, and is classified as an urban collector.



PHASE 1

7	Housing - 64 Units
7.1	Housing - 35 Units
8	100 Room Hotel
9	Retail 1-Story, 39,000 SF
10	Retail 1-Story, 27,000 SF
11	Retail 1-Story, 37,000 SF
12	Retail 1-Story, 33,000 SF
13	Retail 1-Story, 70,000 SF
14	Recreation 1-Story, 5,400 SF
14.1	Recreation 1-Story, 5,400 SF
14.2	Recreation 1-Story, 1,100 SF

PHASE 2

1	Large Retail, 158,000 SF
2	Large Retail, 115,000 SF
3	Shopping Center 1-Story, 105,000 SF
4	Movie Theater, 75,000 SF
5	Restaurants, 5 @ 13,500 SF EA
6	Housing - 24 Units

LEGEND

- Full Access
- Right–in Right–out Only

–750 FT 0 750 1500 FT

Figure 14
Illustrative Development Phasing Plan and Circulation Network *(Source: PSOMAS)*

- ***J Street/Highway 43 North*** is a two-lane highway in the project area. South of Highway 46, the roadway is J Street, and was classified as an urban minor arterial by the FHWA in 2007. North of Highway 46, the roadway is State Route 43 North, offset approximately 1/3 mile from State Route 43 South, and classified as an urban other principal arterial.

- ***Margalo Street*** is currently a dirt road along the northern boundary of the proposed project. To the east, between Griffith Avenue and Annin Avenue (outside of the limits of the Wasco Center project), Margalo Street is a two-lane subdivision street.

The aforementioned traffic study analyzed the following eight critical intersections:

- Highway 46 and Scofield Avenue
- Highway 46 and Magnolia Avenue
- Highway 46 and Central Avenue
- Highway 46 and Beckes Street
- Highway 46 and Palm Avenue
- Highway 46 and Poplar Avenue
- Highway 46 and Griffith Avenue
- Highway 46 and Highway 43 South / F Street
- Highway 46 and Highway 43 North / J Street

All of the foregoing intersections are currently operating at acceptable Levels of Service (C or better). With regard to the current LOS for roadway segments associated with the above listed intersections, all segments are presently also operating at an acceptable LOS (C or better).

Evaluation

Threshold(s) of Significance

Caltrans has a target LOS of C on State facilities, the State Route 46 Transportation Concept Report recommended LOS D as the target for this segment of Highway 46 due to the right-of-way constraints and the built environment. In addition, according to the Kern County General Plan, LOS D is the target for all facilities within the City of Wasco.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	■	☐	☐

The trip generation analysis indicates that Phase 1 will generate 12,563 daily trips, 2,498 of which will be pass-by trips. Therefore, the project will add 10,065 daily trips to external roadways by 2010. Phase 2 will add approximately 11,017 external daily trips to the roadway network, bringing the total external trip generation for the site to 21,082 trips per day. These project-related traffic increases to traffic volumes already on the system are substantial and are likely to significantly impact volume to capacity ratios on area roadways or congestion at project area intersections. As such mitigation measures will likely be required of the proposed project in order to ensure that area roadway segments and intersections will operate at a Level of Service

deemed acceptable by both Kern County and Caltrans. Elaboration on the mitigation measures likely to be required of the proposed project is provided under Item b) which follows.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	■	☐	☐

The additional traffic on the roadway network will require the construction of improvements in order to maintain an adequate LOS. Although Caltrans has a target LOS of C on State facilities, the *State Route 46 Transportation Concept Report* recommended LOS D as the target for this segment of Highway 46 due to the right-of-way constraints and the built environment. In addition, according to the *Kern County General Plan,* LOS D is the target for all facilities within the City of Wasco. The mitigation measures required of the proposed project to ensure that all facilities operate at an acceptable LOS are identified as mitigation measures **TRA1 and TRA2** in Section 5.0, *Mitigation Measure Summary*, found later in this document.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■

No aspect of the proposed project is expected to operationally interact with general aviation activities occurring at the Wasco-Kern County Airport located approximately north of the project site along Palm Avenue. As a consequence, the proposed project will not have any impact on air traffic patterns at that facility. As a result, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
d)	Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	■	☐

The circulation system adjacent to and in the vicinity of the site of the proposed project is free of sharp curves or dangerous intersections. Implementation of the proposed project involves numerous improvements to area roadways and intersections in order to facilitate project site access and improve area-wide circulation. Consequently, the proposed project will not substantially increase any circulation system hazards. Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
e)	Would the project result in inadequate emergency access?	☐	☐	■	☐

Access to the site will be accomplished through one of several driveways located on Magnolia Avenue, Central Avenue, Palm Avenue, and Highway 46. Overall, there will be 18 access points, including three full access points on Magnolia Avenue, eight access points on Highway 46 (4 full access and 4 right-turn only access), five on Central Avenue (2 full access, 3 right-turn only) and two full access points on Palm Avenue. The total site frontage along Highway 46 is 1 mile. Given the foregoing, the proposed project will not result in inadequate emergency access. Rather, the opposite is more accurate. In any event, no further assessment of this issue is warranted and no mitigation measures are required.

f)	Would the project result in inadequate parking capacity?	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
		☐	☐	■	☐

The proposed development meets or exceeds most requirements of the City of Wasco (P-D) required number of trees in the parking lot areas. The exceptions are discussed below. The City's zoning ordinance has a requirement of 1 truck parking space for every quarter developed acre (zoning ordinance 17.51.05 - B.5). The project proponent maintains that this requirement is excessive and would generate a tremendous amount of unused pavement areas. In lieu of this truck parking requirement site-wide, the project proponent is proposing standard vehicle parking and additional landscaping. There are two proposed locations for truck parking envisioned on the site. The proposed locations for the truck parking are the hotel parking lot and the north-west area of the site between the big box retail and the apartment buildings. In addition to the foregoing, it is noted that the proposed project exceeds the City requirements on setbacks, standard parking, and handicap parking by significant amounts. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

g)	Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
		☐	☐	■	☐

The proposed project does not conflict with any known adopted policies, plans, or programs supporting alternative transportation. As a consequence, no further assessment of this issue is warranted and no mitigation measures are required.

XVI. UTILITIES AND SERVICE SYSTEMS

Information in this section is primarily derived from the following reports and technical studies:

Wasco, City of, *City of Wasco Draft Municipal Service Review*, June 2005 (by LSA Associates, Inc)

Wasco, City of, *City of Wasco 2005 Urban Water Management Plan*, August 2007 (by HELT Engineering, Inc.)

PSOMAS, *Wasco Center Preliminary Sewer Study VTTM 7127, City of Wasco*, January 22, 2008

PSOMAS, *Wasco Center Preliminary Water Study VTTM 7127, City of Wasco*, January 22, 2008

PSOMAS, *Water Supply Assessment for the Wasco Center*, January 10, 2008

The first two documents listed above are available for public inspection at the City of Wasco Planning Department, 764 E. Street, Wasco CA, during normal business hours. The three documents listed thereafter are provided herein in their entirety as **Appendices H, I and J**, respectively.

Setting

Wastewater Treatment

The City of Wasco owns, maintains, and operates the City's sanitary sewer system, the two primary components of which are the collection system and the wastewater treatment plant. Sewer collection in the project vicinity is presently via a 24" sanitary sewer line located in Central Avenue and in west of Central Avenue along Highway 46. This collection facility ultimately conveys wastewater to the City's

wastewater treatment plant located at 7th Street and Leonard Avenue. The wastewater treatment plant, originally constructed in 1936, provides secondary treatment, and via several subsequent expansions presently has a design capacity of 3.0 million gallons per day (mgd). Current annual demand on the facility is approximately 1.7mgd. Treated effluent is used for irrigation of feed and fodder type crops on City-owned land. The site of the proposed project does not at present contribute any wastewater to the public sewer system. The small farm which currently remains on the subject property is on a septic system.

Stormwater Drainage Facilities

The site of the proposed project is not located within a 100-year flood zone as determined by the Federal Emergency Management Agency (FEMA). Current FEMA maps indicate that the area of the City that is within a 100-year flood zone is adjacent to the north-south aligned Burlington Northern/Santa Fe Railroad tracks, approximately a mile east of the easternmost portion of the site of the proposed project. Most storm water within the City flows east to west within the street system which ultimately directs storm flows into subsurface storm drain lines at key points throughout the City. Storm water is then conveyed to a system of holding ponds in the vicinity of the City's wastewater treatment facility. There is an emergency holding pond at Westside Park which doubles as a City recreational open space amenity. In addition, several smaller retention basins are also located within the City. One such facility is currently located on the site of the proposed project at its southeastern corner adjacent to Highway 46.

Water Supply

Water service is provided by the City of Wasco and is 100 percent groundwater, drawn from seven active production wells. The City's current seven active production wells provide water service to approximately 20,500 people. Water service is primarily domestic, serving residential areas with various commercial and industrial customers. The Semitropic Water Storage District and the Shafter-Wasco Irrigation District provide water for irrigation and crops in the city and surrounding area. Therefore, the City of Wasco is responsible for providing water for its residents and businesses, but not for irrigating agriculture. In 2007, the demand for domestic water service from the City was approximately 4.1mgd. With regard to water delivery, the City tries to maintain a water pressure of 50 psi in their system at all times. Information provided by the City's Consulting Water Engineer, pressure at a fire hydrant across the street from the site of the proposed project in mid-March 2005 demonstrated a static pressure of 58 psi, residual pressure of 40 psi with a flow of 2,110 gallons per minute (gpm). A subsequent test on the same hydrant later that year demonstrated showed a lower static pressure, residual pressure, and flow rate.

Solid Waste Disposal Facilities

The City of Wasco provides its own refuse collection services within the City limits. The City owns its own refuse trucks and the individuals manning them are City employees. Refuse collection frequency varies with the type and volume of waste generated. The City also collects green waste city-wide. Once collected, the solid waste is transported to either the Arvin or Shafter-Wasco Sanitary Landfill for disposal. Both are Class III facilities operated by the Kern County Waste Management Department. The Arvin Landfill, which is currently permitted to accept 800 tons of refuse per day, is scheduled for closure at the end of 2008. The Shafter-Wasco Landfill is located off of Lerdo Highway and encompasses approximately 160 acres. It is currently permitted to accept approximately 888 tons of waste per day and has an estimated closure date of January 2027. The landfill's solid waste intake has been planned to accommodate a projected area-wide annual increase in solid waste generation of 3 to 4 percent.

In 2000, the City of Wasco generated approximately 13,458 tons of solid waste, or approximately 44 tons per day (based on 6 collection days weekly). In February 2000, the California Integrated Waste Management Board adopted a diversion rate goal of 50 percent by 2002. Diversions rates are defined as the percentage of total solid waste that a jurisdiction diverted from being placed in landfills through

reduction, reuse, recycling programs, and composting programs. In 2002, the City of Wasco reached this CIWMB goal and had a 56 percent diversion rate.

Evaluation

Threshold(s) of Significance

A project may have a significant impact on Utilities and Service Systems if the project results in a violation of solid waste standards, encourages activities which will utilize large amounts of resources, or substantially expands the capacity and network of service systems to serve new development.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	■	☐

During project construction, site preparation activities occur pursuant to the provisions of specific NPDES and SWPPP plans that will be reviewed and approved by the City of Wasco. Through the use of best management practices surface runoff will be subject to various methods by which to control potential erosion, sedimentation, spills and other construction-related sources of pollutants. In light of the foregoing, the proposed project is not expected to violate any water quality standards or waste discharge requirements. The proposed Wasco Center project is a mixed-use development with a variety of retail, visitor-serving commercial, residential and other uses.

The proposed project plans to address its sewage disposal needs by connecting to the City's sanitary sewer system. While there are several planned points of connection to the existing City sewer system most of the system will be connected to the 24" sewer line at Hwy 46. Two portions of the site will discharge to the 12" line in Central north of Hwy 46. Given the foregoing construction and operations related methods of surface runoff control and containment, the proposed project is not expected to exceed RWQCB wastewater treatment requirements. As a result, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐

As indicated previously, the City's wastewater treatment plant is located at 7th Street and Leonard Avenue. Originally constructed in 1936 it provides secondary treatment, and via several subsequent expansions presently has a current design capacity of 3.0 million gallons per day (mgd). Current peak demands on the facility approximate 1.7mgd. The proposed project is anticipated to generate a demand for sewage treatment approximating 0.4mgd at full build out. Given the foregoing, no new or expanded wastewater treatment facilities would be required to adequately accommodate project-related wastewater treatment demand. As a result, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐

As mentioned previously, most storm water within the City flows east to west within the street system which ultimately directs storm flows into subsurface storm drain lines at key points throughout the City. Storm water is then conveyed to a system of holding ponds in the vicinity of the City's wastewater treatment facility. In addition, several smaller retention basins are also located within the City. One such facility is currently located on the site of the proposed project at its southeastern corner adjacent to Highway 46. Design plans for the proposed project provide for the on-site collection, conveyance and retention of storm water. Neither the construction of new, nor the expansion of existing, storm drain facilities are required to accommodate the drainage needs of the proposed project. As such, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
d)	Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	■	☒

A preliminary water study prepared for the proposed project indicates that upon full build-out, the proposed project will add approximately 419 AFY to the City's projected demand for groundwater. However, at that same time, when considering the cessation of any further agriculture-related demand emanating from the project site (minus 35% return flow), add the increased return flow from recycled wastewater generated by the proposed project, as well as the 35% return flow from the proposed project's irrigation demand, the overall net impact of the proposed project in terms of demand for water from local groundwater resources is an estimated 69 AFY, a negligible amount. Given the foregoing, the proposed project is not expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. As such, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
e)	Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	■	☒

As indicated previously, the City's wastewater treatment plant is located at 7th Street and Leonard Avenue. Originally constructed in 1936 it provides secondary treatment, and via several subsequent expansions presently has a current design capacity of 3.0 million gallons per day (mgd). Current peak demands on the facility approximate 1.7mgd. The proposed project is anticipated to generate a demand for sewage treatment approximating 0.4mgd at full build out. Given the foregoing, no new or expanded wastewater treatment facilities would be required to adequately accommodate project-related wastewater treatment demand. As a result, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
f)	Would the project be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?	☐	☐	■	☒

The Shafter-Wasco Landfill, located off of Lerdo Highway, encompasses approximately 160 acres, is currently permitted to accept approximately 888 tons of waste per day and has an estimated closure date of January 2027. The landfill's solid waste intake has been planned to accommodate a projected area-wide annual increase in solid waste generation of 3 to 4 percent. At present, the Shafter-Wasco has sufficient capacity to accommodate the long-term solid waste disposal needs of the proposed project.

Given the foregoing, no further assessment of this issue is warranted and no mitigation measures are required.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
g)	Would the project comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☒

As indicated previously, the City provides solid waste collection services for all solid waste generation sources within its corporate limits. Under mandate by the CIWMB to continue increasing its diversion percentage, the City seeks to take advantage of as many available diversion oriented protocols or methods (e.g. green waste collection) as feasible. The proposed project comprises a wide array of commercial and residential uses. Future site tenants, particularly those which are large solid waste volume generators, would benefit greatly by complying with City, as well as any applicable County, State and/or Federal solid waste-related statutes and/or regulations. Such benefits encompass financial and operational parameters. As a consequence, the proposed project is expected to comply with federal, state, and local statutes and regulations related to solid waste. Therefore, no further assessment of this issue is warranted and no mitigation measures are required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐

As discussed under previous Section 4.IV, *Biological Resources*, two sensitive wildlife species, burrowing owl, a California Species of Special Concern, and San Joaquin kit fox, a Federally Endangered and State Threatened species, have been identified as having a moderate or high potential to occur on the project site. However, project implementation of the mitigation measures identified with the prefix **BIO** in Section 5.0, *Mitigation Measure Summary*, will ensure that neither or these two species would be significantly impacted by the proposed project.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	■	☐	☐

As discussed under previous Section 4.XV, *Transportation and Traffic*, in 2015, the year projected for full build out of the proposed project, area roadway traffic volumes will be a function of cumulative trip generating influences including: traffic volume increases due simply to natural local and regional ambient growth, traffic associated with other known area developments, and traffic associated with the proposed Wasco Center project. Without mitigation, the LOS of certain project area intersections and roadway segments were projected to exceed both Caltrans and County impact significance thresholds. As a consequence, the proposed project is considered to be a contributor to these significant adverse traffic-related cumulative impacts. Reducing the significance of such impacts warranted the imposition of certain mitigation measure requirements on the proposed project. Such measures are identified with the prefix **TRA i**n Section 5.0, *Mitigation Measure Summary*. With regard to cumulative effects generally, it is

concluded the proposed project will not cause any significant adverse cumulative effects that cannot be mitigated.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than Significant Impact	No Impact
c)	Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

Previous Sections 4.I through 4.XVI did not identify any project-specific or cumulative environmental impacts that would substantially affect human beings either directly or indirectly. As a result, no further assessment of this issue is warranted and no additional mitigation measures are required.

5.0 MITIGATION MEASURE SUMMARY

This portion of the document is a compendium of the mitigation measures that have been developed in response to the results of some of the impact assessments undertaken as part of the environmental review for the proposed project.

Air Quality

AQC1 *During project construction, the proposed project shall comply with the following San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII dust control requirements.*

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizers/suppressant, covered with a tarp, or other suitable cover or vegetative ground cover*;
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizers/suppressant*;
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking*;
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained;*
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. *(The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.);*
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant;
- Within urban areas, track-out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday; and
- Any site with 150 or more vehicle trips per day shall prevent carryout and track-out.

AQC2 *During project construction, in addition to San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII requirements for dust control, the proposed project shall also implement the following additional dust control measures:*

- Limit traffic speeds on unpaved roads to 15 mph;
- Limit area subject to excavation, grading, and other construction activity at any one time. (Construction area limited to 10 acres per day);
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.

- Install wheel washers for all exciting trucks, or wash off all trucks and equipment leaving the site;
- Install wind breaks at windward sides(s) of construction areas; and
- Suspend excavation and grading activity when winds exceed 20 mph.[1]

[1] – Regardless of wind speed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation.

AQC3 *During project construction, the proposed project shall implement the following measures for the purpose of minimizing construction-related criteria pollutant emissions:*

- Minimize the idling time (e.g., 10 minute maximum) of heavy duty equipment (scrapers, graders, trenchers, earth movers, etc.);
- Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use;
- Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set);
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways;
- Implement activity management (e.g. rescheduling activities to reduce short-term impacts); and,
- Use alternative fueled or catalyst equipped diesel construction equipment;

AQO1 *The proposed project shall comply with applicable provisions of Indirect Source Review (ISR) Rule (Rule 9510) and the Administrative ISR Fee Rule (Rule 3180) in order to reduce PM_{10} and NO_X emissions. Based on the SJVAPCD ISR Public Fee Estimator 2008 spread sheet, the proposed project will pay a fee of $78,433.68 to the SJVAPCD prior to issuance of grading permits. The subject fee breaks down as follows: NOX emissions $21,165; PM10 emissions $54, 252, and Administrative fees $3,016.68.*

AQO2 *The proposed project shall include the following measures to reduce project-related greenhouse gas emissions:*

- Project tenants shall ensure that preferential parking spaces are allocated to ultra-low emission vehicles and alternative fueled vehicles to encourage the use of alternative fuels and ultra-low emission vehicles.
- Landscape designers shall ensure that Project landscaping uses drought tolerant and smog tolerant plants to ensure the long-term viability and conserve water and energy.
- Landscape designers shall ensure that the Landscape plan includes drought resistant trees, shrubs, and groundcover within the parking lot and perimeter.
- Project designers shall ensure that design features incorporate light colored roofing materials that will deflect heat away from the building and conserve energy
- The Project designers shall ensure that designs include all illumination elements to have controls to allow selective use as an energy conservation measure.

Biological Resources

BIO1 *Prior to the commencement of any project-related construction activity, the project proponent shall have a Phase II Burrow Survey undertaken by qualified professional biologist. Said survey shall be conducted pursuant to the Burrowing Owl Survey Protocol and Mitigation Guidelines prepared by the California Burrowing Owl Consortium. Survey results shall be documented in a report submitted to the City of Wasco Planning Department and CA Department of Fish & Game. If warranted, a pre-construction survey within 30 days of construction commencement may also be required. Monitoring to ensure that this survey, if warranted, is undertaken shall be the responsibility of the City of Wasco Planning Department.*

BIO2 *Prior to the issuance of grading permits, the project proponent shall have a San Joaquin Kit Fox Evaluation Survey undertaken by a qualified professional biologist in full conformance with requisite US Fish & Wildlife Service protocols and procedures. The Evaluation Survey results shall be documented in a report submitted to both the City of Wasco Planning Department and US Fish & Wildlife Service.*

Cultural Resources

CUL1 *During all project-related earth movement activities, in the event that any subsurface archaeological deposits are unearthed, the project proponent shall ensure that all activities will be suspended in the vicinity of the find until the deposit(s) are recorded by a qualified archaeologist.*

CUL2 *During all project-related earth movement activities, in the event human remains of any kind are found, the project proponent shall ensure that all activities will cease immediately and that a qualified archaeologist and the Kern County Coroner are notified.*

CUL3 *During all project-related earth movement activities, in the event that any older sedimentary rock units are encountered which have a lithology conducive to paleontological preservation, the project proponent shall ensure that all activities will be suspended in the vicinity of the find and that a qualified vertebrate paleontologist is retained to examine the depositional context to determine their potential to yield significant paleontological resources.*

Noise

NOI1 *Throughout the construction phase of the proposed project, the project proponent shall ensure that: 1) all construction equipment is properly maintained with operating mufflers and air intake silencers; 2) the location of equipment staging and storage occurs as far as practical from existing residential units and other nearby sensitive receptors; and, 3) all construction equipment activities will occur only between the hours of 7:00AM to 7:00PM Monday through Friday and 9:00AM to 6:00PM on weekends. The foregoing shall be implemented to the satisfaction of the City of Wasco Planning Director.*

NOI2 *All windows within the proposed residential townhouses shall be dual-pane windows with a sound transmission class (STC) rating of 25 or more to reduce interior noise levels at or below the 45 dBA CNEL Interior Noise Standard.*

Transportation and Traffic

Notes: Some of the mitigation measures described below includes references to Figures for illustrative purposes. Said Figures are included in the following report, "Traffic Impact Study for Wasco Center, Wasco, California", July 2008, PSOMAS. The subject report is provided in this document as Appendix G.

Several of the following improvements listed as mitigation measures are completely on the project site; and therefore, they are the sole financial responsibility of the project proponent. Where this is not the case, "Fair Share Percentages", from the above referenced Traffic Impact Study are included..

TRA1 *Prior to the issuance of Building Permits for Wasco Center Phase I, the proposed project will either construct or contribute its fair-share funding to construct the following circulation system improvements:*

- Improve Highway 46 to a 4-Lane divided section between Central Avenue and Griffith Avenue as shown in Figure 5.
  - *The project proponent will be responsible for 83% of the cost of the Poplar Avenue eastbound through lane; 84% of the cost of the Poplar Avenue westbound through lane and 95% of the cost of the Griffith Avenue eastbound right turn lane.*
- Extend Central Avenue from Highway 46 to Margalo Street (1/4 mile) as a 4-Lane roadway with raised median (Figure 44).
- Improve a short section of Palm Avenue north of Highway 46 to a 5-Lane section (4 through lanes with a two-way left turn lane) through the frontage of the project.
- Improve a short section of Margalo Street east of Central Avenue through the frontage of the project.
- Provide turn lanes as shown in Figure i.
  - *Fair share percentages are listed in the previous mitigation measures.*

TRA2 *Prior to the issuance of Building Permits for Wasco Center Phase II, the proposed project will either construct or contribute its fair-share funding to construct the following circulation system improvements:*

- Improve Highway 46 to a 4-Lane divided section between Magnolia Avenue and Central Avenue, and between Griffith Avenue and Highway 43 South, as shown in Figure 5. The addition of these improvements to those associated with Wasco Center Phase I will result in a 4-Lane divided facility for Highway 46 between Magnolia and Highway 43 South / F Street.
  - *The project proponent will be responsible for 98% of cost for the Magnolia Avenue eastbound through lane; 95% of the cost of the Magnolia Avenue westbound through lane, 100% of the cost of the Magnolia westbound right turn, and 82% of the cost for the Griffith Avenue westbound through lane.*
- Construct the eastern half of a 5-Lane section on Magnolia Avenue between Highway 46 and Margalo Street (Figure 45). This would result in two northbound through lanes, a two-way left-turn lane, and one southbound through lane.
  - *The project proponent will be responsible for 100% of the cost of the Magnolia Avenue southbound through lane.*
- Construct Margalo as a 2-Lane roadway between Magnolia Avenue and Central Avenue (Figure 45).
- Install a traffic signal at the intersection of Magnolia Avenue and Highway 46.
  - *The project proponent will be responsible for 90% of the cost of the Magnolia Avenue Signal.*
- Install a traffic signal at the intersection of Central Avenue and Highway 46.
  - *The project proponent will be responsible for 94% of the cost of the Central Avenue Signal.*
- Provide turn lanes as shown in Figure i.
  - *Fair share percentages are listed in the previous mitigation measures.*

6.0 REFERENCES/ORGANIZATIONS AND PERSONS CONSULTED

6.1 REFERENCES

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PSOMAS, *Wasco Center Site Plan - Vesting Tentative Tract Map No. 7127 Sheets 1 of 8 through 8 of 8*, January 15, 2008

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Wasco, City of, *City of Wasco Wastewater Master Plan*, February 2007 (by Harris & Associates in association with ECO: LOGIC Engineering)

Wasco, City of, *City of Wasco 2005 Urban Water Management Plan*, August 2007 (by HELT Engineering, Inc.)

Wasco, City of, *Draft Environmental Impact Report – Rose City Industrial Park Project SCH # 2006061124*, August 2007 (by URS Corporation)

6.2 ORGANIZATIONS & PERSONS CONSULTED

Mr. Jake Raper, Jr. AICP, Acting Planning Director, City of Wasco

Mr. Dennis McNamara, Senior Planner, City of Wasco

Mr. Dave Singleton, Program Analyst, Native American Heritage Commission

Mr. Eric Scott, Curator of Paleontology, San Bernardino County Museum

7.0 LIST OF PREPARERS

City of Wasco – Lead Agency

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Acting Planning Director

Dennis McNamara
Senior Planner

Chambers Group, Incorporated

Robert J. Verlaan
Principal Environmental Planner
Senior Project Manager

Michael Hendrix
Principal Scientist
Director of Air Quality/Noise Analysis

Heather DuBois
Air Quality Project Manager

Jay Sander
Senior Archaeologist

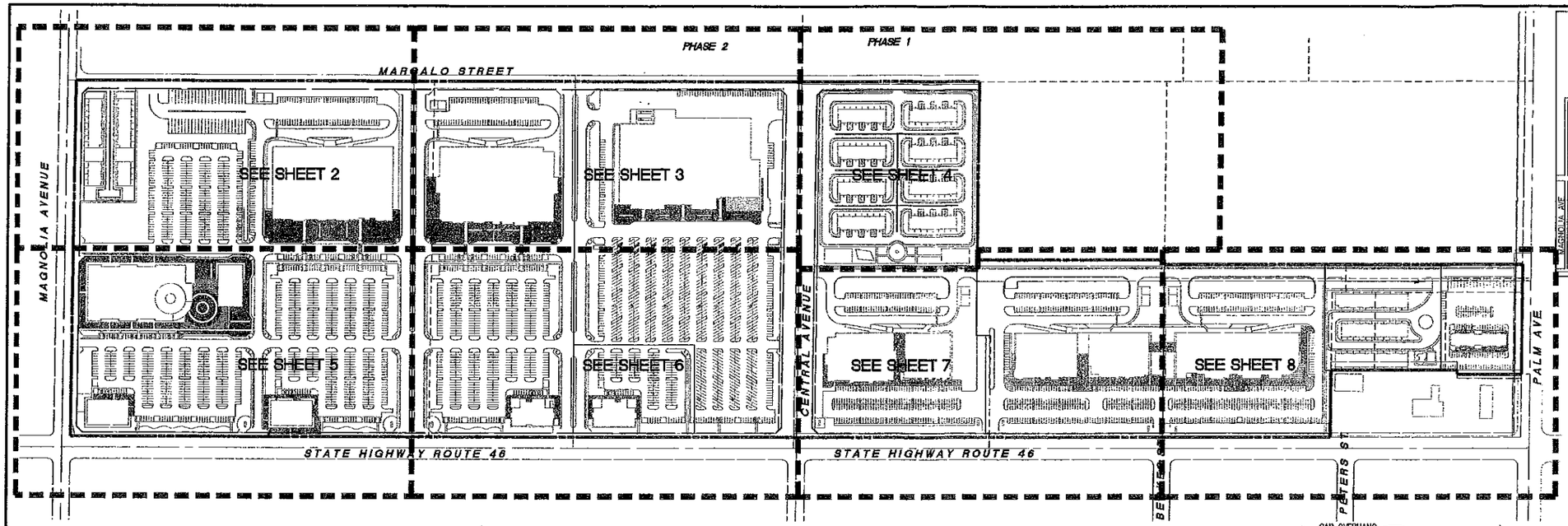
Mike McEntee
Principal Biologist
Director of Biological Services

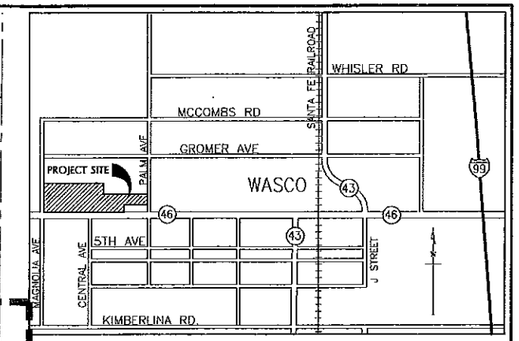
Shannan Shaffer
Staff Wildlife Biologist

Nichole Cervin
Associate Biologist

APPENDIX A

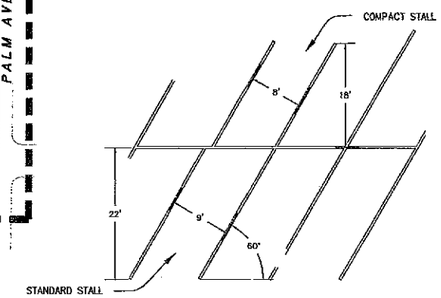
Wasco Center Site Plan VTTM No. 7127





VICINITY MAP

NOT TO SCALE



ANGLE PARKING DETAIL

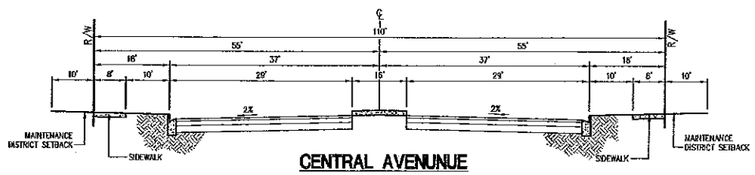
NTS

KEY MAP

200' 100' 0' 200' 400'

GRAPHIC SCALE

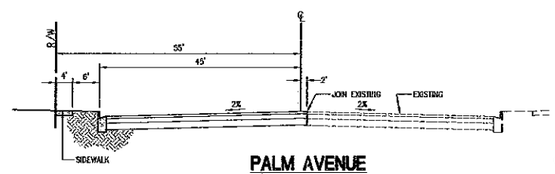
SCALE: 1" = 200'



CENTRAL AVENUNUE

NTS

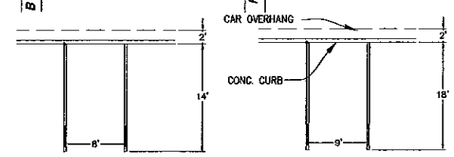
110' ARTERIAL NTS



PALM AVENUE

NTS

104' COLLECTOR

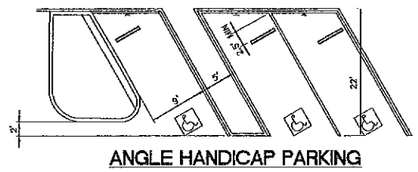


PARKING AGAINST CURB (COMPACT) DETAIL

NTS

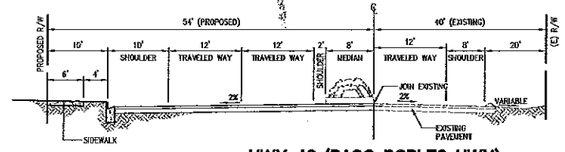
PARKING AGAINST CURB DETAIL

NTS



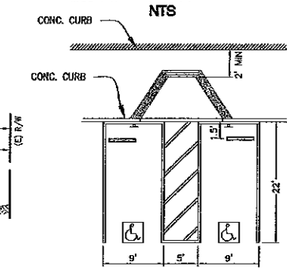
ANGLE HANDICAP PARKING

NTS



HWY 46 (PASO ROBLES HWY)

NTS



HANDICAP PARKING AGAINST CURB DETAIL

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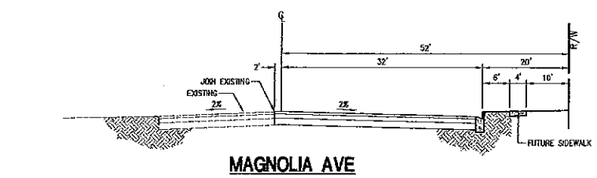

MAGNOLIA AVE

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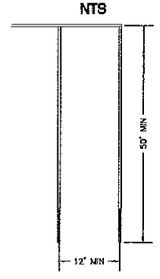
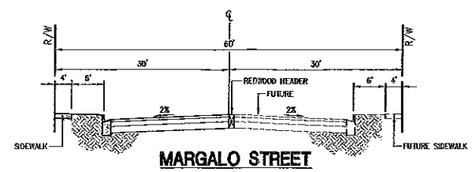
104' COLLECTOR



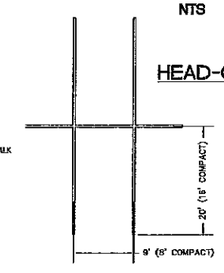
TRUCK PARKING DETAIL



MARGALO STREET

NTS

60' LOCAL COLLECTOR



HEAD-ON PARKING DETAIL

NTS

LEGEND

- PROPERTY BOUNDARY LINE
- STREET R/W LINE
- CURB LINE
- CENTER LINE
- FLOW LINE
- LOT LINE / PARCEL LINE
- EASEMENT LINE (WIDTH)
- ELEV — EXISTING CONTOUR LINE
- BUILDING FOOT PRINT LINE
- OVERHANG LINE
- EDGE OF DIRT ROAD
- EDGE OF ASPHALT PAVING
- MH O MANHOLE (SEWER, STORM DRAIN, POWER, TELEPHONE)
- PP/TP POWER POLE (P.P.) TELEPHONE POLE (T.P.)

OWNER:

WASCO INVESTMENT, LLC.
800 SILVERADO STREET
SUITE 301
LA JOLLA, CA 92037
(858) 456-9301
WILLIAM J. BARKETT

CAL VALLEY, LLC
800 SILVERADO STREET
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(858) 456-9301
WILLIAM J. BARKETT

ENGINEER

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SUBDIVIDER

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WILLIAM J. BARKETT

REGISTERED PROFESSIONAL ENGINEER ROSS WILLIAM BARKER No. 32799 Exp. 6-30-08 CIVIL STATE OF CALIFORNIA

SEAL 1-15-2008

DESIGNED					
DRAFTED LJF					
CHECKED					
	REV	DATE	DESCRIPTION	BY	APP'D

BENCHMARK

AT THE SW CORNER OF THE INTERSECTION OF HIGHWAY 46 AND MAGNOLIA AVE.
BRASS DISK IN CONCRETE STAMPED U285 1934

ELEV. USGS BM ELEV. = 308.9 ADJUSTMENT

PSOMAS

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WASCO CENTER
SITE PLAN
VTTM No. 7127

IN THE CITY OF WASCO, COUNTY OF KERN STATE OF CALIFORNIA

DATE: 01/16/08

SCALE: AS NOTED

PROJECT NUMBER 1MER100200

SHEET 1 OF 8

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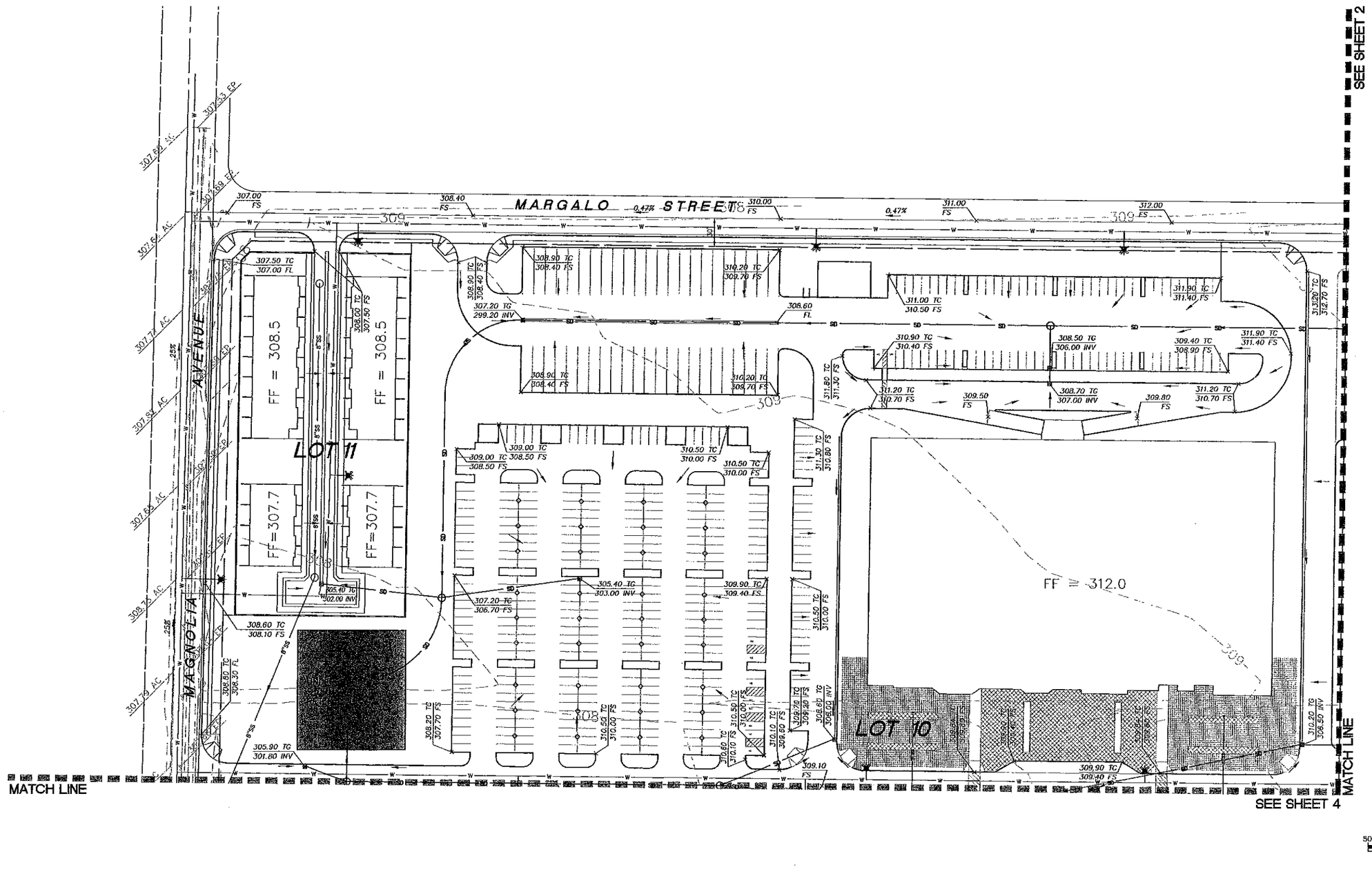

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BENCHMARK

AT THE SW CORNER OF THE INTERSECTION OF HIGHWAY 46 AND MAGNOLIA AVE.
BRASS DISK IN CONCRETE STAMPED U285 1934

ELEV. USGS BM ELEV = 308.9 ADJUSTMENT

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WASCO CENTER
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VTTM No. 7127

IN THE CITY OF WASCO, COUNTY OF KERN STATE OF CALIFORNIA

DATE: 01/16/08	SHEET	2
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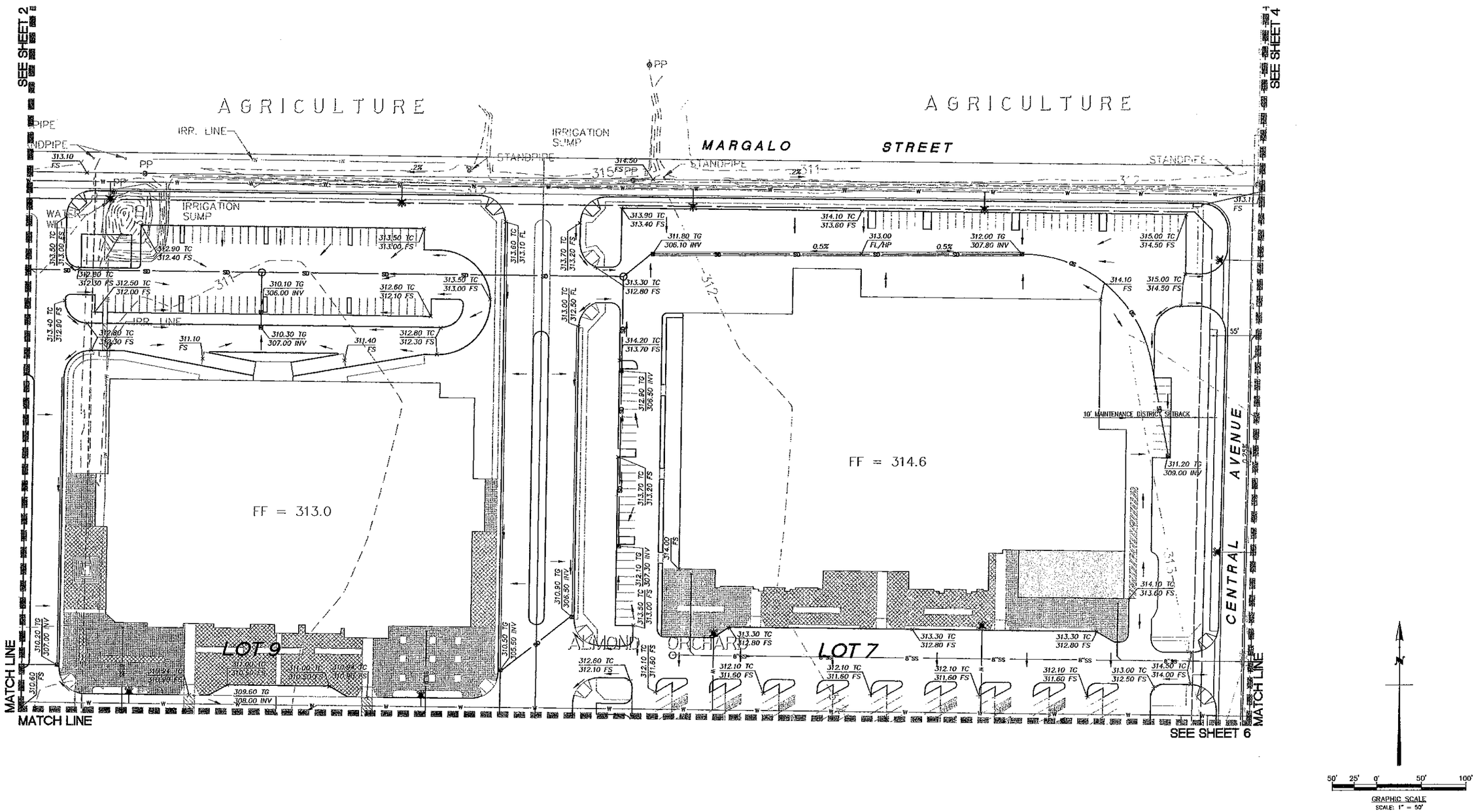

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BRASS DISK IN CONCRETE STAMPED U285 1934

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WASCO CENTER

SITE PLAN

VTTM No. 7127

IN THE CITY OF WASCO, COUNTY OF KERN STATE OF CALIFORNIA

DATE:	01/16/08
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SHEET	3 OF 8

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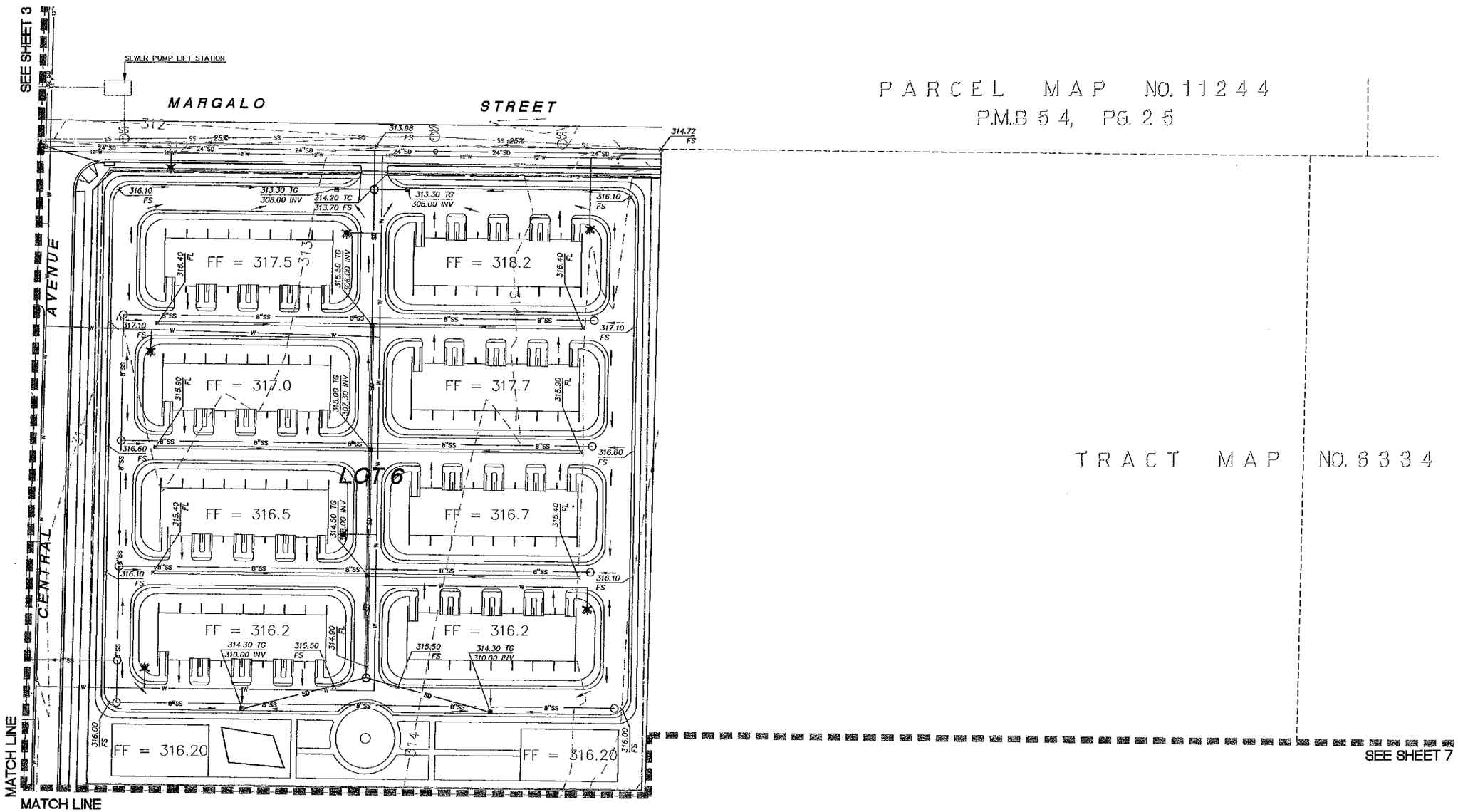

REGISTERED PROFESSIONAL ENGINEER
ROSS WILLIAM BAKER
No. 32709
Exp. 6-30-08
CIVIL
STATE OF CALIFORNIA
SEAL
1-15-2008

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BENCHMARK
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BRASS DISK IN CONCRETE STAMPED U285 1934
ELEV. USGS BM ELEV. = 308.9 ADJUSTMENT

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VTTM No. 7127
IN THE CITY OF WASCO, COUNTY OF KERN STATE OF CALIFORNIA

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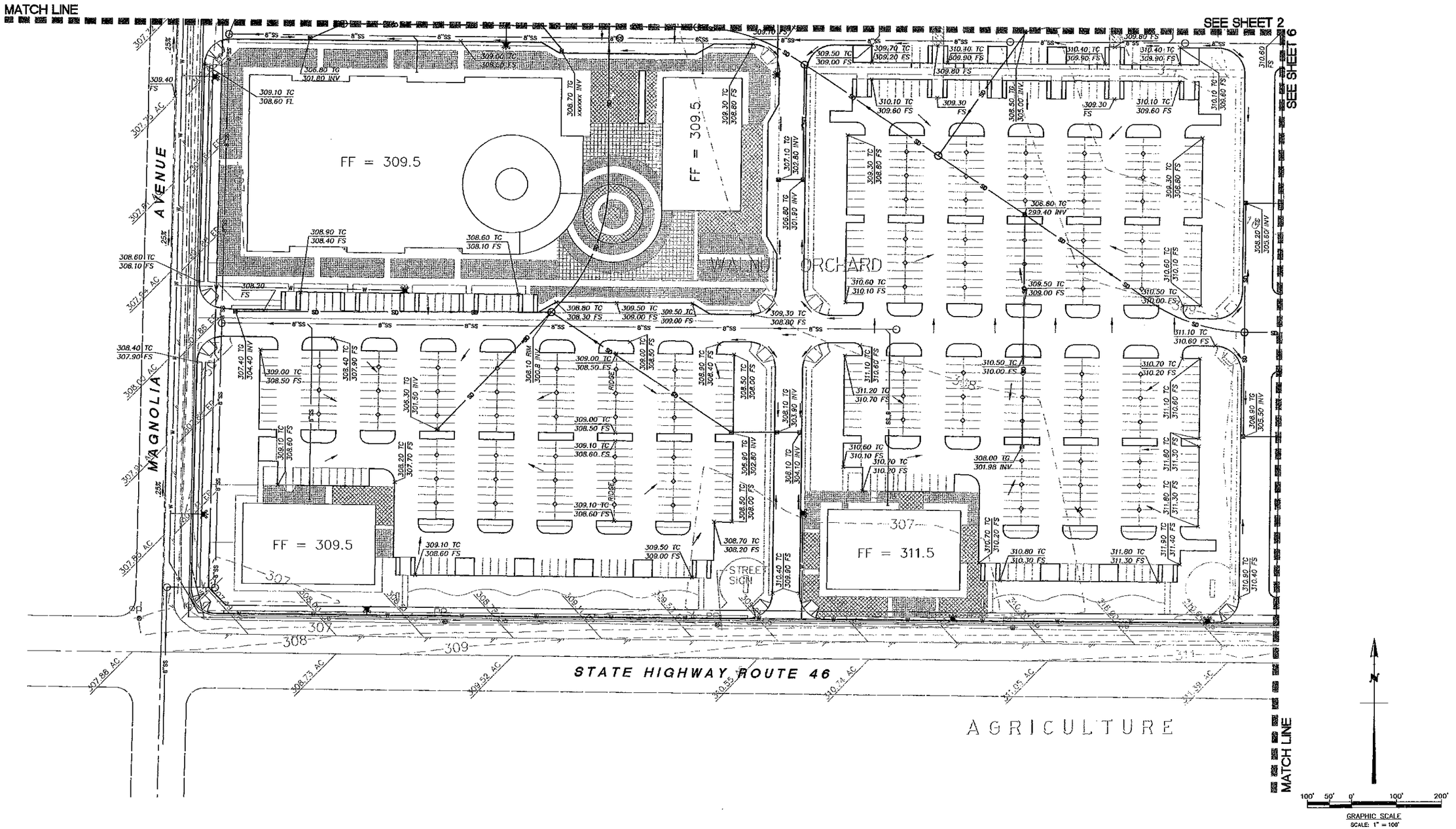

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1-15-2008

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BENCHMARK
AT THE SW CORNER OF THE INTERSECTION OF HIGHWAY 46 AND MAGNOLIA AVE.
BRASS DISK IN CONCRETE STAMPED U285 1934
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WASCO CENTER
SITE PLAN
VTTM No. 7127
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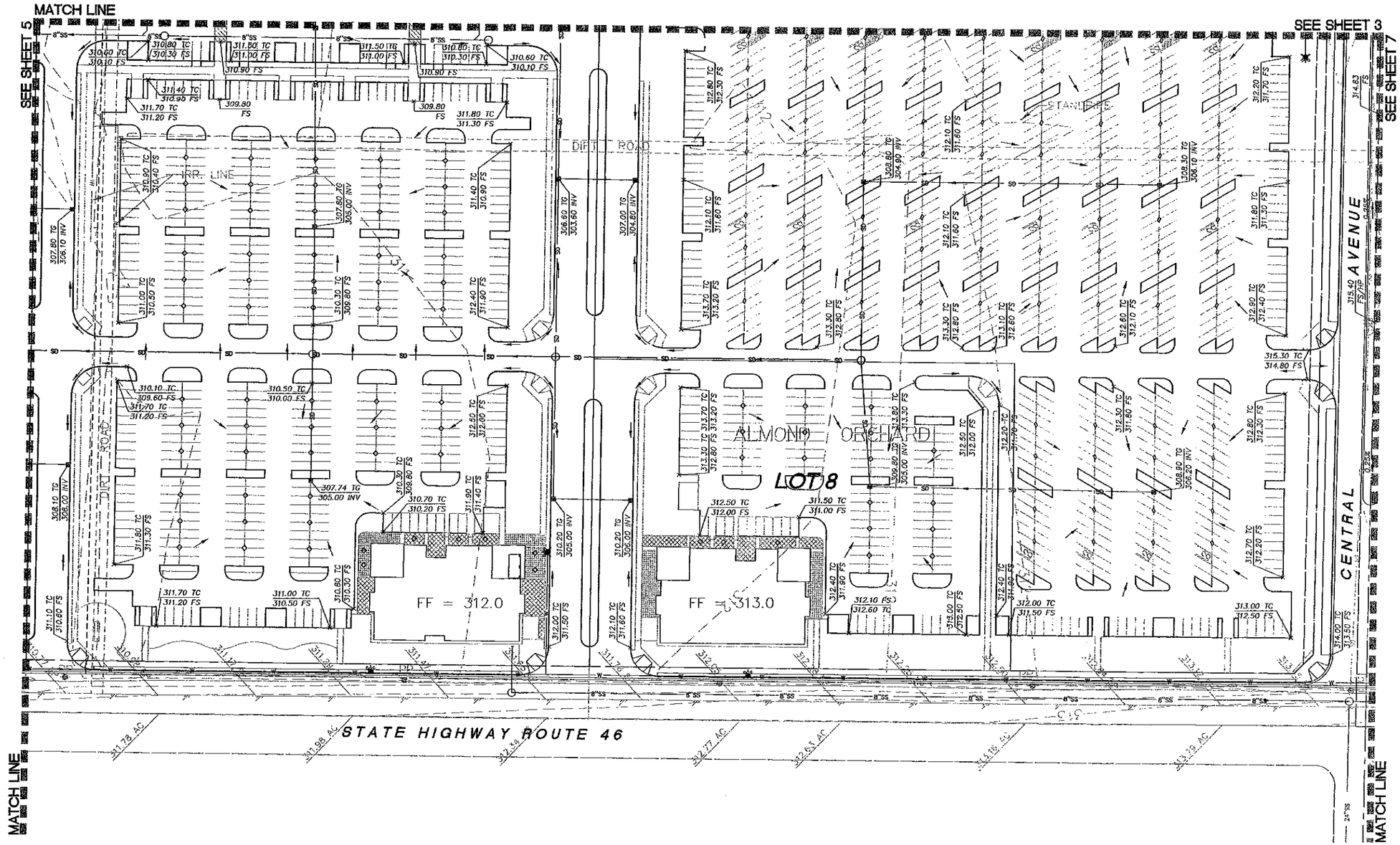

50' 25' 0' 50' 100'

GRAPHIC SCALE
SCALE: 1" = 50'

REGISTERED PROFESSIONAL ENGINEER ROSS WILLIAM BARCH No. 32799 Exp. 6-30-08 STATE OF CALIFORNIA CIVIL

SEAL 1-15-2008

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BENCHMARK

AT THE SW CORNER OF THE INTERSECTION OF HIGHWAY 46 AND MAGNOLIA AVE.
BRASS DISK IN CONCRETE STAMPED U285 1934

ELEV. USGS 84 ELEV. = 308.9 ADJUSTMENT

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WASCO CENTER
SITE PLAN
VTTM No. 7127

IN THE CITY OF WASCO, COUNTY OF KERN STATE OF CALIFORNIA

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PROJECT NUMBER	1MER100200	OF 8

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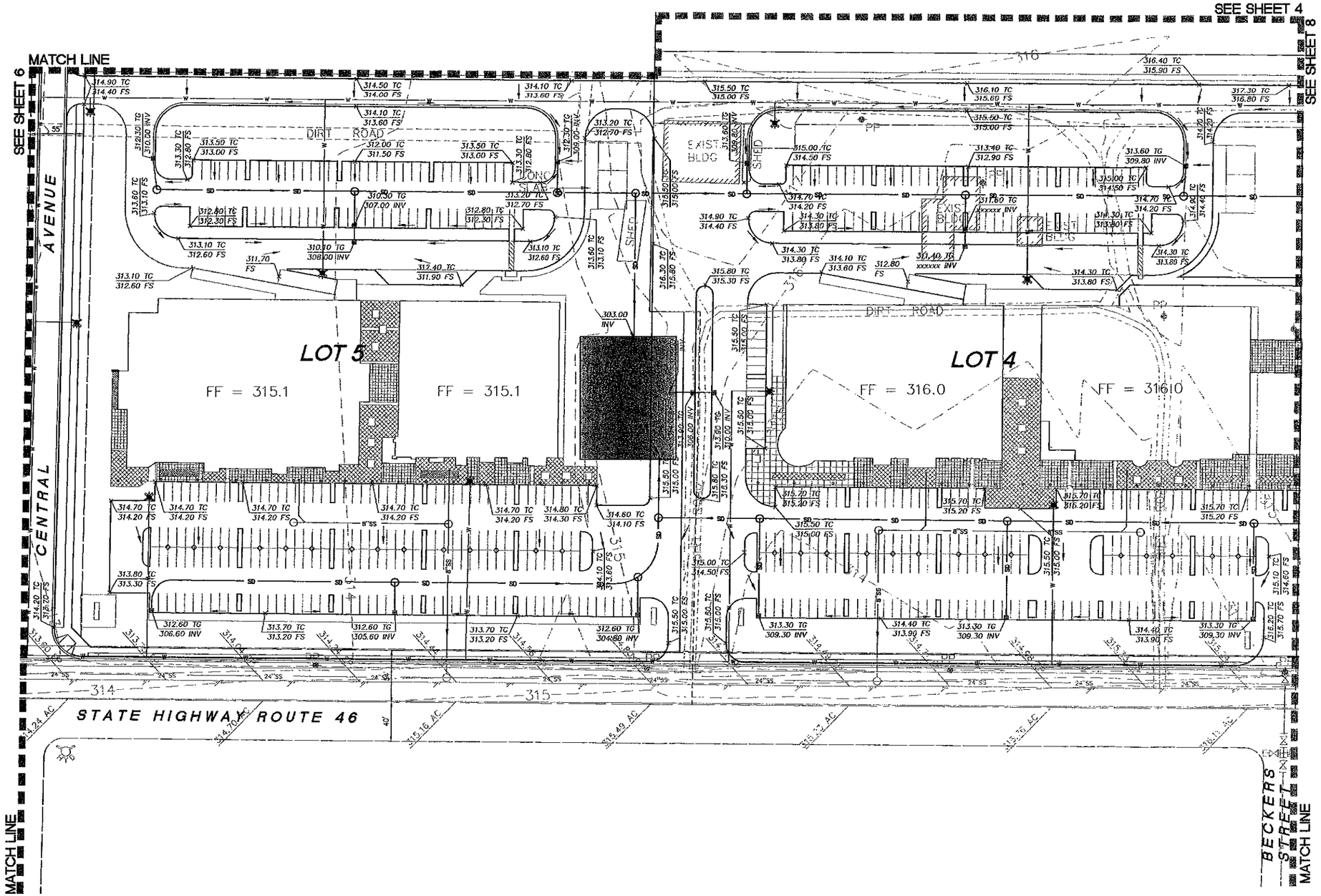

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BENCHMARK
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BRASS DISK IN CONCRETE STAMPED U285 1934
ELEV. USGS BM ELEV. = 308.9 ADJUSTMENT

PSOMAS
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Bakersfield, CA 93309
(661) 631-2311 .p (661) 631-2782 .f
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WASCO CENTER
SITE PLAN
VTTM No. 7127
IN THE CITY OF WASCO, COUNTY OF KERN STATE OF CALIFORNIA

DATE: 01/16/08	SHEET 7 OF 8
SCALE: 1" = 50'	
PROJECT NUMBER 1MER100200	

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SEE SHEET 7

MATCH LINE

BUCKERS STREET

PETERS STREET

STATE HIGHWAY ROUTE 46

STATE HIGHWAY ROUTE 46

PALM AVENUE

EX. 30' R/W

6' HIGH BLOCKWALL

AN EASMENT FOR INGRESS, EGREES AND ROAD PURPOSES TO THE CITY OF WASCO PER INSTRUMENT No. 0200034110 O.R

PROPOSED 22' R/W TO DEDICATION TO THE CITY OF WASCO

LOT 1

FF = 316.6

LOT 2

FF = 319.4

FF = 319.5 VACANT

FF = 319.5

LOT 3

FF = 317.3

VACANT LAND

BLOCKBUSTER & PIZZA HUT

CONC. CURB

ASPHALT & PARKING

BIG O TIRE

McDONALD'S RESTAURANT

ELEC. TRANSF.

EXISTING SEWAGE SYSTEM

GRAPHIC SCALE

SCALE: 1" = 50'

REGISTERED PROFESSIONAL ENGINEER ROSS WILLIAM BAKER No. 37799 Exp. 6-30-08 STATE OF CALIFORNIA SEAL 1-15-2008	DESIGNED						
	DRAFTED EM						
	CHECKED						
		REV	DATE	DESCRIPTION	BY	APP'D	

BENCHMARK

AT THE SW CORNER OF THE INTERSECTION OF HIGHWAY 46 AND MAGNOLIA AVE.
BRASS DISK IN CONCRETE STAMPED U285 1934

ELEV. USGS BM ELEV. = 308.9 ADJUSTMENT

PSOMAS

4540 California Avenue, Suite 110
Bakersfield, CA 93309
(661) 631-2311 .p (661) 631-2782 .f
www.psomas.com

WASCO CENTER
SITE PLAN
VTTM No. 7127

IN THE CITY OF WASCO, COUNTY OF KERN STATE OF CALIFORNIA

DATE:	01/16/08	SHEET	8
SCALE:	1" = 50'	OF	8
PROJECT NUMBER	1MER100200		

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APPENDIX B

Air Quality Impact Assessment

AIR QUALITY ANALYSIS REPORT
Wasco Center Project
Wasco, California

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March 2008

EXECUTIVE SUMMARY

This air quality evaluation was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) to determine if significant air quality impacts are likely to occur in conjunction with the type and scale of development associated with the proposed Ayres Hotel Expansion Project (Project).

The Project considered in this analysis proposes the construction of a Mixed Use commercial/residential center in Wasco California. The Project will consist of approximately 584,000 sq.ft. of retail, 285,500 sq.ft. of recreational, and 185,354 sq.ft. of residential land use. The Project site is located north of Paso Robles (Hwy 46), east of Magnolia Avenue and west of Palm Ave in the City of Wasco, California.

The impact analysis contained in this report was prepared in accordance with the methodologies provided by the San Joaquin Valley Air Pollution Control District (SJVAPCD) as included in its *Guide for Assessing and Mitigating Air Quality Impacts* (*GAMAQI*). Regional impacts for both construction and operation are assessed using the Urban Emissions model (URBEMIS2007, version 9.2.4) distributed by the California Air Resources Board (CARB). Localized impacts were assessed using the SCREEN3 model, a screening version of the ISC3 model, distributed by the California Air Resources Board (CARB).

The analysis finds that short-term emissions of particulate matter associated with earthmoving activities have the potential to exceed threshold values. Mitigation is provided to ensure that these impacts are reduced below significance thresholds.

In conclusion, the proposed Project would not involve growth-inducing impacts or cause an exceedance of established population or growth projections. Furthermore, with the included mitigation discussed below, the project would not create either short- or long-term significant quantities of criteria pollutants. Additionally, the Project would not result in significant localized air quality impacts. As such, the Project is consistent with the goals of the Attainment Plans for the project area, and in this respect does not present a significant impact.

Air Basin Required Control Measures
Regulation VIII Control Measures –*The following controls are required to be implemented at all construction sites (*those control measures that are included in the Urbemis model):*

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizers/suppressant, covered with a tarp, or other suitable cover or vegetative ground cover*;
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizers/suppressant*;
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking*;

- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition;
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained;*
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. *(The use of dry rotary brushes is expressly prohibited except where preceeded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.);*
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant;
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday; and
- Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

Rule 9510 (Indirect Source Review) Ozone and PM_{10} reduction measures:
The Project applicant is required to pay $78,433.68 in Indirect Source Review (ISR) fees that will fund air quality mitigation projects within the air basin. The purpose of ISR is to reduce ozone and PM_{10} concentrations within the air basin to acceptable levels and gain attainment of the federal and state ambient air quality standards throughout the valley.

Mitigation Measures

- Limit traffic speeds on unpaved roads to 15 mph;
- Limit area subject to excavation, grading, and other construction activity at any one time. (Construction area limited to 10 acres per day); and
- Use of alternative fueled or catalyst equipped diesel construction equipment.
- Tenants shall be responsible to ensure that preferential parking spaces are allocated to ultra-low emission vehicles and alternative fueled vehicles to encourage the use of alternative fuels and ultra-low emission vehicles.
- Landscape designers shall ensure that Project landscaping uses drought tolerant and smog tolerant plants to ensure the long-term viability and conserve water and energy.
- Landscape designers shall ensure that the Landscape plan includes drought resistant trees, shrubs, and groundcover within the parking lot and perimeter.
- Project designers shall ensure that design features incorporate light colored roofing materials that will deflect heat away from the building and conserve energy
- The Project designers shall ensure that designs include all illumination elements to have controls to allow selective use as an energy conservation measure.

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LIST OF ACRONYMS AND ABBREVIATIONS

^{O}F	degrees Fahrenheit
µg	microgram
AAQS	Ambient Air Quality Standards
ADT	Average Daily Trips
BACT	Best Available Control Technology
Basin	San Joaquin Valley Air Basin
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Control Board
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
EMFAC2007	On-Road Emission Factors published by the CARB in 2007
EPA	Environmental Protection Agency
Gal	gallon
Lbs	pounds
LOS	Level of Service
LST	Localized Significance Thresholds
m^3	cubic meters
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NO	Nitrogen Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
Pb	Lead
PM_{10}	Particulate Matter of 10 micrograms or less in size
$PM_{2.5}$	Particulate Matter of 2.5 micrograms or less in size
ppm	Parts per Million
PUC	Public Utilities Commission
ROC	Reactive Organic Compounds
ROG	Reactive Organic Gases
SCAG	Southern California Association of Governments

LIST OF ACRONYMS AND ABBREVIATIONS

SJVAB	San Joaquin Valley Air Basin
SJVACPD	San Joaquin Valley Air Pollution Control District
SO_2	Sulfur Dioxide
SO_X	Sulfur Oxides
TAC	Toxic Air Contaminant
T-BACT	Best Available Control Technology for Toxic Air Contaminants
TRU	Transportation Refrigeration Units
URBEMIS2007	Urban Emissions Model, version 9.2.4 published in February 2008
URF	Unit Risk Factor
Yr	year

SECTION 1.0 – METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) to determine if significant air quality impacts are likely to occur in conjunction with the type and scale of development associated with the proposed Wasco Center Project (Project).

The impact analysis contained in this report was prepared in accordance with the methodologies provided by the San Joaquin Valley Air Pollution Control District (SJVAPCD) as included in its *Guide for Assessing and Mitigating Air Quality Impacts* (*GAMAQI*). Regional impacts for both construction and operation are assessed using the Urban Emissions model (URBEMIS2007, version 9.2.4) distributed by the California Air Resources Board (CARB).

The subsequent operation of the Wasco Center Project is also based on the URBEMIS2007 model using default traffic-projections provided in the URBEMIS model, unless otherwise specified. The *URBEMIS* model utilized trip rates provided by the *Traffic Impact Study For Wasco* Center, Psomas, January 2008 *(Traffic Study)* in estimating that the Project would add 21,082 average daily trips (ADT) at build out. The calculated emissions of the project are compared to thresholds of significance for individual projects using the GAMAQI *Thresholds of Significance* published by the SJVAPCD.

The Project considered in this analysis proposes the construction of a Mixed Use commercial/residential center in Wasco California. The Project will consist of approximately 584,000 sf. of retail, 285,500 sf. of recreational, and 185,354 sf. of residential land use. The Project site is located north of Paso Robles (HWY 46), east of Magnolia Avenue and west of Palm Ave in the City of Wasco, California (Exhibit 1).

Projected air emissions are calculated using the Urban Emissions model (URBEMIS2007, version 9.2.4) distributed by the CARB. The URBEMIS2007 model uses EMFAC2007 emissions factors for vehicle traffic and OffRoad2007 for construction equipment. For the purposes of this analysis, construction is estimated to be completed in two phases. Phase I (development east of Center Street) is to begin in June 2008 with completion in December 2011, and Phase II (development west of Center Street) beginning in January 2012 with Completion in December 2015 (approximately 7.5 years). Although actual construction of Phase II will begin in January 2012, grading will be conducted at the same time as grading for Phase I.

Legend

Sensitive Receptors

- Off-Site Receptor
- On-Site Receptor
- Project Boundary

N W E S

0 150 300 600 900 Feet

Exhibit 1

Project Location & Sensitive Receptor Map

Chambers Group Inc.

Image Source: NAIP, June 2006

SECTION 2.0 – EXISTING CONDITIONS

2.1 CLIMATE/METEOROLOGY

The proposed Project area lies in the San Joaquin Valley Air Basin (Basin). The Basin is comprised of a single air district, the San Joaquin Valley Air Pollution Control District that includes all of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties, as well as the Valley portions of Kern County. The Basin is approximately 250 miles long and 35 miles wide. It is bordered by the Sierra Nevada Mountains on the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. The valley itself is flat with a slight down-gradient to the northwest, and finally opens to the sea at the Carquinez Straits. Although marine air generally flows into the basin from the San Joaquin River Delta, these topographic features restrict air movement through the basin.

The Basin is an "inland Mediterranean climate where the valley floor is characterized by warm dry summers and cool winters. The annual average temperature varies little throughout the Basin, ranging from the low to high 90s in the summer and the 50s in the winter, measured in degrees Fahrenheit (^{o}F). The climatological station located nearest to the site in Newhall reports a yearly average of 64°F. The average low is reported at 51°F while the average high is 77°F.

The position of the semi-permanent subtropical high-pressure belt off the Pacific Coast, strongly influences the precipitation throughout the Basin. Precipitation decreases from north to south throughout the basin with the areas near Stockton receiving more than the areas around Bakersfield. Rainfall averages around 9.25 inches per year in the Project area.

Wind patterns across the south coastal region are characterized by diurnal wind cycles complicated by a combination of sea breeze-land breeze and mountain-valley regimes. The sea breeze-land breeze regime has a breeze flowing into the Basin from the north during the day and out at night while the mountain-valley regime has an upslope flow during the day and downslope flow at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Precipitation and fog can reduce some pollutant concentrations. For example, clouds and fog can block sunlight thus limiting ozone formation. Fog and precipitation can reduce carbon monoxide concentrations because it is somewhat water soluble. Particulate matter can be washed out by precipitation was well. The majority of rainfall occurs between November and April. The Bakersfield Airport received an average of 6.23 inches of precipitation per year during 1937-2005 (WRCC 2006). The local average wind speed is 6.88 knots.

The Basin limits the vertical dispersion of air pollutants by the persistent temperature inversion. Typically, air temperature usually decreases with altitude. The reversal of this atmospheric state, is termed an inversion. Semi-permanent systems of high barometric pressure fronts are frequently established in the Basin and deflect systems that might otherwise bring cleansing rain and winds.

2.2 AMBIENT AIR QUALITY

The following characterization of the baseline atmospheric environment includes an evaluation of the ambient air quality and applicable rules, regulations, and standards for the area. Because the Project has the ability to release gaseous emissions of criteria pollutants and dust into the ambient air, it falls under the ambient air quality standards promulgated on the local, state, and federal levels.

2.2.1 Affected Environment

The proposed Project site is subject to the rules and regulations imposed by the SJVAB; however, the SJVAB reports to the CARB and all emissions are also governed by the California Ambient Air Quality Standards (CAAQS) as well as the National Ambient Air Quality Standards (NAAQS).

Topographical features which affect the transport and diffusion of pollutants in the Project area include the mountain ranges to east, south and west that prevent the transport of pollutants. Air quality in the Basin generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

The quality of the ambient air is affected by pollutants emitted into the air from stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources consist of one or more emission sources at a facility with an identified location and are usually associated with manufacturing and industrial processing plants. Area sources are widely distributed and produce many small emissions, such as residential water heaters.

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources are a combination of emissions from automobiles, trucks, and indirect sources. Indirect sources are sources that by themselves may not emit air contaminants; however, they indirectly cause the generation of air pollutants by attracting vehicle trips or consuming energy. Examples of indirect sources include an office complex or commercial center that generates commuter trips and consumes energy resources through the use of natural gas for space and water heating. Indirect sources also include actions proposed by local governments, such as redevelopment districts and private projects involving the development of either large buildings or tracts. In addition, indirect sources include those emissions created by the distance vehicles travel. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

2.2.2 Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as “criteria air pollutants” and are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_X), sulfur dioxide (SO_2), and most fine particulate matter (PM_{10}, $PM_{2.5}$) including lead (Pb) and fugitive dust; are primary air pollutants. Of these CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors

and go on to form secondary criteria pollutants through chemical and photochemical reaction in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

Presented below is a description of each of these primary and secondary criteria air pollutants and their known health effects.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances (e.g., gasoline or diesel fuel). The primary adverse health effect associated with CO is the interference of normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.

Reactive Organic Gases (ROGs) are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of ROG include the evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants.

Nitrogen Oxides (NO_X) serve as integral participants in the process of photochemical smog production. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown irritating gas formed by the combination of NO and oxygen. NO_X acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Nitrogen Dioxide (NO_2) is a byproduct of fuel combustion. The principal form of NO_2 produced by combustion is NO, but NO reacts to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm). NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO_2 also contributes to the formation of PM_{10} (particulates having an aerodynamic diameter of 10 microns or 0.0004 inch or less in diameter).

Sulfur Dioxide (SO_2) is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfuric acid is formed from sulfur dioxide, which is an aerosol particle component that may lead to acid deposition. Acid deposition into water, vegetation, soil, or other materials can harm natural resources and materials. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide (SO_3). Although sulfur dioxide concentrations have been reduced to levels well below state and national standards, further reductions are desirable because SO_2 is a precursor to sulfates. Sulfates are a particulate formed through the photochemical oxidation of SO_2. Long-term exposure to high levels of SO_2 can cause irritation of existing cardiovascular disease, respiratory illness, and changes in the defenses in the lungs. When people with asthma are exposed to high levels of SO_2 for short periods of time during moderate activity, effects may include wheezing, chest tightness, or shortness of breath.

Particulate Matter (PM) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulate are now recognized. Course particles, or PM_{10}, include that portion of the particulate matter with an aerodynamic diameter of 10 microns (i.e., ten one-millionths of a meter or 0.0004 inch) or less. Fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns that is 2.5 one-millionths of a meter or 0.0001 inch or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities; however, wind action on the arid landscape also contributes substantially to the local particulate loading. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in those people who are naturally sensitive or susceptible to breathing problems.

Fugitive Dust poses primarily two public health and safety concerns. The first concern is that of respiratory problems attributable to the suspended particulates in the air. The second concern is that of motor vehicle accidents caused by reduced visibility during severe wind conditions. Fugitive dust may also cause significant property damage during strong windstorms by acting as an abrasive material agent (much like sandblasting activities). Finally, fugitive dust can result in a nuisance factor due to the soiling of proximate structures and vehicles.

Ozone (O_3) is one of a number of substances called photochemical oxidants that are formed when reactive organic compounds (ROC) and NO_X (both byproducts of the internal combustion engine) react with sunlight. Ozone is present in relatively high concentrations in the SJVAB, and the damaging effects of photochemical smog are generally related to the concentrations of Ozone. High ozone concentrations in the Basin are due to varying combinations of local and transported pollutants. Ozone may pose a health threat to those who already suffer from respiratory diseases as well as healthy people. Additionally, Ozone has been tied to crop damage, typically in the form of stunted growth and pre-mature death. Ozone can also act as a corrosive resulting in property damage such as the embitterment of rubber products.

2.2.3 Other Effects of Air Pollution

Just as humans are affected by air pollution, so too are plants and animals. Animals must breathe the same air and are subject to the same types of negative health effects. Certain plants and trees may absorb air pollutants that can stunt their development or cause premature death.

There are also numerous impacts to the human economy including lost workdays due to illness, a desire on the part of business to locate in areas with a healthy environment, and increased expenses from medical costs. Pollutants may also lower visibility and cause damage to property. Certain air pollutants are responsible for discoloring painted surfaces, eating away at stones used in buildings, dissolving the mortar that holds bricks together, and cracking tires and other items made from rubber.

2.3 FEDERAL AMBIENT AIR QUALITY STANDARDS (AAQS)

The Federal Clean Air Act Amendment of 1971 (CAA) established national Ambient Air Quality Standards (AAQS) with states retaining the option to adopt more stringent standards or to include other pollution

species. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both the State of California and the federal government have established health based AAQS for six air pollutants. As shown in Table 1, these pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM_{10}, $PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to primary and secondary Ambient AAQS, the State of California has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health.

Table 1
Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070	0.08 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Average	*	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	*	
Sulfur Dioxide (SO_2)	Annual Average	*	0.03 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	*	
	24 hours	0.04 ppm	0.14 ppm	
Suspended Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	50 $\mu g/m^3$	150 $\mu g/m^3$	
Suspended Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	*	35 $\mu g/m^3$	
Lead (Pb)	Monthly	1.5 $\mu g/m^3$	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	*	1.5 $\mu g/m^3$	
Sulfates (SO_4)	24 hours	25 $\mu g/m^3$	*	Industrial processes.

ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
*** = standard is not used for this pollutant/duration by this entity.**

Areas that meet the ambient air quality standards are classified as "attainment" areas while areas that do not meet these standards are classified as "non-attainment" areas. The severity of the classifications for ozone non-attainment include: marginal, moderate, serious, severe, and extreme. The State and Federal attainment status for the Basin are included in Table 2.

Table 2
Attainment Status for the Basin

Pollutant	State Status	Federal Status
Ozone (1-hour)	Nonattainment/Severe	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment/Serious
PM_{10}	Nonattainment	Nonattainment/Serious
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment/Unclassified	Attainment/Unclassified
NO_2	Attainment	Attainment/Unclassified
* Note: In 2007, the SJVAPCD applied for redesignation of the air basin to attainment status for the Federal PM_{10} standard. US EPA is currently reviewing the redesignation application.		

The Basin is also designated as attainment of the California Ambient Air Quality Standards (CAAQS) for SO_2, lead, vinyal chloride, and sulfates. Areas that are designated as Severe for the ozone standard must meet attainment of the 8-hour standard by 2021 (2024 if reclassified to Extreme). Areas considered as serious non-attainment of the PM_{10} standards must have reached attainment by the end of 2006, or as expeditiously as possible. The $PM_{2.5}$ attainment date is to be met in the year 2015.

2.4 AIR QUALITY MANAGEMENT PLANNING

Federal Clean Air Act Requirements

The CAA requires plans to provide for the implementation of all reasonably available control measures including the adoption of reasonably available control technology for reducing emissions from existing sources. Emission control innovations in the form of market-based approaches are explicitly encouraged by the CAA. Other federal requirements addressed include mechanisms to track plan implementation and milestone compliance for O_3 and CO.

The EPA has recently phased out the federal 1-hour ozone standard and replaced it with a new 8-hour standard to protect against longer exposure periods. However, the Basin still experiences ozone levels over the prior federal 1-hour standard on more than 20 days per year. The District and a number of environmental organizations have litigated against EPA's revocation of the 1-hour standard with the case still pending.

The new 8-hour ozone standard is set at a concentration of 0.08 parts per million (ppm) and represents a tightening of the existing 1-hour ozone standard that was set at 0.12 ppm. Under the form of the standard adopted by the EPA, areas are allowed to disregard their three worst measurements every year and average their fourth highest measurements over 3 years to determine if they meet the standard.

For particulate matter, the EPA established new annual and 24-hour standards for $PM_{2.5}$ to complement the existing PM_{10} standards. The new annual $PM_{2.5}$ standard is set at 15 micrograms per cubic meter and the new 24-hour $PM_{2.5}$ standard is set at 65 micrograms per cubic meter. The annual component of the standard was set to provide protection against typical day-to-day exposures as well as longer-term exposures, while the daily component protects against more extreme short-term events. For the new 24-hour $PM_{2.5}$ standard, the form of the standard is based on the 98th percentile of 24-hour $PM_{2.5}$ concentrations measured in a year (averaged over 3 years) at the monitoring site with the highest measured values in an area. This form of the standard will reduce the impact of a single high exposure event that may be due to unusual meteorological conditions and thus provide a more stable basis for effective control programs.

While EPA has retained the current annual PM_{10} standard of 50 micrograms per cubic meter, it has modified the form of the 24-hour PM_{10} standard set at 150 micrograms per cubic meter. More specifically, EPA revised the one-expected exceedance form of the current standard with a 99th percentile form, averaged over 3 years.

The State Implementation Plans (SIP) that will incorporate attainment demonstrations with the new 8-hour and $PM_{2.5}$ standards are expected to be required within 3 years of the air quality designations or by 2007. Therefore, the current regulatory control strategies will continue to focus on attaining the 1-hour ozone standard with the recognition that these controls will have benefits toward attaining the 8-hour ozone and $PM_{2.5}$ standards. The EPA is considering several options in transitioning from the 1-hour to the 8-hour standard, while ensuring that no backsliding will occur. Based on the recent consent decree guidance, it is most likely that the Basin will have to meet the federal $PM_{2.5}$ standards by 2015 and the 8-hour ozone standard by 2021 or 2024 if the area is re-designated as “Extreme.”

San Joaquin Valley Air Pollution Control District

Regional Air Quality Management Districts (AQMD) or Air Pollution Control Districts (APCD) throughout the state are the regulatory authority for each of the air basins within California. Each regional AQMD or APCD is required to produce attainment plans that include the air pollution control programs designed to achieve the NAAQS and CAAQS within their air basin. Each of the attainment plans from all the regional AQMD and APCD collectively make up the State Implementation Plan (SIP) for the State of California.

The Project area is within the jurisdiction of the San Joaquin Valley APCD (District or SJVAPCD). The predicted emissions associated with vehicular traffic (mobile sources) are not subject to the District’s permit requirements. However, the District is responsible for overseeing efforts to improve air quality within the San Joaquin Valley. The District regulates stationary sources and has limited authority to implement transportation control measures and indirect source control programs.

Attainment Plans

For purposes of reaching attainment of the state and national air quality standards, the District adopted the Extreme Ozone Attainment Demonstration Plan (Extreme OADP) and the 2003 PM_{10} Plan. CARB has approved both plans; however, the U.S. EPA approved the 2003 PM_{10} Plan but has not acted on the Extreme OADP.

The Extreme OADP was prepared to fulfill the requirements of the Clean Air Act to attain the national 1-hour ozone ambient air quality standards in the SJVAB by November 15, 2010. EPA revoked the national 1-hour standard on June 15, 2005; however, many of the requirements of the adopted Extreme OADP remain in effect. The District and CARB must continue to implement control measures contained in the Extreme OADP to achieve the needed emission reductions. Since its adoption, the District has implemented many of the control measures listed in the Extreme OADP as rules and rule amendments. The Extreme OADP control measures and associated emission reductions will be used as part of the District's plan to attain the new, more stringent, 8-hour ozone standard due June 15, 2007.

The goal of the 2003 PM_{10} Plan is for the SJVAB to achieve the NAAQS for PM_{10} by December 31, 2010. The plan is designed to meet the requirements of the federal Clean Air Act and contains measures needed to attain the NAAQS at the earliest possible date. The PM_{10} Plan proposes many different types of control strategies for PM_{10}. According to the 2003 PM10 Plan, the control strategies are a collective effort between the EPA, CARB, the District, and local government agencies. The 2003 PM_{10} Plan contained a commitment to submit a mid-course review as part of the Reasonable Further Progress Report due in 2006. The review was intended to incorporate findings of the California Regional Particulate Air Quality Study and to revise the plan's control strategy if warranted by the science. The District approved the 2006 PM_{10} Plan on February 16, 2006. The 2006 PM_{10} reaffirms the control strategy and the science described in the 2003 PM_{10} Plan regarding reducing only NOx and not ammonia to control the secondary particulate ammonium nitrate and addresses other atmospheric modeling issues.

The EPA approved a determination that the SJVAB has attained the federal PM_{10} standards on October 30, 2006, well before the projected 2010 attainment date. In order to be officially re-designated as attainment for PM_{10}, the District must submit and the U.S. EPA must approve a maintenance plan that ensures the air basin will continue to achieve the standards in the future. Until that is accomplished, all requirements applicable to serious PM_{10} nonattainment areas remain in effect except for the need for contingency measures.

There is a $PM_{2.5}$ attainment plan due to the U.S. EPA in April 2008. The District is currently working on the plan.

2.5 BASELINE AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the project area are best documented by measurements made by the SJVAB. The project is located within Kern County and the closest air monitoring station is located at 578 Walker St, Shafter, California. The Shafter station only monitors for NO_2 and O_3, therefore data from the next two closest stations (Oildale and Bakersfield-Golden) were used to obtain data for CO, PM_{10}, and $PM_{2.5}$. Data from these monitoring stations is summarized in Table 3.

The data show recurring violations of both the State and Federal ozone standards and no clear trend is apparent. The data also indicate that the area regularly exceeds the State PM_{10} and Federal $PM_{2.5}$ standards. Neither CO or NO_2 standards have been violated in the last three years.

Table 3
Ambient Air Quality Monitoring Summary,

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations		
	2004	2005	2006
***Ozone*[1]**			
State 1-Hour ≥ 0.09 ppm	3	14	20
State 8-Hour ≥ 0.07 ppm	-	-	-
Federal 1-Hour > 0.12 ppm	0	0	0
Federal 8-Hour > 0.08 ppm	3	15	23
Max. 1-Hour Conc. (ppm)	0.100	0.104	0.106
Max. 8-Hour Conc. (ppm)	0.092	0.096	0.099
***Carbon Monoxide*[2]**			
State 8-Hour > 9.0 ppm	0	0	0
Federal 8-Hour ≥ 9.5 ppm	0	0	0
Max 1-Hour Conc. (ppm)	-	-	-
Max. 8-Hour Conc. (ppm)	2.60	2.10	2.19
***Nitrogen Dioxide*[1]**			
State 1-Hour ≥ 0.25 ppm	0	0	0
Max. 1-Hour Conc. (ppm)	0.074	0.063	0.100
***Inhalable Particulates (PM_{10})*[3]**			
State 24-Hour > 50 µg/m^3	17	14	19
Federal 24-Hour > 150 µg/m^3	0	0	1
Max. 24-Hour Conc. (µg/m^3)	82.0	109.0	162.0
***Inhalable Particulates ($PM_{2.5}$)*[2]**			
Federal 24-Hour > 65 µg/m^3	1	4-	2
Max. 24-Hour Conc. (µg/m^3)	66.6	83.6	76.4

[1] – Data obtained from the Shafter monitoring Station.
[2] – Data obtained from the Bakersfield-Golden monitoring station.
[3] – Data obtained from the Oildale monitoring station.
ppm: parts per million; µg/m^3: micrograms per cubic meter
Source: California Air Resources Board Ambient Air Quality Data Summaries Database

2.6 STANDARD CONDITIONS AND UNIFORM CODES

All projects constructed in the Basin are subject to Standard Conditions and Uniform Codes. Compliance with these provisions is mandatory and as such, does not constitute mitigation under CEQA. Those conditions specific to air quality are included below:

- Regulation VIII is a series of rules designed to reduce PM10 emissions (predominately dust/dirt) generated by human activity, including construction and road construction. The District's Fugitive Dust Control rules contained in Regulation VIII are listed below.

  1) Rule 8011 (General Requirements)
  2) Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). If a non-residential project is 5.0 acres or more in area, a Dust Control Plan must be submitted as specified in Section 6.3.1 of Rule 8021.
  3) Rule 8031 (Bulk Materials)
  4) Rule 8041 (Carryout and Trackout)
  5) Rule 8051 (Open Areas)
  6) Rule 8061 (Paved and Unpaved Roads)

7) Rule 8071 (Unpaved Vehicle/Equipment Traffic Areas)

- Rule 2201 (New and Modified Stationary Source Review Rule) applies to new stationary sources which are subject to the District permit requirements and after construction may emit one or more pollutants.
- Rule 3180 (Administrative Fees for Indirect Source Review) is to cover the District's costs for administering the requirements of Rule 9510.
- Rule 4101 (Visible Emissions) prohibits the emissions of visible air contaminants to the atmosphere.
- Rule 4102 (Nuisance) applies to any source that emits or may emit air contaminants or other materials. In the event that the Project or construction of the Project creates a public nuisance, it could be in violation and be subject to District enforcement action.
- Rule 4601 (Architectural Coatings) limits volatile organic compounds from architectural coatings. This rule specifies architectural coatings storage, clean up, and labeling requirements.
- Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations) applies to the manufacture and use of cutback asphalt, slow cure asphalt, and emulsified asphalt for paving and maintenance operations.
- Rule 4661 (Organic Solvents) limits emissions of ROG from organic solvents through reduction, monitoring, reporting, and disposal requirements.
- Rule 4662 (Organic Solvent Degreasing Operations) limits ROG and hazardous air pollutant emissions from solvent degreasing operations.
- Rule 4663 (Organic Solvent Cleaning, Storage, and Disposal) limits emissions of ROG from organic solvent cleaning, storage, and disposal.
- Rule 4692 (Commercial Charbroiling) applies if any restaurant at the Project site would use chain driven char broilers such as grill char boilers, flame boilers, and direct-fired barbeques.
- Rule 9510 (Indirect Source Review) applies to all development projects that include 50 residential units or more, or 2,000 sq.ft. of commercial floor space or more that have not gained discretionary approval from the Lead Agency. The rule requires that construction and operational emissions be mitigated by certain percentages on-site or by the payment of off-site emission reduction fees. The fees are used to fund air pollutant mitigation projects throughout the valley. Rule 9510 is applicable to the project because the project has more than 50 residential units and more than 2,000 square feet of commercial space. The purpose of ISR is to reduce ozone and PM_{10} concentrations within the air basin to acceptable levels and gain attainment of the federal and state ambient air quality standards throughout the valley. In explaining Rule 9510, the District stated that "The PM10 and Ozone plans have determined that the ISR Rule, in addition to existing and future rules and conditions, will help clean the Valley's air and reach attainment."

2.7 SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential areas are considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also

considered as sensitive receptors as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution because exercise places a high demand on respiratory functions, which can be impaired by air pollution. The closest offsite sensitive receptor is existing residential properties located within 40 meters of the western, and 160 meters from the southeastern Project boundaries.

Table 4
Required Best Available Control Measures for Fugitive Dust
(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
Backfilling	• Stabilize backfill material when not actively handling; and • Stabilize backfill material during handling; and • Stabilize soil at completion of activity	• Mix backfill soil with water prior to moving; and • Dedicate water truck or high capacity hose to backfilling equipment; and • Empty loader bucket slowly so that no dust plumes are generated; and • Minimize drop height from loader bucket.
Clearing and grubbing	• Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and • Stabilize soil during clearing and grubbing activities; and • Stabilize soil immediately after clearing and grubbing activities.	• Maintain live perennial vegetation where possible; and • Apply water in sufficient quantity to prevent generation of dust plumes.
Clearing forms	• Use water spray to clear forms; or • Use sweeping and water spray to clear forms; or • Use vacuum system to clear forms.	Use of high pressure air to clear forms may cause exceedance of Rule requirements.
Crushing	• Stabilize surface soils prior to operation of support equipment; and • Stabilize material after crushing.	• Follow permit conditions for crushing equipment; and • Pre-water material prior to loading into crusher; and • Monitor crusher emissions opacity; and • Apply water to crushed material to prevent dust plumes.
Cut and fill	• Pre-water soils prior to cut and fill activities; and • Stabilize soil during and after cut and fill activities.	• For large sites, pre-water with sprinklers or water trucks and allow time for penetration; and • Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts.

Table 4 (Continued)
Best Available Control Measures for Fugitive Dust
(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
Demolition – mechanical/manual	• Stabilize wind erodible surfaces to reduce dust; and • Stabilize surface soil where support equipment and vehicles will operate; and • Stabilize loose soil and demolition debris; and • Comply with AQMD Rule 1403.	Apply water in sufficient quantities to prevent the generation of visible dust plumes.
Disturbed soil	• Stabilize disturbed soil throughout the construction site; and • Stabilize disturbed soil between structures	• Limit vehicular traffic and disturbances on soils where possible; and • If interior block walls are planned, install as early as possible; and • Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes.
Earth-moving activities	• Pre-apply water to depth of proposed cuts; and • Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and • Stabilize soils once earth-moving activities are complete.	• Grade each Project phase separately, timed to coincide with construction phase; and • Upwind fencing can prevent material movement on site; and • Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes.
Importing/exporting of bulk materials	• Stabilize material while loading to reduce fugitive dust emissions; and • Maintain at least six inches of freeboard on haul vehicles; and • Stabilize material while transporting to reduce fugitive dust emissions; and • Stabilize material while unloading to reduce fugitive dust emissions; and	• Use tarps or other suitable enclosures on haul trucks; and • Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage; and • Comply with track-out prevention/mitigation requirements; and

Table 4 (Continued)
Best Available Control Measures for Fugitive Dust
(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
	• Comply with Vehicle Code Section 23114.	• Provide water while loading and unloading to reduce visible dust plumes.
Landscaping	Stabilize soils, materials, slopes	• Apply water to materials to stabilize; and • Maintain materials in a crusted condition; and • Maintain effective cover over materials; and • Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes; and • Hydroseed prior to rain season.
Road shoulder maintenance	• Apply water to unpaved shoulders prior to clearing; and • Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	• Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs; and • Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs.
Screening	• Pre-water material prior to screening; and • Limit fugitive dust emissions to opacity and plume length standards; and • Stabilize material immediately after screening.	• Dedicate water truck or high capacity hose to screening operation; and • Drop material through the screen slowly and minimize drop height; and • Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point.
Staging areas	• Stabilize staging areas during use; and • Stabilize staging area soils at project completion.	• Limit size of staging area; and • Limit vehicle speeds to 15 miles per hour; and • Limit number and size of staging area entrances/exits.

Table 4 (Continued)
Best Available Control Measures for Fugitive Dust
(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
Stockpiles/bulk material handling	Stabilize stockpiled materials, and Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	• Add or remove material from the downwind portion of the storage pile; and • Maintain storage piles to avoid steep sides or faces.
Traffic areas for construction activities	• Stabilize all off-road traffic and parking areas; and • Stabilize all haul routes; and • Direct construction traffic over established haul routes.	• Apply gravel/paving to all haul routes as soon as possible to all future roadway areas; and • Barriers can be used to ensure vehicles are only used on established parking areas/haul routes.
Trenching	• Stabilize surface soils where trencher or excavator and support equipment will operate; and • Stabilize soils at the completion of trenching activities.	• Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching; and • Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment.
Truck loading	• Pre-water material prior to loading; and • Ensure that freeboard exceeds six inches (CVC 23114)	• Empty loader bucket such that no visible dust plumes are created; and • Ensure that the loader bucket is close to the truck to minimize drop height while loading.
Turf overseeding	• Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and • Cover haul vehicles prior to exiting the site.	Haul waste material immediately off-site.

Table 4 (Continued)
Best Available Control Measures for Fugitive Dust
(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
Unpaved roads/parking lots	• Stabilize soils to meet the applicable performance standards; and • Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements.
Vacant land	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 5
Contingency Control Measures for Fugitive Dust during High Winds in Excess of 25 MPH

Fugitive Dust Source Category	Control Measures
Earth-moving	• Cease all active operations; or • Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	• On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; or • Apply chemical stabilizers prior to wind event; or • Apply water to all unstabilized disturbed areas three times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; or • Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; or • Utilize any combination of these control actions such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	• Apply chemical stabilizers prior to wind event; or • Apply water twice per hour during active operation; or • Stop all vehicular traffic.
Open storage piles	• Apply water twice per hour; or • Install temporary coverings.
Paved road track-out	• Cover all haul vehicles; or • Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All categories	Executive Officer and the USEPA as equivalent to the methods specified in this table may be used.

SECTION 3.0 – THRESHOLDS OF SIGNIFICANCE

The State CEQA Guidelines suggest, from an "air quality" perspective, that a project would normally be judged to produce a significant or potentially significant effect on the environment if the project were to:

- *Conflict with or obstruct implementation of the applicable air quality plan.*
- *Violate any air quality standard or contribute substantially to an existing or projected air quality violation.*
- *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standards.*
- *Expose sensitive receptors to substantial air pollutant concentrations.*
- *Create objectionable odors affecting a substantial number of people.*

As indicated in Section 15064(i)(1) of the State CEQA Guidelines, "cumulatively considerable" is defined to mean "that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

In order to determine whether or not a proposed project would cause a significant effect on the environment, the impact of the project must be determined by examining the types and levels of emissions generated and its impacts on factors that affect air quality. To accomplish this determination of significance, the SJVAPCD has established air pollution thresholds against which a proposed project can be evaluated and assist lead agencies in determining whether or not the proposed project is significant. If the thresholds are exceeded by a proposed project, then it should be considered significant.

While, the final determination of significance thresholds is within the purview of the lead agency pursuant to the State CEQA Guidelines, the SJVAPCD recommends that the following air pollution thresholds be used by lead agencies in determining whether the construction or operational phase of a proposed project is significant. If the lead agency finds that the proposed project has the potential to exceed any of the air pollution thresholds, the project should be considered significant. These threshold factors are included below.

Regional Thresholds of Significance

The following significance thresholds (Table 6) for air quality have been established by the SJVAPCD on an annual basis for operations emissions. During operation, if any of the identified annual air pollutant thresholds are exceeded by the proposed project, then the project's air quality impacts may be considered significant. The SJVAPCD indicates in that it considers a project to be mitigated to a level of insignificance if it complies to the construction mitigation Regulation VIII indicated in the GAMAQI, and its operational effects are mitigated below the thresholds provided.

Table 6
Regional Operational Thresholds of Significance

Pollutant	Operations Emissions (Tons/yr)
ROG	10
NO_X	10
CO	-
PM_{10}	-
$PM_{2.5}$	-
SO_X	-

Additional Indicators

The SJVAPCD recommends that "additional indicators" should be used as screening criteria with respect to air quality. Additional factors relevant to the project at hand include the following significance criteria:

- Interference with the attainment of the federal or State ambient air quality standards by either violating or contributing to an existing or projected air quality violation.

SECTION 4.0 – ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The Project involves the construction and subsequent use of a Mixed Use commercial/residential center in Wasco California . Projected air emissions are calculated using URBEMIS2007. The URBEMIS2007 model uses EMFAC2007 emissions factors for vehicle traffic. For the purposes of this analysis, construction is estimated to be completed in two phases. Phase I (development east of Center Street) is to begin in June 2008 with completion in December 2011, and Phase II (development west of Center Street) beginning in January 2012 with Completion in December 2015 (approximately 7.5 years). Although actual construction of Phase II will begin in January 2012, grading will be conducted at the same time as grading for Phase I.

The subsequent occupation of the site is also based on the URBEMIS2007 model using default traffic-projections provided by the Urbemis model. In accordance with Urbemis, the project would add 21,082 average daily trips (ADT).

The calculated emissions of the project are compared to thresholds of significance for individual projects using the *Guide for Assessing and Mitigating Air Quality Impacts,* SJVAPCD, January 2002 (*GAMAQI*) as well as updates included on the SJVAPCD Internet Web site. The *GAMAQI* recommends assessing emissions of reactive organic compounds (ROG) as an indicator of ozone. For ease of the reader, the included analysis follows the outline of the CEQA Checklist.

4.1 PROJECT CONSISTENCY WITH THE APPLICABLE AIR QUALITY PLAN

The adopted Attainment Plans for the SJVAB set forth comprehensive programs that will lead the SJVAB into compliance with all federal and state ambient air quality standards. The Attainment Plans control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with the Southern California Association of Governments. Accordingly, conformance with the Attainment Plans for development projects is determined by demonstrating compliance with local land use plans, population projections, and SJVAPCD Regulations. The proposed Project represents the construction and operation of a mixed use commercial/residential center Project. The Project would not involve growth-inducing impacts or cause an exceedance of established population or growth projections. Furthermore, with the included mitigation discussed in the following sections, the project would not create either short- or long-term significant quantities of criteria pollutants. Additionally, the project would not result in significant localized air quality impacts. As such, the project is consistent with the goals of the Attainment Plans, and in this respect does not present a significant impact.

4.2 PROJECT POTENTIAL TO VIOLATE OR ADD TO A VIOLATION OF AN AIR QUALITY STANDARD

CEQA inquires as to whether a project would violate any air quality standard or contribute substantially to an existing or projected air quality violation. A violation could occur over the short-term during project construction, or over the long-term during its subsequent operation. Each is addressed below.

4.2.1 Site Construction

Air quality impacts may occur during demolition, site preparation, grading, and construction activities required for implementation of the proposed land uses. Major sources of emissions during construction include exhaust emissions generated during site preparation, grading, and the subsequent construction of the structures, fugitive dust generated as a result of soil and material disturbance during site preparation, grading, and excavation activities, and the emission of reactive organic compounds during site paving and painting of the structures.

The Project site includes approximately 584,000 sf. of retail, 285,500 sf. of recreational, and 185,354 sf. of residential land use. Construction would occur in two phases over a period of approximately seven and a half years, with approximately 10.00 acres of the site graded and/or disturbed on any given day. In general Urbemis2007 default values were used and results recorded as presented except the following changes that are required by the SJVAPCD.

- Silt Loading operational emissions factor changed from 0.1 to 0.031 (indicated as a Change by the 2002 GAMAQI but is a default as of the 2007 Urbemis model;
- Residential Fleet Mix for 2010 and 2016 (for Phase 1 and Phase II respectively) were changed to represent the following:; and

Table 7
District Recommended Fleet Mix (% Vehicle Trip by Year)

Vehicle Class & Weight	2010	2016
Light Auto	51.4	51.1
Light Truck <3,750	22.3	22.5
Light Truck 3,750 – 5,750	16.3	16.4
Medium Truck 5,751 – 8,500	6.4	6.4
Light-Heavy 8,501 – 10,000	0.2	0.2
Light-Heavy 10,001 – 14,000	0.0	0.0
Medium-Heavy 14,001 – 33,000	0.7	0.7
Heavy-Heavy 33,000 – 60,000	0.6	0.5
Line Haul >60,000	0.0	0.0
Urban Bus	0.1	0.1
Motorcycle	1.3	1.3
School Bus	0.0	0.0
Motor Home	0.7	0.

- Pass-by trips for operational emissions was set to “on”.

Table 8 summarizes the annual emissions for grading and construction for both Project Phases prior to the implementation of any of the control measures. Construction emissions were modeled using Urbemis 2007, and model results appear in Appendix A. The SJVAPCD does not have thresholds of significance for construction activities. Instead, the SJVAPCD has stipulated required control measures in order to reduce construction activities. The SJVAPCD also indicates additional mitigation measures that can be implemented to further reduce emissions. The required control measures are detailed below. Further,

the SJVAPCD "Recognizes that construction equipment also emits carbon monoxide and ozone precursor emissions. However, the SJVAPCD has determined that these emissions may cause a significant air quality impact only in the case of very larger or very intense construction projects."

Regulation VIII Control Measures –*The following controls are required to be implemented at all construction sites (*those control measures that are included in the Urbemis model):*

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizers/suppressant, covered with a tarp, or other suitable cover or vegetative ground cover*;
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizers/suppressant*;
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking*;
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition;
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained;*
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. *(The use of dry rotary brushes is expressly prohibited except where preceeded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.);*
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant;
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday; and
- Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

Table 9 details the reduction in emissions based on the implementation of a number of the control measures and additional recommended mitigation measures. Construction emissions were modeled using Urbemis 2007, and model results appear in Appendix A. The Urbemis model does not include some of the above required control measures, therefore values presented in Table 9 are higher than the actual emissions rates will be once all control measures are implemented. With the inclusion of required control measures listed above and the implementation of additional suggested mitigation measures, the Project will be less than significant for construction activities.

Table 8
Projected Construction Emissions and Criteria Values Prior to Regulation VIII Control Measures and Mitigation.

Source	CO		NOx		ROG		SOx		PM_{10}		$PM_{2.5}$	
	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II
Mass Grading												
Exhaust Emissions, tons/yr	2.18	-	4.97	-	0.56	-	0	-	0.23	-	0.21	-
Fugitive Dust, tons/yr	0	-	0	-	0	-	0	-	13.25	-	2.77	-
Total Annual Emissions, tons/yr	2.18	-	4.97	-	0.56	-	0	-	13.48	-	2.98	-
Fine Grading												
Exhaust Emissions, tons/yr	0.41	1.56	0.75	2.49	0.09	0.32	0	0	0.04	0.14	0.04	0.13
Fugitive Dust, tons/yr	0	0	0	0	0	0	0	0	4.28	23.43	0.89	4.89
Total Annual Emissions, tons/yr	0.41	1.56	0.75	2.49	0.09	0.32	0	0	4.32	23.57	0.93	5.02
Trenching												
Total Annual Emissions, tons/yr	0.1	0.2	0.21	0.34	0.02	0.04	0	0	0.01	0.02	0.01	0.02
Building/Asphalt/Coating												
Building Exhaust Emissions, tons/yr	5.1	5.33	2.94	2.71	0.61	0.49	0	0	0.2	0.2	0.18	0.16
Asphalt Emissions, tons/yr	1.11	2.05	1.87	2.82	0.28	0.45	0	0	0.13	0.19	0.12	0.18
Painting Emissions, tons/yr	0.05	0.05	0	0	3.38	5.73	0	0	0	0	0	0
Total Annual Emissions, tons/yr	6.26	7.43	4.81	5.53	4.27	6.67	0	0	0.33	0.39	0.3	0.34

Table 9
Projected Construction Emissions and Criteria Values After Implementation of Regulation VIII Control Measures and Mitigation.

Source	CO		NOx		ROG		SOx		PM10		PM2.5	
	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II
Mass Grading												
Exhaust Emissions, tons/yr	2.18	-	4.23	-	0.56	-	0	-	0.23	-	0.21	-
Fugitive Dust, tons/yr	0	-	0	-	0	-	0	-	0.21	-	0.04	-
Total Annual Emissions, tons/yr	2.18	-	4.23	-	0.56	-	0	-	0.44	-	0.25	-
Fine Grading												
Exhaust Emissions, tons/yr	0.41	1.56	0.64	2.12	0.09	0.32	0	0	0.04	0.14	0.04	0.13
Fugitive Dust, tons/yr	0	0	0	0	0	0	0	0	0.07	0.37	0.01	0.08
Total Annual Emissions, tons/yr	0.41	1.56	0.64	2.12	0.09	0.32	0	0	0.11	0.51	0.05	0.21
Trenching												
Total Annual Emissions, tons/yr	0.1	0.2	0.18	0.29	0.02	0.04	0	0	0.01	0.02	0.01	0.02
Building/Asphalt/Coating												
Building Exhaust Emissions, tons/yr	5.1	5.33	2.6	2.38	0.61	0.49	0	0	0.2	0.2	0.18	0.16
Asphalt Emissions, tons/yr	1.11	2.05	1.6	2.41	0.28	0.45	0	0	0.13	0.19	0.12	0.18
Painting Emissions, tons/yr	0.05	0.05	0	0	3.04	5.16	0	0	0	0	0	0
Total Annual Emissions, tons/yr	**6.26**	**7.43**	**4.2**	**4.79**	**3.39**	**6.1**	**0**	**0**	**0.33**	**0.39**	**0.3**	**0.34**

The following additional mitigation measures were incorporated into the above mitigation scenario and should be implemented by the Project in order to further reduce criteria pollutant emissions.

- Limit traffic speeds on unpaved roads to 15 mph;
- Limit area subject to excavation, grading, and other construction activity at any one time. (Construction area limited to 10 acres per day); and
- Use of alternative fueled or catalyst equipped diesel construction equipment.

The following additional mitigation measures should be considered by the applicant in order to further reduce construction related criteria pollutant emissions.

Enhanced Control Measures –*The following measures should be implemented at construction sites when required to mitigate significant PM_{10} impacts (note, these measures are to be implemented in addition to Regulation VIII Requirements):*

- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with as slope greater than one percent.

Additional Control Measures –*The following control measures are strongly encouraged at construction sites that are large in area, located near sensitive receptors, or which for any other reason warrant additional emissions reductions:*

- Install wheel washers for all exciting trucks, or wash off all trucks and equipment leaving the site;
- Install wind breaks at windward sides(s) of construction areas; and
- Suspend excavation and grading activity when winds exceed 20 mph.[1]

[1] – Regardless of windspeed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation.

Construction Equipment Mitigation Measures*- Heavy duty equipment (scrapers, grader, trenchesrs, earth movers, etc.):*

- Minimize idling time (e.g., 10 minute maximum);
- Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use;
- Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set);
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways; and
- Implement activity management (e.g. rescheduling activities to reduce short-term impacts).

4.2.2 Site Operations

The major source of long-term air quality impacts is that associated with the emissions produced from project-generated vehicle trips. Stationary sources also add to these values.

Mobile Source Emissions

Vehicle trip generation that will result upon implementation of the project was estimated in the *Traffic Study* for the Project and used in this analysis. Emissions generated by project-related trips are based on the URBEMIS2007 computer model using EMFAC2007 to calculate mobile on-road emission rates. Model runs are included in the Appendix. Table 10 summarizes long-term operational emissions including mobile source emissions.

Stationary Source Emissions

In addition to vehicle trips, the facility would produce emissions from on-site sources. The combustion of natural gas for heating the structures and water would occur. Associated landscaping will be maintained requiring the use of gardening equipment and their attendant emissions. Additionally, the structures would be maintained and this requires repainting over time that releases ROG emissions. The resultant emissions are projected by the URBEMIS2007 computer model and included in Table 10.

Table 10 summarizes the annual emissions during operation of the mixed use commercial/residential project in comparison with the SJVAPCD regional thresholds of significance. Table 11 summarizes the annual emissions during operation after applied mitigation. Note that with implementation of all applicable mitigation and the indirect source review process all criteria pollutants are reduced to below significance thresholds. Model results appear in Appendix A.

The following mitigation measures are implemented to reduce the emissions emitted by the project to below the applicable SJVAPCD regional thresholds.

- The project features a mix of residential and commercial uses.
- Retail uses are located within a half mile of the project.
- Provide secure bicycle parking (1 bicycle space provided per 20 vehicle spaces)
- Provide information on bicycle and mass transit routes for employees;
- Preferential parking is provided for carpools;
- A maximum of 3880 parking spaces will be available for the Project site;
- Residential and Commercial properties will increase energy efficiency at least 20% beyond Title 24; and
- All residential and commercial properties will use low VOC paints for internal and external property maintenance.

Table 10
Unmitigated Operational Emissions

Source	CO, tons/yr		NO_X, tons/yr		ROG, tons/yr		SO_X, tons/yr		PM_{10}, tons/yr		$PM_{2.5}$, tons/yr	
	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II
Mobile Sources												
Residential	12.82	1.7	1.28	0.17	1.13	0.15	0.01	0	0.92	0.2	0.2	0.04
Recreational	9.14	40.12	0.94	4.03	0.94	4.36	0.01	0.04	0.65	4.01	0.14	0.87
Retail	82.58	123.93	8.45	12.87	8.31	11.32	0.06	0.15	5.62	14.23	1.23	3.05
Stationary Sources												
Natural Gas	0.49	0.79	0.65	0.95	0.05	0.07	0	0	0	0	0	0
Hearth												
Landscape	0.43	0.43	0.01	0.01	0.04	0.04	0	0	0	0	0	0
Consumer Products					0.64	0.16						
Architectural Coatings					0.34	0.57						
Total Emissions	105.46	166.97	**11.33**	**18.03**	**16.67**	**16.67**	0.08	0.19	7.19	**18.44**	1.57	3.96
SVJAPCD Annual Threshold	-		10		10		-		15		15	
Exceeds Threshold	No	No	**Yes**	**Yes**	**Yes**	**Yes**	No	No	No	**Yes**	No	No
CO, SO_x, PM_{10}, and $PM_{2.5}$: SJVAPCD Annual Recommendation (tons/yr).												

Table 11
Mitigated Operational Emissions

Source	CO, tons/yr		NO_X, tons/yr		ROG, tons/yr		SO_X, tons/yr		PM_{10}, tons/yr		$PM_{2.5}$, tons/yr	
	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II
Mobile Sources												
Residential	11.57	1.54	1.15	0.15	1.04	0.14	0.01	0	0.83	0.18	0.18	0.04
Recreational	4.26	18.65	0.44	1.87	0.51	2.06	0	0.02	0.3	1.86	0.07	0.4
Retail	31.13	57.71	3.9	5.99	3.98	5.51	0.03	0.07	2.6	6.63	0.57	1.42
Stationary Sources												
Natural Gas	0.39	0.63	0.52	0.76	0.04	0.06	0	0	0	0	0	0
Hearth												
Landscape	0.43	0.43	0.01	0.01	0.04	0.04	0	0	0	0	0	0
Consumer Products					0.65	0.16						
Architectural Coatings					0.3	0.51						
Total Emissions	54.78	78.96	6.02	8.78	6.56	8.48	0.04	0.09	3.73	8.67	0.82	1.86
SVJAPCD Annual Threshold	-		10		10		-		15		15	
Exceeds Threshold	No	No	No	No	No	No	No	No	No	No	No	No
CO, SO_x, PM_{10}, and $PM_{2.5}$: SJVAPCD Annual Recommendation (tons/yr).												

Indirect Source Review

The Indirect Source Review (ISR) rule was adopted in March 2006 and required developers of larger residential, commercial, and industrial projects to reduce smog-forming and particulate emissions generated by their projects. The rule is expected to reduce nitrogen oxides and particulates through out the San Joaquin Valley by more than 10 tons per day by 2010.

The ISR Rule (Rule 9510) and the Administrative ISR Fee Rule (Rule 3180) resulted from the requirements of the State Implementation Plan and the California Health and Safety Code, which identify the need to reduce PM_{10} and NO_X in order to reach the ambient air pollution standards on schedule.

The ISR Rule affects new developments (post March 1, 2006) that are expected to create a substantial amount of air pollution. Requirements of this Project that require it to participate in the ISR review include:

- More than 50 residential units;
- Greater than 2,000 sf of commercial land use;
- The project's primary function is not subject to District Rule 2201 (New and Modified Stationary Source Review Rule), or District Rule 2010 (Permits Required); and
- The Project emissions of nitrogen oxides and PM_{10} are both greater than two tons per year.

The Indirect Source Review requires developers to mitigate:

- 20 percent of construction equipment exhaust nitrogen oxides;
- 45 percent of construction equipment exhaust PM_{10};
- 33 percent of operational nitrogen oxides over 10 years; and
- 50 percent of operationalPM_{10} over 10 years.

The ISR encourages developers to reduce air pollution as much as possible using on-site mitigation and the incorporation of air-friendly designs and practices into the project design. In the event that on-site mitigation measures do not reduce emissions to the percents required, the developer is required to mitigate the difference by paying an off-site mitigation fee. This fee will be used by the Air District to achieve off-site emissions reductions on behalf of the developer by funding clean air projects. In addition, an administrative fee equal to 4 percent of the off-site fee will be required.

Table 12 details the percentage of emissions reduction per year from beginning construction through buildout. For all of the emission reductions that do not meet or exceed the ISR reduction requirements, a fee is determined based on the ISR Public Fee Estimator 2008 spread sheet provided by SJVAPCD (Appendix B). Based on expected project emissions, the project will be required to pay fees totaling $78,433.68. These fees break down as follows: NO_X emissions $21,165; PM_{10} emissions $54,252, and Administrative fees $3,016.68.

Table 11
Mitigated Operational Emissions

NOX				PM10			
Construction							
Unmitigated	***Mitigated***	***% Reduction***	***> 20% reduction***	***Unmitigated***	***Mitigated***	***% Reduction***	***> 45% reduction***
5.4000	4.5900	15.00	No	15.8400	0.4900	96.91	Yes
3.4700	3.0400	12.39	No	4.5000	0.2900	93.56	Yes
3.1400	2.7800	11.46	No	0.2200	0.2200	0.00	No
4.8000	4.1900	12.71	No	0.3400	0.3400	0.00	No
3.9900	3.4300	14.04	No	23.6700	0.6100	97.42	Yes
3.2400	2.8500	12.04	No	0.2300	0.2300	0.00	No
2.9800	2.6300	11.74	No	0.2000	0.2000	0.00	No
5.5500	4.8100	13.33	No	0.3900	0.3900	0.00	No
Operational							
Unmitigated	***Mitigated***	***% Reduction***	***> 33% reduction***	***Unmitigated***	***Mitigated***	***% Reduction***	***> 50% reduction***
0.0000	0.0000	-	-	0.0000	0.0000	-	-
0.0000	0.0000	-	-	0.0000	0.0000	-	-
0.0000	0.0000	-	-	0.0000	0.0000	-	-
0.0000	0.0000	-	-	0.0000	0.0000	-	-
11.3300	6.0200	46.87	Yes	7.1900	3.7300	48.12	No
11.3300	6.0200	46.87	Yes	7.1900	3.7300	48.12	No
11.3300	6.0200	46.87	Yes	7.1900	3.7300	48.12	No
11.3300	6.0200	46.87	Yes	7.1900	3.7300	48.12	No
18.0300	8.7800	51.30	Yes	18.4400	8.6700	52.98	Yes

4.3 PROJECT POTENTIAL TO RESULT IN A CUMULATIVELY CONSIDERABLE INCREASE IN CRITERIA POLLUTANTS

The project area is designated as a non-attainment area for ozone and PM_{10}. The project-specific evaluation of emissions presented in the preceding analysis supports a conclusion that with mitigation and ISR Fee, the air quality impacts for the proposed project are less than significant on an individual project basis. CEQA Section 21100 (e) addresses evaluation of cumulative effects allowing the use of approved land use documents in a cumulative impact analysis. CEQA Guidelines Section 15064 (i)(3) further stipulates that for an impact involving a resource that is addressed by an approved plan or mitigation program, the lead agency may determine that a project's incremental contribution is not cumulatively considerable if the project complies with the adopted plan or program. In addressing cumulative effects for air quality, the Attainment Plans are the most appropriate documents to use because the Attainment Plans set forth a comprehensive programs that will lead the SJVAPCD, including

the project area, into compliance with all federal and state air quality standards and utilizes control measures and related emission reduction estimates based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. With mitigation, all criteria pollutant emissions are below the thresholds of significance. The project is funding a regional mitigation program through payment of ISR fees that will reduce the Project's incremental contribution to cumulative air quality impacts. In addition, the project will comply with all District Rules and Regulations. For these reasons, the project is in conformance with the Attainment Plans for the San Joaquin Valley Air Basin. Since the proposed Project is in conformance with the Attainment Plans and the project is not significant on an individual basis, it is appropriate to conclude that the project's incremental contribution to criteria pollutant emissions is not cumulatively considerable.

4.4 PROJECT POTENTIAL TO EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS

CEQA inquires as to whether a project would violate any air quality standard or contribute substantially to an existing or projected air quality violation. The analysis focused on determining if a violation could occur over the short-term during project construction, or over the long-term during its subsequent operation. Each is addressed below.

4.4.1 Short-Term (Construction) Impacts

As discussed above the project construction has the potential to raise local ambient pollutant concentrations. This could present a significant impact if these concentrations were to exceed the Ambient Air Quality Standards included in Table 1 at receptor locations.

Peak daily emissions for CO, NO_X, ROG, PM_{10}, and $PM_{2.5}$ were estimated as shown in Table 7 above. With the inclusion of required control measures outlined in Section 4.2.1, and the implementation of additional suggested mitigation measures, the Project will be less than significant for construction activities.

4.4.2 Long-Term (Operational) Impacts

As discussed in Section 4.2.2, Tables 9 and 10 detail the emissions estimates for operational activities of the Project. With the incorporation of mitigation and the ISR fee, the project is less than significant for operational activities.

4.5 PROJECT POTENTIAL CREATE OBJECTIONABLE ODORS

Project construction would involve the use of heavy equipment creating exhaust pollutants from on-site earth movement and from equipment bringing concrete and other building materials to the site. With regards to nuisance odors, any air quality impacts will be confined to the immediate vicinity of the equipment itself. By the time such emissions reach any sensitive receptor sites away from the project

site, they will be diluted to well below any level of air quality concern. An occasional “whiff” of diesel exhaust from trucks accessing the site from public roadways may result. Such brief exhaust odors may be adverse, but not a significant air quality impact. Additionally, some odor would be produced from the application of asphalt, paints, and coatings. Again, any exposure of the general public to these common odors would be of short duration and while potentially adverse, are less than significant.

SECTION 5.0 – CUMULATIVE IMPACTS AND LIMITED GLOBAL CLIMATE CHANGE ANALYSIS

Parts of the Earth's atmosphere act as an insulating blanket of just the right thickness, trapping sufficient solar energy to keep the global average temperature in a suitable range. The 'blanket' is a collection of atmospheric gases called 'greenhouse gases' (GHGs) based on the idea that the gases also 'trap' heat like the glass walls of a greenhouse. These gases, mainly water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone, and chlorofluorocarbons (CFCs) all act as effective global insulators, reflecting back to earth visible light and infrared radiation. Human activities such as producing electricity and driving vehicles have contributed to the elevated the concentration of these gases in the atmosphere. This in turn, is causing the Earth's temperature to rise. A warmer Earth may lead to changes in rainfall patterns, much smaller polar ice caps, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans.

An individual project cannot generate enough GHG emissions to influence global climate change. The project participates in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of GHGs, which when taken together form global climate change impacts. The following discussion reviews each of the GHGs and the project's potential generation of these gases. The Project's main contribution to GHGs is carbon dioxide, and therefore the GHG analysis will focus exclusive on Carbon Dioxide emissions.

Carbon Dioxide

The natural production and absorption of carbon dioxide (CO_2) is achieved through the terrestrial biosphere and the ocean. However, humankind has contributed to the alteration of the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid 1700s, each of these human caused activities has increased in scale and distribution. Carbon dioxide was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 ppm. Today, they are around 370 ppm, an increase of well over 30 percent (EPA 2006). Left unchecked, the concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (IPCC 2001). This will result in an average global temperature rise of at least two degrees Celsius (3.6 ^{O}F) (IPPCC 2001).

The Project will generate emissions of carbon dioxide primarily in the form of vehicle exhaust and in the consumption of natural gas for heating. Carbon dioxide emissions from vehicles were calculated using URBEMIS2007 assumptions and EMFAC2007 emission factors that are used in URBEMIS2007. Carbon dioxide emissions from natural gas combustion were generated using an EPA AP-42 emission factor (EPA 1998). The carbon dioxide emissions are shown in Table 17.

Table 17
Unmitigated Carbon Dioxide Emissions

Emission Source	Unmitigated Carbon Dioxide Emissions (tons per year)	Mitigated Carbon Dioxide Emissions (tons per year)	Percent Reduction
Vehicles	28,373.25	13,727.44	
Natural Gas Combustion	1,929.32	1,543.45	
Total	30,302.57	15,270.89	49.61

Summary

The United Nations Intergovernmental Panel on Climate Change constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400-450 ppm carbon dioxide-equivalent concentration is required to keep global mean warming below 2°C, which in turn is assumed to be necessary to avoid 'dangerous' climate change (IPCC 2001).

The California Climate Change Center at UC Berkeley has determined that an 11 percent statewide reduction of GHGs from present levels is required by year 2010, a 25 percent statewide reduction is required by 2020, and an 80 percent statewide reduction by 2050 in order to stabilize GHGs. California Governor Arnold Schwarzenegger announced on June 1, 2005 through Executive Order S-3-05, GHG emission reduction targets as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels (CA 2005). Some literature equates these reductions to 11 percent of the current GHG emissions by 2010 and 25 percent of the current GHG emissions by 2020.

AB-32 requires that by January 1, 2008, CARB shall determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not been approved on this date, other publications indicate that levels varied from 425 to 468 Tg CO_2 Eq. (CEC 2006). In 2004, the emissions were estimated at 492 Tg CO_2 Eq. (CEC 2006).

Additional Greenhouse Gas Mitigation Measures

The following mitigation will further reduce greenhouse gas emissions for the Project:

- Tenants shall be responsible to ensure that preferential parking spaces are allocated to ultra-low emission vehicles and alternative fueled vehicles to encourage the use of alternative fuels and ultra-low emission vehicles.
- Landscape designers shall ensure that Project landscaping uses drought tolerant and smog tolerant plants to ensure the long-term viability and conserve water and energy.
- Landscape designers shall ensure that the Landscape plan includes drought resistant trees, shrubs, and groundcover within the parking lot and perimeter.

- Project designers shall ensure that design features incorporate light colored roofing materials that will deflect heat away from the building and conserve energy
- The Project designers shall ensure that designs include all illumination elements to have controls to allow selective use as an energy conservation measure.

SECTION 6.0 – REFERENCES

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California Air Resources Board

EMFAC2007 Computer Model, Version 2.3, November 1, 2006.

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Guide for Assessing and Mitigating Air Quality Impacts, January 10, 2002

Guide for Assessing And Mitigating Air Quality Impacts, Technical Document, January 10, 2002.

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Extreme Ozone Attainment Demonstration Plan. 2007.

2007 - Ambient Air Quality Standards & Valley Attainment Status; http://www.valleyair.org/aqinfo/attainment.htm, April 30, 2007.

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APPENDIX A
URBEMIS2007 MODEL RESULTS FOR UNMITIGATED CONSTRUCTION EMISSIONS

3/11/2008 12:15:38 PM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\PLongoni\Desktop\8522 - Wasco Center\Wasco Center - 1st Phase.urb924

Project Name: Wasco Center - 1st Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2008	0.61	5.40	2.42	0.00	15.59	0.25	15.84	3.26	0.23	3.49	490.93
Mass Grading 06/02/2008-	0.56	4.97	2.18	0.00	13.25	0.23	13.47	2.77	0.21	2.97	454.87
Mass Grading Dust	0.00	0.00	0.00	0.00	13.25	0.00	13.25	2.77	0.00	2.77	0.00
Mass Grading Off Road Diesel	0.55	4.96	2.01	0.00	0.00	0.23	0.23	0.00	0.21	0.21	441.58
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.01	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.29
Fine Grading 12/01/2008-	0.05	0.43	0.24	0.00	2.34	0.02	2.37	0.49	0.02	0.51	36.06
Fine Grading Dust	0.00	0.00	0.00	0.00	2.34	0.00	2.34	0.49	0.00	0.49	0.00
Fine Grading Off Road Diesel	0.05	0.43	0.22	0.00	0.00	0.02	0.02	0.00	0.02	0.02	34.59
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
2009	0.65	3.47	4.93	0.00	4.29	0.21	4.50	0.90	0.19	1.09	579.74
Fine Grading 12/01/2008-	0.09	0.75	0.41	0.00	4.28	0.04	4.32	0.89	0.04	0.93	65.84
Fine Grading Dust	0.00	0.00	0.00	0.00	4.28	0.00	4.28	0.89	0.00	0.89	0.00
Fine Grading Off Road Diesel	0.09	0.75	0.38	0.00	0.00	0.04	0.04	0.00	0.04	0.04	63.16
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.68
Trenching 03/02/2009-03/31/2009	0.02	0.21	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	19.99
Trenching Off Road Diesel	0.02	0.21	0.09	0.00	0.00	0.01	0.01	0.00	0.01	0.01	18.86
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
Building 04/01/2009-12/30/2011	0.53	2.51	4.41	0.00	0.01	0.16	0.17	0.01	0.15	0.15	493.91
Building Off Road Diesel	0.41	1.91	1.23	0.00	0.00	0.14	0.14	0.00	0.12	0.12	180.37
Building Vendor Trips	0.04	0.45	0.38	0.00	0.00	0.02	0.02	0.00	0.02	0.02	76.77
Building Worker Trips	0.09	0.15	2.80	0.00	0.01	0.01	0.02	0.00	0.01	0.01	236.78
2010	0.66	3.14	5.48	0.00	0.02	0.20	0.22	0.01	0.18	0.19	654.52
Building 04/01/2009-12/30/2011	0.66	3.14	5.48	0.00	0.02	0.20	0.22	0.01	0.18	0.19	654.52
Building Off Road Diesel	0.51	2.41	1.59	0.00	0.00	0.17	0.17	0.00	0.15	0.15	238.97

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Building Vendor Trips	0.04	0.55	0.47	0.00	0.00	0.02	0.03	0.00	0.02	0.02	101.73
Building Worker Trips	0.11	0.19	3.42	0.00	0.02	0.01	0.02	0.01	0.01	0.01	313.82
2011	4.27	4.80	6.25	0.00	0.02	0.32	0.34	0.01	0.29	0.30	839.27
Building 04/01/2009-12/30/2011	0.61	2.93	5.09	0.00	0.02	0.19	0.21	0.01	0.17	0.18	652.17
Building Off Road Diesel	0.47	2.27	1.53	0.00	0.00	0.16	0.16	0.00	0.15	0.15	238.05
Building Vendor Trips	0.04	0.50	0.44	0.00	0.00	0.02	0.02	0.00	0.02	0.02	101.36
Building Worker Trips	0.10	0.17	3.13	0.00	0.02	0.01	0.02	0.01	0.01	0.01	312.76
Asphalt 07/01/2011-12/30/2011	0.29	1.87	1.11	0.00	0.00	0.13	0.13	0.00	0.12	0.12	182.37
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.27	1.82	0.95	0.00	0.00	0.13	0.13	0.00	0.12	0.12	161.21
Paving On Road Diesel	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.08
Paving Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.08
Coating 07/01/2011-12/30/2011	3.38	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73
Architectural Coating	3.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73

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Phase Assumptions

Phase: Fine Grading 12/1/2008 - 2/27/2009 - Fine SIte Grading (1st Phase)
Total Acres Disturbed: 40.76
Maximum Daily Acreage Disturbed: 10.19
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 6/2/2008 - 11/28/2008 - Mass Site Grading (1st and 2nd Phase)
Total Acres Disturbed: 112.88
Maximum Daily Acreage Disturbed: 10.19
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
2 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 8 hours per day
1 Other Material Handling Equipment (191 hp) operating at a 0.59 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 3/2/2009 - 3/31/2009 - Trenching (1st Phase)
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 7/1/2011 - 12/30/2011 - Paving (1st Phase)
Acres to be Paved: 10.19

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Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 0 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 4/1/2009 - 12/30/2011 - Building Construction (1st Phase)
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 7 hours per day
1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 7/1/2011 - 12/30/2011 - Coating (1st Phase)
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Paolo's Documents\Projects\8522 - Wasco Center\URBEMIS 2nd Phase\Wasco Center - 2nd Phase.urb924

Project Name: Wasco Center - 1st Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2012	0.58	3.99	3.93	0.00	23.44	0.23	23.67	4.90	0.21	5.11	605.17
Fine Grading 01/02/2012-	0.32	2.49	1.56	0.00	23.43	0.14	23.57	4.89	0.13	5.02	269.30
Fine Grading Dust	0.00	0.00	0.00	0.00	23.43	0.00	23.43	4.89	0.00	4.89	0.00
Fine Grading Off Road Diesel	0.32	2.48	1.45	0.00	0.00	0.14	0.14	0.00	0.13	0.13	257.65
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.64
Trenching 07/02/2012-08/31/2012	0.04	0.34	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02	40.88
Trenching Off Road Diesel	0.04	0.34	0.18	0.00	0.00	0.02	0.02	0.00	0.02	0.02	38.58
Trenching Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30
Building 09/03/2012-12/31/2015	0.21	1.15	2.17	0.00	0.01	0.07	0.08	0.00	0.07	0.07	294.99
Building Off Road Diesel	0.15	0.91	0.60	0.00	0.00	0.06	0.06	0.00	0.06	0.06	100.80
Building Vendor Trips	0.01	0.17	0.16	0.00	0.00	0.01	0.01	0.00	0.01	0.01	39.95
Building Worker Trips	0.04	0.07	1.41	0.00	0.01	0.00	0.01	0.00	0.00	0.01	154.24
2013	0.59	3.24	6.15	0.01	0.03	0.20	0.23	0.01	0.18	0.19	895.47
Building 09/03/2012-12/31/2015	0.59	3.24	6.15	0.01	0.03	0.20	0.23	0.01	0.18	0.19	895.47
Building Off Road Diesel	0.43	2.57	1.79	0.00	0.00	0.17	0.17	0.00	0.15	0.15	305.91
Building Vendor Trips	0.04	0.47	0.45	0.00	0.00	0.02	0.02	0.00	0.02	0.02	121.27
Building Worker Trips	0.12	0.20	3.90	0.00	0.02	0.01	0.04	0.01	0.01	0.02	468.30
2014	0.54	2.98	5.72	0.01	0.03	0.18	0.20	0.01	0.16	0.17	895.68
Building 09/03/2012-12/31/2015	0.54	2.98	5.72	0.01	0.03	0.18	0.20	0.01	0.16	0.17	895.68
Building Off Road Diesel	0.39	2.39	1.76	0.00	0.00	0.15	0.15	0.00	0.14	0.14	305.91
Building Vendor Trips	0.04	0.41	0.42	0.00	0.00	0.02	0.02	0.00	0.01	0.02	121.29
Building Worker Trips	0.11	0.18	3.55	0.00	0.02	0.01	0.04	0.01	0.01	0.02	468.49
2015	6.67	5.55	7.43	0.01	0.03	0.36	0.39	0.01	0.33	0.34	1,264.90
Asphalt 01/01/2015-12/31/2015	0.45	2.83	2.05	0.00	0.00	0.20	0.20	0.00	0.18	0.18	362.04
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.42	2.77	1.82	0.00	0.00	0.19	0.19	0.00	0.18	0.18	321.19

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Paving On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.75
Paving Worker Trips	0.01	0.01	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.09
Building 09/03/2012-12/31/2015	0.49	2.72	5.34	0.01	0.03	0.16	0.19	0.01	0.15	0.16	895.85
Building Off Road Diesel	0.36	2.19	1.72	0.00	0.00	0.14	0.14	0.00	0.13	0.13	305.91
Building Vendor Trips	0.03	0.36	0.38	0.00	0.00	0.01	0.02	0.00	0.01	0.01	121.31
Building Worker Trips	0.10	0.16	3.23	0.00	0.02	0.01	0.04	0.01	0.01	0.02	468.63
Coating 01/01/2015-12/31/2015	5.73	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.02
Architectural Coating	5.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.02

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Phase Assumptions

Phase: Fine Grading 1/2/2012 - 6/29/2012 - Fine Site Grading (1st Phase)
Total Acres Disturbed: 72.1
Maximum Daily Acreage Disturbed: 18.02
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 7/2/2012 - 8/31/2012 - Trenching (1st Phase)
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 1/1/2015 - 12/31/2015 - Paving (1st Phase)
Acres to be Paved: 18.02
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 0 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 9/3/2012 - 12/31/2015 - Building Construction (1st Phase)
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

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1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day
3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day
1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2015 - 12/31/2015 - Coating (1st Phase)
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

APPENDIX A
URBEMIS2007 MODEL RESULTS FOR MITIGATED CONSTRUCTION EMISSIONS

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Mitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\PLongoni\Desktop\8522 - Wasco Center\Wasco Center - 1st Phase.urb924

Project Name: Wasco Center - 1st Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2008	0.61	4.59	2.42	0.00	0.25	0.25	0.49	0.05	0.23	0.28	490.93
Mass Grading 06/02/2008-	0.56	4.22	2.18	0.00	0.21	0.23	0.43	0.04	0.21	0.25	454.87
Mass Grading Dust	0.00	0.00	0.00	0.00	0.21	0.00	0.21	0.04	0.00	0.04	0.00
Mass Grading Off Road Diesel	0.55	4.22	2.01	0.00	0.00	0.23	0.23	0.00	0.21	0.21	441.58
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.01	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.29
Fine Grading 12/01/2008-	0.05	0.37	0.24	0.00	0.04	0.02	0.06	0.01	0.02	0.03	36.06
Fine Grading Dust	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.05	0.37	0.22	0.00	0.00	0.02	0.02	0.00	0.02	0.02	34.59
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
2009	0.65	3.04	4.93	0.00	0.08	0.21	0.29	0.02	0.19	0.21	579.74
Fine Grading 12/01/2008-	0.09	0.64	0.41	0.00	0.07	0.04	0.11	0.01	0.04	0.05	65.84
Fine Grading Dust	0.00	0.00	0.00	0.00	0.07	0.00	0.07	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.09	0.64	0.38	0.00	0.00	0.04	0.04	0.00	0.04	0.04	63.16
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.68
Trenching 03/02/2009-03/31/2009	0.02	0.18	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	19.99
Trenching Off Road Diesel	0.02	0.18	0.09	0.00	0.00	0.01	0.01	0.00	0.01	0.01	18.86
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
Building 04/01/2009-12/30/2011	0.53	2.23	4.41	0.00	0.01	0.16	0.17	0.01	0.15	0.15	493.91
Building Off Road Diesel	0.41	1.62	1.23	0.00	0.00	0.14	0.14	0.00	0.12	0.12	180.37
Building Vendor Trips	0.04	0.45	0.38	0.00	0.00	0.02	0.02	0.00	0.02	0.02	76.77
Building Worker Trips	0.09	0.15	2.80	0.00	0.01	0.01	0.02	0.00	0.01	0.01	236.78
2010	0.66	2.78	5.48	0.00	0.02	0.20	0.22	0.01	0.18	0.19	654.52
Building 04/01/2009-12/30/2011	0.66	2.78	5.48	0.00	0.02	0.20	0.22	0.01	0.18	0.19	654.52
Building Off Road Diesel	0.51	2.05	1.59	0.00	0.00	0.17	0.17	0.00	0.15	0.15	238.97

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Building Vendor Trips	0.04	0.55	0.47	0.00	0.00	0.02	0.03	0.00	0.02	0.02	101.73
Building Worker Trips	0.11	0.19	3.42	0.00	0.02	0.01	0.02	0.01	0.01	0.01	313.82
2011	3.94	4.19	6.25	0.00	0.02	0.32	0.34	0.01	0.29	0.30	839.27
Building 04/01/2009-12/30/2011	0.61	2.59	5.09	0.00	0.02	0.19	0.21	0.01	0.17	0.18	652.17
Building Off Road Diesel	0.47	1.93	1.53	0.00	0.00	0.16	0.16	0.00	0.15	0.15	238.05
Building Vendor Trips	0.04	0.50	0.44	0.00	0.00	0.02	0.02	0.00	0.02	0.02	101.36
Building Worker Trips	0.10	0.17	3.13	0.00	0.02	0.01	0.02	0.01	0.01	0.01	312.76
Asphalt 07/01/2011-12/30/2011	0.29	1.59	1.11	0.00	0.00	0.13	0.13	0.00	0.12	0.12	182.37
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.27	1.55	0.95	0.00	0.00	0.13	0.13	0.00	0.12	0.12	161.21
Paving On Road Diesel	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.08
Paving Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.08
Coating 07/01/2011-12/30/2011	3.04	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73
Architectural Coating	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73

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Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 12/1/2008 - 2/27/2009 - Fine SIte Grading (1st Phase)

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:
PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:
PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:
PM10: 61% PM25: 61%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:
PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:
PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust Pave all haul roads mitigation reduces emissions by:
PM10: 99% PM25: 99%

For Graders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Rubber Tired Dozers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Water Trucks, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

The following mitigation measures apply to Phase: Mass Grading 6/2/2008 - 11/28/2008 - Mass Site Grading (1st and 2nd

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:
PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:
PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:
PM10: 61% PM25: 61%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:
PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:
PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust Pave all haul roads mitigation reduces emissions by:
PM10: 99% PM25: 99%

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For Graders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Rubber Tired Dozers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Water Trucks, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Other Material Handling Equipment, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Off Highway Trucks, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Trenching 3/2/2009 - 3/31/2009 - Trenching (1st Phase)

For Excavators, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Other General Industrial Equipment, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Paving 7/1/2011 - 12/30/2011 - Paving (1st Phase)

For Pavers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Paving Equipment, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Rollers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Cement and Mortar Mixers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Graders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Water Trucks, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Building Construction 4/1/2009 - 12/30/2011 - Building Construction (1st

For Cranes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

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NOX: 15%

For Forklifts, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Generator Sets, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Welders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Cement and Mortar Mixers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Concrete/Industrial Saws, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Architectural Coating 7/1/2011 - 12/30/2011 - Coating (1st Phase)

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces

ROG: 10%

Phase Assumptions

Phase: Fine Grading 12/1/2008 - 2/27/2009 - Fine SIte Grading (1st Phase)

Total Acres Disturbed: 40.76

Maximum Daily Acreage Disturbed: 10.19

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Phase: Mass Grading 6/2/2008 - 11/28/2008 - Mass Site Grading (1st and 2nd Phase)
Total Acres Disturbed: 112.88
Maximum Daily Acreage Disturbed: 10.19
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
2 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 8 hours per day
1 Other Material Handling Equipment (191 hp) operating at a 0.59 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 3/2/2009 - 3/31/2009 - Trenching (1st Phase)
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 7/1/2011 - 12/30/2011 - Paving (1st Phase)
Acres to be Paved: 10.19
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 0 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 4/1/2009 - 12/30/2011 - Building Construction (1st Phase)
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

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2 Forklifts (145 hp) operating at a 0.3 load factor for 7 hours per day
1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 7/1/2011 - 12/30/2011 - Coating (1st Phase)
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Mitigated Emissions (Tons/Year)

File Name: C:\Paolo's Documents\Projects\8522 - Wasco Center\URBEMIS 2nd Phase\Wasco Center - 2nd Phase.urb924

Project Name: Wasco Center - 2nd Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2012	0.58	3.43	3.93	0.00	0.38	0.23	0.61	0.08	0.21	0.29	605.17
Fine Grading 01/02/2012-	0.32	2.12	1.56	0.00	0.37	0.14	0.51	0.08	0.13	0.21	269.30
Fine Grading Dust	0.00	0.00	0.00	0.00	0.37	0.00	0.37	0.08	0.00	0.08	0.00
Fine Grading Off Road Diesel	0.32	2.11	1.45	0.00	0.00	0.14	0.14	0.00	0.13	0.13	257.65
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.64
Trenching 07/02/2012-08/31/2012	0.04	0.29	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02	40.88
Trenching Off Road Diesel	0.04	0.29	0.18	0.00	0.00	0.02	0.02	0.00	0.02	0.02	38.58
Trenching Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30
Building 09/03/2012-12/31/2015	0.21	1.02	2.17	0.00	0.01	0.07	0.08	0.00	0.07	0.07	294.99
Building Off Road Diesel	0.15	0.77	0.60	0.00	0.00	0.06	0.06	0.00	0.06	0.06	100.80
Building Vendor Trips	0.01	0.17	0.16	0.00	0.00	0.01	0.01	0.00	0.01	0.01	39.95
Building Worker Trips	0.04	0.07	1.41	0.00	0.01	0.00	0.01	0.00	0.00	0.01	154.24
2013	0.59	2.85	6.15	0.01	0.03	0.20	0.23	0.01	0.18	0.19	895.47
Building 09/03/2012-12/31/2015	0.59	2.85	6.15	0.01	0.03	0.20	0.23	0.01	0.18	0.19	895.47
Building Off Road Diesel	0.43	2.18	1.79	0.00	0.00	0.17	0.17	0.00	0.15	0.15	305.91
Building Vendor Trips	0.04	0.47	0.45	0.00	0.00	0.02	0.02	0.00	0.02	0.02	121.27
Building Worker Trips	0.12	0.20	3.90	0.00	0.02	0.01	0.04	0.01	0.01	0.02	468.30
2014	0.54	2.63	5.72	0.01	0.03	0.18	0.20	0.01	0.16	0.17	895.68
Building 09/03/2012-12/31/2015	0.54	2.63	5.72	0.01	0.03	0.18	0.20	0.01	0.16	0.17	895.68
Building Off Road Diesel	0.39	2.03	1.76	0.00	0.00	0.15	0.15	0.00	0.14	0.14	305.91
Building Vendor Trips	0.04	0.41	0.42	0.00	0.00	0.02	0.02	0.00	0.01	0.02	121.29
Building Worker Trips	0.11	0.18	3.55	0.00	0.02	0.01	0.04	0.01	0.01	0.02	468.49
2015	6.10	4.81	7.43	0.01	0.03	0.36	0.39	0.01	0.33	0.34	1,264.90
Asphalt 01/01/2015-12/31/2015	0.45	2.41	2.05	0.00	0.00	0.20	0.20	0.00	0.18	0.18	362.04
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.42	2.36	1.82	0.00	0.00	0.19	0.19	0.00	0.18	0.18	321.19

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Paving On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.75
Paving Worker Trips	0.01	0.01	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.09
Building 09/03/2012-12/31/2015	0.49	2.39	5.34	0.01	0.03	0.16	0.19	0.01	0.15	0.16	895.85
Building Off Road Diesel	0.36	1.86	1.72	0.00	0.00	0.14	0.14	0.00	0.13	0.13	305.91
Building Vendor Trips	0.03	0.36	0.38	0.00	0.00	0.01	0.02	0.00	0.01	0.01	121.31
Building Worker Trips	0.10	0.16	3.23	0.00	0.02	0.01	0.04	0.01	0.01	0.02	468.63
Coating 01/01/2015-12/31/2015	5.16	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.02
Architectural Coating	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.02

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Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/2/2012 - 6/29/2012 - Fine Site Grading (1st Phase)

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:
PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:
PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:
PM10: 61% PM25: 61%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:
PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces
PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust Pave all haul roads mitigation reduces emissions by:
PM10: 99% PM25: 99%

For Graders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Rubber Tired Dozers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Water Trucks, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Excavators, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

The following mitigation measures apply to Phase: Trenching 7/2/2012 - 8/31/2012 - Trenching (1st Phase)

For Excavators, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Other General Industrial Equipment, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

The following mitigation measures apply to Phase: Paving 1/1/2015 - 12/31/2015 - Paving (1st Phase)

For Pavers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

For Paving Equipment, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

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NOX: 15%

For Rollers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Cement and Mortar Mixers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Graders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Water Trucks, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Building Construction 9/3/2012 - 12/31/2015 - Building

For Cranes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Forklifts, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Generator Sets, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Welders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Cement and Mortar Mixers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Concrete/Industrial Saws, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Architectural Coating 1/1/2015 - 12/31/2015 - Coating (1st Phase)

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation

ROG: 10%

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Phase Assumptions

Phase: Fine Grading 1/2/2012 - 6/29/2012 - Fine Site Grading (1st Phase)
Total Acres Disturbed: 72.1
Maximum Daily Acreage Disturbed: 18.02
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 7/2/2012 - 8/31/2012 - Trenching (1st Phase)
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 1/1/2015 - 12/31/2015 - Paving (1st Phase)
Acres to be Paved: 18.02
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 0 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 9/3/2012 - 12/31/2015 - Building Construction (1st Phase)
Off-Road Equipment:
1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

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1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day
3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day
1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2015 - 12/31/2015 - Coating (1st Phase)
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

APPENDIX A
URBEMIS2007 MODEL RESULTS FOR OPERATIONAL AND AREA UNMITIGATED EMISSIONS

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\PLongoni\Desktop\8522 - Wasco Center\Wasco Center - 1st Phase.urb924

Project Name: Wasco Center - 1st Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Condo/townhouse general	1.13	1.28	12.82	0.01	0.92	0.20	1,019.77
Hotel	0.94	0.94	9.14	0.01	0.65	0.14	717.36
Strip mall	8.31	8.45	82.58	0.06	5.62	1.23	6,210.74
TOTALS (tons/year, unmitigated)	10.38	10.67	104.54	0.08	7.19	1.57	7,947.87

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	12.24	8.00	dwelling units	99.00	792.00	5,928.33
Hotel		8.17	rooms	100.00	817.00	4,191.83
Strip mall		42.94	1000 sq ft	206.00	8,845.64	36,065.79
					10,454.64	46,185.95

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.4	1.4	98.4	0.2
Light Truck < 3750 lbs	22.3	3.3	90.1	6.6
Light Truck 3751-5750 lbs	16.3	1.4	98.1	0.5
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.2	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.7	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	1.3	66.7	33.3	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.7	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6

3/12/2008 09:34:04 AM

Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0

Operational Changes to Defaults

3/11/2008 12:16:20 PM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Area Source Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\PLongoni\Desktop\8522 - Wasco Center\Wasco Center - 1st Phase.urb924

Project Name: Wasco Center - 1st Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas Hearth	0.05	0.65	0.49	0.00	0.00	0.00	785.25
Landscape	0.04	0.01	0.43	0.00	0.00	0.00	0.74
Consumer Products	0.65						
Architectural Coatings	0.34						
TOTALS (tons/year, unmitigated)	1.08	0.66	0.92	0.00	0.00	0.00	785.99

Area Source Changes to Defaults

3/13/2008 10:12:37 AM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Unmitigated Emissions (Tons/Year)

File Name: C:\Paolo's Documents\Projects\8522 - Wasco Center\URBEMIS 2nd Phase\Wasco Center - 2nd Phase.urb924

Project Name: Wasco Center - 2nd Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Condo/townhouse general	0.15	0.17	1.70	0.00	0.20	0.04	221.55
High turnover (sit-down) rest.	4.36	4.03	40.12	0.04	4.01	0.87	4,496.84
Regnl shop. center	11.32	12.87	123.93	0.15	14.23	3.05	15,705.51
TOTALS (tons/year, unmitigated)	15.83	17.07	165.75	0.19	18.44	3.96	20,423.90

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2016 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

3/13/2008 10:12:37 AM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	1.80	7.18	dwelling units	24.00	172.32	1,289.86
High turnover (sit-down) rest.		127.15	1000 sq ft	67.50	8,582.63	25,793.99
Regnl shop. center		42.94	1000 sq ft	453.00	19,451.82	91,820.96
					28,206.77	118,904.81

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.1	0.2	99.6	0.2
Light Truck < 3750 lbs	22.5	0.8	95.1	4.1
Light Truck 3751-5750 lbs	16.4	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.2	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	1.3	46.2	53.8	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.8	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6

Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
High turnover (sit-down) rest.				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0

Operational Changes to Defaults

3/13/2008 10:11:42 AM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Area Source Unmitigated Emissions (Tons/Year)

File Name: C:\Paolo's Documents\Projects\8522 - Wasco Center\URBEMIS 2nd Phase\Wasco Center - 2nd Phase.urb924

Project Name: Wasco Center - 2nd Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas Hearth	0.07	0.95	0.79	0.00	0.00	0.00	1,144.07
Landscape	0.04	0.01	0.43	0.00	0.00	0.00	0.74
Consumer Products	0.16						
Architectural Coatings	0.57						
TOTALS (tons/year, unmitigated)	0.84	0.96	1.22	0.00	0.00	0.00	1,144.81

Area Source Changes to Defaults

APPENDIX A
URBEMIS2007 MODEL RESULTS FOR OPERATIONAL AND AREA MITIGATED EMISSIONS

3/12/2008 09:34:43 AM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Mitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\PLongoni\Desktop\8522 - Wasco Center\Wasco Center - 1st Phase.urb924

Project Name: Wasco Center - 1st Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Condo/townhouse general	1.04	1.15	11.57	0.01	0.83	0.18	919.97
Hotel	0.51	0.44	4.26	0.00	0.30	0.07	334.05
Strip mall	3.98	3.90	38.13	0.03	2.60	0.57	2,867.42
TOTALS (tons/year, mitigated)	5.53	5.49	53.96	0.04	3.73	0.82	4,121.44

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

3/12/2008 09:34:43 AM

Operational Mitigation Options Selected

Residential Mitigation Measures

Residential Mix of Uses Mitigation

Percent Reduction in Trips is 6.18% (calculated as a % of 9.57 trips/day))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the

number of residential units included in the project are 99.

The employment for the study area (within a 1/2 mile radius of the project) is 92.

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Nonresidential Mitigation Measures

Non-Residential Mix of Uses Mitigation

Percent Reduction in Trips is 6.18%

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the

number of residential units included in the project are 99.

3/12/2008 09:34:43 AM
The employment for the study area (within a 1/2 mile radius of the project) is 92.

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Other Transportation Demand Measures Mitigation

---

Percent Reduction in Trips is 1%

Note that the above percent is applied ONLY to worker trips.

Inputs Selected:

The 'Secure Bike Parking' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Non-Residential Parking Supply Mitigation for Hotel

Percent Reduction in Trips is 53.4%

The Parking Supply reduction is larger than the sum of Mix of Uses, Local Serving Retail,

Transit Service and Bike/Ped mitigation measures: 8.18%

Therefore the Parking Supply percent will be used in place of these other mitigation reductions.

Inputs Selected:

For the 100 units of Hotel the Parking Provision was set to 125

The ITE Parking Rate manual states that: 9100 spaces should be provided.

3/12/2008 09:34:43 AM

Non-Residential Parking Supply Mitigation for Strip mall

Percent Reduction in Trips is 53.82%

The Parking Supply reduction is larger than the sum of Mix of Uses, Local Serving Retail,

Transit Service and Bike/Ped mitigation measures: 8.18%

Therefore the Parking Supply percent will be used in place of these other mitigation reductions.

Inputs Selected:

For the 206 units of Strip mall the Parking Provision was set to 944

The ITE Parking Rate manual states that: 173987.59 spaces should be provided.

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	12.24	7.22	dwelling units	99.00	714.49	5,348.16
Hotel		3.81	rooms	100.00	380.69	1,952.00
Strip mall		19.83	1000 sq ft	206.00	4,084.99	16,651.21
					5,180.17	23,951.37

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.4	1.4	98.4	0.2
Light Truck < 3750 lbs	22.3	3.3	90.1	6.6
Light Truck 3751-5750 lbs	16.3	1.4	98.1	0.5
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.2	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.7	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0

Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	1.3	66.7	33.3	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.7	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0

Operational Changes to Defaults

3/12/2008 09:34:43 AM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Mitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\PLongoni\Desktop\8522 - Wasco Center\Wasco Center - 1st Phase.urb924

Project Name: Wasco Center - 1st Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Condo/townhouse general	1.04	1.15	11.57	0.01	0.83	0.18	919.97
Hotel	0.51	0.44	4.26	0.00	0.30	0.07	334.05
Strip mall	3.98	3.90	38.13	0.03	2.60	0.57	2,867.42
TOTALS (tons/year, mitigated)	5.53	5.49	53.96	0.04	3.73	0.82	4,121.44

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

3/12/2008 09:34:43 AM

Operational Mitigation Options Selected

Residential Mitigation Measures

Residential Mix of Uses Mitigation

Percent Reduction in Trips is 6.18% (calculated as a % of 9.57 trips/day))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the

number of residential units included in the project are 99.

The employment for the study area (within a 1/2 mile radius of the project) is 92.

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Nonresidential Mitigation Measures

Non-Residential Mix of Uses Mitigation

Percent Reduction in Trips is 6.18%

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the

number of residential units included in the project are 99.

3/12/2008 09:34:43 AM
The employment for the study area (within a 1/2 mile radius of the project) is 92.

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Other Transportation Demand Measures Mitigation

---

Percent Reduction in Trips is 1%

Note that the above percent is applied ONLY to worker trips.

Inputs Selected:

The 'Secure Bike Parking' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Non-Residential Parking Supply Mitigation for Hotel

Percent Reduction in Trips is 53.4%

The Parking Supply reduction is larger than the sum of Mix of Uses, Local Serving Retail,

Transit Service and Bike/Ped mitigation measures: 8.18%

Therefore the Parking Supply percent will be used in place of these other mitigation reductions.

Inputs Selected:

For the 100 units of Hotel the Parking Provision was set to 125

The ITE Parking Rate manual states that: 9100 spaces should be provided.

3/12/2008 09:34:43 AM

Non-Residential Parking Supply Mitigation for Strip mall

Percent Reduction in Trips is 53.82%

The Parking Supply reduction is larger than the sum of Mix of Uses, Local Serving Retail,

Transit Service and Bike/Ped mitigation measures: 8.18%

Therefore the Parking Supply percent will be used in place of these other mitigation reductions.

Inputs Selected:

For the 206 units of Strip mall the Parking Provision was set to 944

The ITE Parking Rate manual states that: 173987.59 spaces should be provided.

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	12.24	7.22	dwelling units	99.00	714.49	5,348.16
Hotel		3.81	rooms	100.00	380.69	1,952.00
Strip mall		19.83	1000 sq ft	206.00	4,084.99	16,651.21
					5,180.17	23,951.37

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.4	1.4	98.4	0.2
Light Truck < 3750 lbs	22.3	3.3	90.1	6.6
Light Truck 3751-5750 lbs	16.3	1.4	98.1	0.5
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.2	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.7	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0

Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	1.3	66.7	33.3	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.7	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0

Operational Changes to Defaults

3/11/2008 12:16:45 PM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Area Source Mitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\PLongoni\Desktop\8522 - Wasco Center\Wasco Center - 1st Phase.urb924

Project Name: Wasco Center - 1st Phase

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas Hearth	0.04	0.52	0.39	0.00	0.00	0.00	628.20
Landscape	0.04	0.01	0.43	0.00	0.00	0.00	0.74
Consumer Products	0.65						
Architectural Coatings	0.30						
TOTALS (tons/year, mitigated)	1.03	0.53	0.82	0.00	0.00	0.00	628.94

Area Source Mitigation Measures Selected

Mitigation Description	Percent Reduction
Residential Increase Energy Efficiency Beyond Title 24	20.00
Commercial Increase Energy Efficiency Beyond Title 24	20.00
For Residential Interior Use Low VOC Coating	10.00
For Residential Exterior Use Low VOC Coating	10.00
For Nonresidential Interior Use Low VOC Coating	10.00
For Nonresidential Exterior Use Low VOC Coating	10.00

Area Source Changes to Defaults

APPENDIX B
GLOBAL CLIMATE CHANGE OUTPUT

Wasco Center, Wasco, CA
Green House Gas Emissions from Direct Sources

Scenario	Vehicle & Landscape		Natural Gas		
	1st Phase	2nd Phase	1st Phase	2nd Phase	
Unmitigated	7,948.61	20,424.64	785.25	1,144.07	30,302.57
Mitigated	4,122.18	9,605.26	628.20	915.25	15,270.89

Wasco Center, Wasco, CA
Green House Gas Emissions from Direct Sources
Unmitigated

Carbon Dioxide

A. Direct Sources

A1. Mobile (Motor Vehicles and Landscape Equipment) and Stationary Sources (Cooling and Heating)

Emissions of carbon dioxide from mobile (motor vehicles and landscape equipment) and stationary sources (cooling and heating) are calculated using the following equation:

$$Y_A = (Y_{AM}+Y_{AS})$$

Y_A = annual emissions of carbon dioxide from mobile and stationary sources, tons/yr.

Y_{AM} = annual emissions of carbon dioxide from mobile sources, tons/yr (URBEMIS 2007 9.2.4 output file).

Y_{AS} = annual emissions of carbon dioxide from stationary sources, tons/yr (URBEMIS 2007 9.2.4 output file).

Y_{AM}, tons/yr	Y_{AS}, tons/yr	Y_A, tons/yr
28,373.25	1,929.32	**30,302.57**

Wasco Center, Wasco, CA
Green House Gas Emissions from Direct Sources
Mitigated

Carbon Dioxide

A. Direct Sources

A1. Mobile (Motor Vehicles and Landscape Equipment) and Stationary Sources (Cooling and Heating)

Emissions of carbon dioxide from mobile (motor vehicles and landscape equipment) and stationary sources (cooling and heating) are calculated using the following equation:

$$Y_A = (Y_{AM}+Y_{AS})$$

Y_A = mitigated annual emissions of carbon dioxide from mobile and stationary sources, tons/yr.

Y_{AM} = mitigated annual emissions of carbon dioxide from mobile sources, tons/yr (URBEMIS 2007 9.2.4 output file).

Y_{AS} = mitigated annual emissions of carbon dioxide from stationary sources, tons/yr (URBEMIS 2007 9.2.4 output file).

Y_{AM}, tons/yr	Y_{AS}, tons/yr	Y_A, tons/yr
13,727.44	1,543.45	**15,270.89**

Off-site Emissions Estimator Worksheet

5/5/2008

Applicant/Business Name:	
Project Name:	**Wasco Center Project**
Project Location:	**Wasco, California**
District Project ID No.:	

Project Construction Emissions

		NOx				PM10			
Phase	**Construction Start Date**	**Unmitigated Baseline (TPY)**	**Mitigated Baseline (TPY)**	**Achieved Onsite Reductions (tons)**	**Required Offsite Reductions (tons)**	**Unmitigated Baseline (TPY)**	**Mitigated Baseline (TPY)**	**Achieved Onsite Reductions (tons)**	**Required Offsite Reductions (tons)**
1	6/1/2008	5.4000	4.5900	0.8100	0.2700	15.8400	0.4900	15.3500	0.0000
2	1/1/2009	3.4700	3.0400	0.4300	0.2640	4.5000	0.2900	4.2100	0.0000
3	1/1/2010	3.1400	2.7800	0.3600	0.2680	0.2200	0.2200	0.0000	0.0990
4	1/1/2011	4.8000	4.1900	0.6100	0.3500	0.3400	0.3400	0.0000	0.1530
5	1/11/2012	3.9900	3.4300	0.5600	0.2380	23.6700	0.6100	23.0600	0.0000
6	1/1/2013	3.2400	2.8500	0.3900	0.2580	0.2300	0.2300	0.0000	0.1035
7	1/1/2014	2.9800	2.6300	0.3500	0.2460	0.2000	0.2000	0.0000	0.0900
8	1/1/2015	5.5500	4.8100	0.7400	0.3700	0.3900	0.3900	0.0000	0.1755
9				0.0000	0.0000			0.0000	0.0000
10				0.0000	0.0000			0.0000	0.0000
	Total	**32.5700**	**28.3200**	**4.2500**	**2.2640**	**45.3900**	**2.7700**	**42.6200**	**0.6210**

Total Achieved On-Site Reductions (tons)

Phase	**NOx**	**PM10**
1	0.8100	15.3500
2	0.4300	4.2100
3	0.3600	0.0000
4	0.6100	0.0000
5	40.3850	57.6600
6	40.2150	34.6000
7	40.1750	34.6000
8	40.5650	34.6000
9	69.3750	97.7000
10	0.0000	0.0000
Total	**232.9250**	**278.7200**

Project Operations Emissions (Area + Mobile)

		NOx				PM10			
Phase	**Operation Start Date**	**Unmitigated Baseline (TPY)**	**Mitigated Baseline (TPY)**	**Achieved Onsite Reductions (tons)**	**Required Offsite Reductions (tons)**	**Unmitigated Baseline (TPY)**	**Mitigated Baseline (TPY)**	**Achieved Onsite Reductions (tons)**	**Required Offsite Reductions (tons)**
1	6/1/2008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	1/1/2009	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	1/1/2010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	1/1/2011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	1/11/2012	11.3300	6.0200	39.8250	0.0000	7.1900	3.7300	34.6000	1.3500
6	1/1/2013	11.3300	6.0200	39.8250	0.0000	7.1900	3.7300	34.6000	1.3500
7	1/1/2014	11.3300	6.0200	39.8250	0.0000	7.1900	3.7300	34.6000	1.3500
8	1/1/2015	11.3300	6.0200	39.8250	0.0000	7.1900	3.7300	34.6000	1.3500
9	1/1/2016	18.0300	8.7800	69.3750	0.0000	18.4400	8.6700	97.7000	0.0000
10				0.0000	0.0000			0.0000	0.0000
	Total	**63.3500**	**32.8600**	**228.6750**	**0.0000**	**47.2000**	**23.5900**	**236.1000**	**5.4000**

Total Required Off-Site Reductions (tons)

Phase	**NOx**	**PM10**
1	0.2700	0.0000
2	0.2640	0.0000
3	0.2680	0.0990
4	0.3500	0.1530
5	0.2380	1.3500
6	0.2580	1.4535
7	0.2460	1.4400
8	0.3700	1.5255
9	0.0000	0.0000
10	0.0000	0.0000
Total	**2.2640**	**6.0210**

Note: TPY = Tons Per Year

Fee Estimator Worksheet

5/5/2008

Applicant/Business Name:	
Project Name:	Wasco Center Project
Project Location:	Wasco, California
District Project ID No.:	

Scheduled Payment Date per Phase	Start Date per Phase	Phase	Pollutant	Required Reductions (tons)	Project Reductions (tons)	NO FDS 2008	FEE DEFERRAL SCHEDULE (FDS) 2008	2009	2010	2011	2012	2013	2014	2015
	6/1/2008	1	NOx	0.2700	0.2700	0.2700	0.2700							
			PM10	0.0000	0.0000	0.0000								
	1/1/2009	2	NOx	0.2640	0.2640	0.2640		0.2640						
			PM10	0.0000	0.0000	0.0000								
	1/1/2010	3	NOx	0.2680	0.2680	0.2680			0.2680					
			PM10	0.0990	0.0990	0.0990			0.0990					
	1/1/2011	4	NOx	0.3500	0.3500	0.3500				0.3500				
			PM10	0.1530	0.1530	0.1530				0.1530				
	1/11/2012	5	NOx	0.2380	0.2380	0.2380					0.2380			
			PM10	1.3500	1.3500	1.3500					1.3500			
	1/1/2013	6	NOx	0.2580	0.2580	0.2580						0.2580		
			PM10	1.4535	1.4535	1.4535						1.4535		
	1/1/2014	7	NOx	0.2460	0.2460	0.2460							0.2460	
			PM10	1.4400	1.4400	1.4400							1.4400	
	1/1/2015	8	NOx	0.3700	0.3700	0.3700								0.3700
			PM10	1.5255	1.5255	1.5255								1.5255
	1/1/2016	9	NOx	0.0000	0.0000	0.0000								
			PM10	0.0000	0.0000	0.0000								
		10	NOx	0.0000	0.0000	0.0000								
			PM10	0.0000	0.0000	0.0000								
TOTAL (tons)			NOx	2.2640	2.2640	2.2640	0.2700	0.2640	0.2680	0.3500	0.2380	0.2580	0.2460	0.3700
			PM10	6.0210	6.0210	6.0210	0.0000	0.0000	0.0990	0.1530	1.3500	1.4535	1.4400	1.5255

Rule 9510 Fee Schedule ($/ton)		
Year	NOx	PM10
2008 and beyond	$9,350	$9,011

Offsite Fee by Pollutant by Year ($)	NOx	$21,165	$2,524	$2,468	$2,505	$3,272	$2,225	$2,412	$2,300	$3,459
	PM10	$54,252	$0	$0	$892	$1,378	$12,164	$13,097	$12,975	$13,746
Administrative Fee by Year ($)		$3,016.68	$100.96	$98.72	$135.88	$186.00	$575.56	$620.36	$611.00	$688.20
Offsite Mitigation Fee by Year ($)		$78,433.68	$2,624.96	$2,566.72	$3,532.88	$4,836.00	$14,964.56	$16,129.36	$15,886.00	$17,893.20
Total Project Offsite Fee ($)		$78,433.68	$78,433.68							

Summary		Without Fee Deferral Schedule (A)	With Fee Deferral Schedule (B)	Amount Saved Through One-Time Payment (B-A)
Total Offsite Mitigation Fee by Pollutant ($)	NOx	$21,165	$21,165	$0
	PM10	$54,252	$54,252	$0
Total Administrative Fee ($)		$3,016.68	$3,016.68	$0.00
Total ($)		$78,433.68	$78,433.68	$0.00

Total Amount Saved Through On-Site Mitigation Measures	
NOx	$2,177,849
PM10	$2,511,546
Total Savings ($)	$4,689,395

(A) If you have chosen a **ONE-TIME** payment for the project, then the total amount due for ALL PHASES combined is: **$78,433.68**

(B) If you have chosen a **DEFERRED** payment schedule for the project, then according to the above Fee Deferral Schedule, the total amount due for ALL PHASES combined is: **$78,433.68**

Note: If the District did not receive a request for a Fee Deferral Schedule, an invoice is issued according to the **one-time** payment option.

NOX				PM10			
Construction							
Unmitigated	***Mitigated***	***% Reduction***	***> 20% reduction***	***Unmitigated***	***Mitigated***	***% Reduction***	***> 45% reduction***
5.4000	4.5900	15.00	No	15.8400	0.4900	96.91	Yes
3.4700	3.0400	12.39	No	4.5000	0.2900	93.56	Yes
3.1400	2.7800	11.46	No	0.2200	0.2200	0.00	No
4.8000	4.1900	12.71	No	0.3400	0.3400	0.00	No
3.9900	3.4300	14.04	No	23.6700	0.6100	97.42	Yes
3.2400	2.8500	12.04	No	0.2300	0.2300	0.00	No
2.9800	2.6300	11.74	No	0.2000	0.2000	0.00	No
5.5500	4.8100	13.33	No	0.3900	0.3900	0.00	No
Operational							
Unmitigated	***Mitigated***	***% Reduction***	***> 33% reduction***	***Unmitigated***	***Mitigated***	***% Reduction***	***> 50% reduction***
0.0000	0.0000	-	-	0.0000	0.0000	-	-
0.0000	0.0000	-	-	0.0000	0.0000	-	-
0.0000	0.0000	-	-	0.0000	0.0000	-	-
0.0000	0.0000	-	-	0.0000	0.0000	-	-
11.3300	6.0200	46.87	Yes	7.1900	3.7300	48.12	No
11.3300	6.0200	46.87	Yes	7.1900	3.7300	48.12	No
11.3300	6.0200	46.87	Yes	7.1900	3.7300	48.12	No
11.3300	6.0200	46.87	Yes	7.1900	3.7300	48.12	No
18.0300	8.7800	51.30	Yes	18.4400	8.6700	52.98	Yes

APPENDIX C

Biological Resources Impact Assessment

Chambers Group®
Solving Environmental Challenges

17671 Cowan Avenue, Suite 100
Irvine, California 92614
949 • 261-5414 tel
949 • 261-8950 fax

December 12, 2007
(8522)

Mr. William Barkett
Wasco Investments, LLC
7541 Eads Avenue, Suite F
La Jolla, CA 92037

Subject: **Results of the Biological Reconnaissance Survey for the Wasco Center Development Project in the City of Wasco, Kern County, California**

Dear Mr. Barkett:

The purpose of this letter is to describe the results of the biological reconnaissance survey and literature review conducted for the Wasco Center Development Project (project site). The project site is located on the U.S. Geological Survey (USGS) 7.5-minute quadrangle topographic map, Wasco NW, just north of Highway 46 between Magnolia Avenue and Palm Avenue in the City of Wasco, Kern County, California. This project involves the development of approximately 121 acres in the City of Wasco. The current vegetation communities present onsite include cultivated orchards, developed, ruderal vegetation, and barren ground.

Prior to performing the field surveys, existing documentation relevant to the project site was reviewed (see References attached). The most recent records of the California Natural Diversity Database (CNDDB 2007) and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI 2007) were reviewed for the quadrangles containing and surrounding the project site (i.e., Wasco NW, Wasco SW, and Pond, California USGS 7.5 minute quadrangles). These databases contain records of reported occurrences of federal- or state-listed endangered or threatened or proposed endangered or threatened species, former Federal Species of Concern (FSC), California Species of Special Concern (CSC), or otherwise sensitive species or habitat that may occur within or in the immediate vicinity of the project site.

Status Codes

Federal

FE	=	Federally listed; Endangered
FT	=	Federally listed; Threatened
FC	=	Federal Candidate for listing
FSC	=	Federal Species of Special Concern

State

ST	=	State listed; Threatened
SE	=	State listed; Endangered
RARE	=	State-listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
CSC	=	State Species of Special Concern

CNPS

List 1A = Plants presumed extinct in California.
List 1B = Plants rare and endangered in California and throughout their range.
List 2 = Plants rare, threatened or endangered in California but more common elsewhere in their range.

Extensions

0.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat).
0.2 = Fairly endangered in California (20-80% occurrences threatened).
0.3 = Not very endangered in California (<20% of occurrences threatened).

Based on the results of the database searches, the following sensitive species that may have the potential to occur on the project site include:

Plants

- Heartscale (*Artiplex cordulata*) – CNPS 1B.2;
- Earlimart orache (*Atriplex erecticaulis*) – CNPS 1B.2;
- Subtle orache (*Atriplex subtilis*) – CNPS 1B.2;
- California jewel-flower (*Caulanthus californicus*) – FE; SE; CNPS 1B.1;
- Slough thistle (*Circium crassicaule*) – CNPS 1B.1;
- Recurved larkspur (*Delphinium recurvatum*) – CNPS 1B.2;
- Munz' tidy-tips (*Layia munzii*) – CNPS 1B.2;

Wildlife

- San Joaquin antelope squirrel (*Ammospermophilus nelsoni*) – ST;
- burrowing owl (*Athene cunicularia*) – CSC;
- Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*) – FE, SE;
- blunt-nosed leopard lizard (*Gambelia sila*) – FE, SE;
- Coast (California) horned lizard (*Phrynosoma coronatum*) – CSC;
- Le Conte's thrasher (*Toxostoma lecontei*) – CSC;
- San Joaquin kit fox (*Vulpes macrotis mutica*) – FE, ST.

Chambers Group biologists Shannan Shaffer and Nichole Cervin conducted a reconnaissance-level biological resource survey of the project site on December 5, 2007, between 8:30 and 11:45 a.m. Weather conditions during the survey consisted of 100% cloud cover, winds ranging from 0 to 1 mile per hour (mph), and temperatures that ranged from 51 to 64 degrees Fahrenheit. The project site and its immediate vicinity were walked on foot. All plant and wildlife species detected during the survey were recorded (see Attachment). Photographs were taken of the site to document the existing conditions of the area (see Attachment).

Results – Vegetation

The project site encompasses approximately 121 acres. The site is primarily comprised of cultivated orchards with patches of ruderal vegetation occurring along their margins. Other areas on the site are either barren or developed. A map of these vegetation communities is included as an Attachment.

The majority of the site is actively cultivated as a walnut and almond orchard. A dense layer of leaf litter is present in the understory of the orchards. Occasional weedy annuals were observed including horseweed (*Conyza canadensis*), broad-lobed filaree (*Erodium botrys*), Palmer's amaranth (*Amaranthus palmeri*), Mexican sprangletop (*Leptochloa uninervia*), and cheeseweed (*Malva parviflora*). Cultivated areas account for approximately 94.5 acres of the project site.

Ruderal areas consist of early successional habitats that are dominated by pioneering herbaceous species that readily colonize disturbed ground. The soils in ruderal areas are typically characterized as heavily compacted or frequently disturbed. The vegetation in these areas is adapted to living in compacted areas where water does not readily penetrate the soil. Typically, ruderal vegetation communities are dominated by species of the Centaurea, Brassica, Malva, Salsola, Eremocarpus, Amaranthus, and Atriplex genuses.

Areas with ruderal vegetation are present on the project site. They primarily occur along the margins of the orchards. Ruderal plant species found on the project site include Russian thistle (*Salsola tragus*), barnyard grass (*Echinochloa* sp.), red-stemmed filaree (*Erodium cicutarium*), horseweed, cheeseweed, Bermuda grass (*Cynodon dactylon*), and flax-leaved horseweed (*Conyza bonariensis*). This vegetation community comprised approximately 1.6 acres of the project site.

A portion of the project site has been altered by humans and is comprised of developed or barren areas. Developed areas display man-made structures such as houses; paved roads, buildings, parks, and other maintained areas; and barren areas are completely void of vegetation. Developed and barren areas comprise 22.2 acres of the project site.

A water catch basin is located toward the north end of the project site. The basin was empty at the time of the visit, and vegetation had begun to grow in the bottom. Plant species observed in the basin include Palmer's amaranth, yellow cress (*Rorippa palustris*), red-stemmed filaree, tall cyperus (*Cyperus eragrostis*), and cheeseweed. The catch basin covers approximately 0.1 acres of the project site.

A list of the plant species observed onsite at the time of the survey is included as an attachment. No sensitive plant species were observed during the survey.

All seven of the sensitive plant species identified in the literature review have habitat requirements characteristic of chenopod scrub, pinyon-juniper woodland, meadows and seeps, riparian scrub, or valley and foothill grassland communities that were not present onsite. Due to the lack of suitable habitat and the disturbed state of the property, these species are considered absent from the project site. No further surveys onsite are required for these seven sensitive plant species.

Results – Wildlife

Wildlife species observed or detected during the site survey were characteristic of the existing conditions. A list of the wildlife detected within the project area during the survey is included as an attachment.

Populations of the Le Conte's thrasher within Kern County are restricted to the southwestern corner of the San Joaquin Valley in the Taft-Maricopa area (CDFG 1983). Because the project site occurs well outside the known range of the Le Conte's thrasher and no habitat exists onsite, this species is considered absent from the project site.

Three of the seven sensitive wildlife species identified in the literature review, California horned lizard, San Joaquin antelope squirrel, and the Tipton kangaroo rat, require the presence of scattered shrubs and low to moderate ground cover of grasses and forbs. Because only marginal, low quality habitat exists along

the borders of the project site, these species are considered to have a low potential to occur on the project site.

Burrowing owls are yearlong residents of shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial and open areas (Haug et al., 1993). They may also use golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas and university campuses, fairgrounds, abandoned buildings, and irrigation ditches (Haug et al., 1993). This species requires large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. They primarily utilize modified rodent or other small mammal burrows for roosting and nesting cover. When burrows are scarce, they may use man-made structures such as openings beneath cement or asphalt pavement, pipes, culverts, and nest boxes (Robertson, 1929).

Potential foraging and nesting habitat for burrowing owl exists along the outer edges of the orchards and within the cleared area on the east end of the project. Although no burrowing owl sign was detected during the survey, ground squirrel activity was detected on the site and historical records for burrowing owl exist within 5 miles of the site. Therefore, the site has a moderate potential to support this species.

The blunt-nose leopard lizard inhabits sparsely vegetated plains, alkali flats, low foothills, grasslands, canyon floors, large river washes and arroyos and seeks cover in mammal burrows and under shrubs or structures. They do not excavate their own burrows (CDFG 2000). Although historical records for this species exist within 3.5 miles of the project site, only marginal habitat for this species exists near the existing structures and debris piles on site, and the majority of the site has been used for agriculture, which is a contributing factor in the decline of the blunt-nose leopard lizard population. Therefore, this species is considered to have a low potential to occur within the project site.

The San Joaquin kit fox occurs in native valley and foothill grasslands and chenopod scrub communities of the valley floor and surrounding foothills from southern Kern County north to Los Baños, Merced County (CDFG 2000). Historical records for this species occur within 3.5 miles of the project site and potential sign was found within the project site boundary. Sign included the presence of burrows, scat, and partial carcass. Due to the condition of the carcass, identification as San Joaquin kit fox was deemed probable but not absolute. Therefore, this species is considered to have a high probability to occur within areas of the site bordering the orchards.

Conclusions and Recommendations

Although the majority of the project site is actively cultivated as a walnut and almond orchard and lacks the habitat requirements for many of the sensitive plant and wildlife species identified in the literature review, two sensitive wildlife species, burrowing owl, a California Species of Special Concern, and San Joaquin kit fox, a Federally Endangered and State Threatened species, have been identified as having a moderate or high potential to occur on the project site.

According to the Burrowing Owl Survey Protocol and Mitigation Guidelines prepared by The California Burrowing Owl Consortium, because habitat for the burrowing owl does exist on site, a Phase II Burrow Survey is recommended and may be required prior to the start of construction (Burrowing Owl Consortium 1993). The Phase II Burrow Survey is conducted by walking transects over 100% of the project areas which contain habitat, as well as within a 150-meter buffer of these areas, noting any sign or observations of burrowing owls. A pre-construction survey within 30 days prior to construction activity may also be required for the burrowing owl.

Under the California Endangered Species Act (CESA), Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened

species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project caused losses of listed species populations and their essential habitats. Additionally, Section 9 of the Endangered Species Act (ESA) of 1973 prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the ESA, take means "…..to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat (USFWS 1999).

It is likely that projects occurring within kit fox habitat will require take permits from California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS). In order to evaluate the project's impacts to the San Joaquin kit fox, an Evaluation Survey for San Joaquin kit fox should be conducted within the project site. This survey is conducted by walking transects throughout the project site to determine prey base, denning potential, and an analysis of adverse and cumulative effects of the project on kit foxes, if any.

If you have any questions or comments regarding this letter or other related issues, please call (949) 261-5414.

Sincerely,

CHAMBERS GROUP, INC.

Shannan Shaffer
Staff Wildlife Biologist

Nichole Cervin
Associate Biologist

Attachments: References, Site Vicinity, Site Location, Vegetation Communities, Plant Species Observed, and Wildlife Species Detected, Site Photographs

REFERENCES

California Burrowing Owl Consortium
1993 Burrowing Owl Survey Protocol and Mitigation Guidelines.

California Department of Fish and Game (CDFG)
1983 Bird Species of Special Concern in California: Le Conte's Thrasher.

2000 The Status of Rare, Threatened, and Endangered Animals and Plants of California, San Joaquin Kit Fox.

2000 The Status of Rare, Threatened, and Endangered Animals and Plants of California, Blunt-nosed Leopard Lizard.

California Native Plant Society Electronic Inventory (CNPSEI).
2007 Wasco NW, Wasco SW, and Pond, California USGS 7.5-minute quadrangles.

California Natural Diversity Database (CNDDB).
2007 Wasco NW, Wasco SW, and Pond, California USGS 7.5-minute quadrangles.

Haug, E.A., B.A. Millsap, and M.S. Martell
1993 Burrowing Owl (*Speotyto cunicularia*). In *The Birds of North America*, No. 130, A. Poole and F. Gill (eds.). The Academy of Natural Sciences, Philadelphia, Pennsylvania; The American Ornithologists' Union, Washington D.C.

Remsen, J. V., Jr.
1978 *Bird species of Special Concern in California: Le Conte's Thrasher*. California Department of Fish and Game Nongame Wildlife and Sensitive Species information. http://www.dfg.ca.gov/wildlife/species. Accessed December 7, 2007.

Robertson, J.M.
1929 Some Observations on the Feeding Habits of the Burrowing Owl. *Condor* 31: 38-39.

U.S. Fish and Wildlife Service (USFWS)
1999 U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance.

APPENDIX D

Cultural Resources Impact Assessment

Cultural Resources Inventory for Wasco Center Development Project Wasco, Kern County, California

Prepared For:

Wasco Investments, LLC
La Jolla, California

Prepared By:

Chambers Group, Inc.
Redlands, California

February 2008

Cultural Resources Inventory for Wasco Center Development Project Wasco, Kern County, California

Prepared For:

Wasco Investments, LLC
7541 Eads Avenue, Suite F
La Jolla, California 92037

Prepared By:

Jay K. Sander, M.A.

Chambers Group, Inc.
302 Brookside Avenue
Redlands, California

February 2008

U.S. Geological Survey 7.5' Quadrangle:

Wasco, California (1973)

Area Surveyed: Approximately 120 Acres

Resources Identified:

None

Keywords: Southern Valley Yokuts, Cultural Resources Survey, Ethnohistory, History, Prehistory, Project Area, Kern County

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1.0 INTRODUCTION

This report provides the results of the cultural resources inventory of the proposed Wasco Center Development Project in Wasco, Kern County, California (Figures 1 and 2). State law, as set forth in the California Environmental Quality Act (CEQA), requires that a cultural and paleontological resources evaluation of the project area be completed before construction work can proceed.

In compliance with CEQA, Wasco Investments, LLC. (Wasco Investments) retained Chambers Group, Inc. (Chambers Group) to perform a records/literature review of cultural resources known to exist in the project area, as well as an intensive archaeological field survey to identify any previously unrecorded cultural resources that may exist there. The cultural and paleontologic resources inventories presented here consist of the results of the cultural/paleontologic resources records search/literature reviews, and the results of the archaeological field survey of the Wasco Center project area.

2.0 LOCATION AND ENVIRONMENTAL SETTING

The proposed 120-acre Wasco Center Development Project area is just north of Highway 46 between Magnolia Avenue and Palm Avenue in Wasco, Kern County, California. The property lies within the southern one-half quarter of Section 2 of Township 27 South, Range 24 East of the Mount Diablo Base Meridian, as depicted on the U.S. Geological Survey (USGS) 7.5-minute *Wasco, California* topographic quadrangle (Figure 2). The elevation of the project area ranges from approximately 305 to 320 feet above mean sea level. The majority of the property is given to mature, cultivated orchards.

3.0 CULTURAL SETTING

3.1 Prehistory

It is generally believed that human occupation of southern California dates back to at least 10,000 years before present (BP). Four cultural periods of prehistoric occupation of California during the Holocene Epoch (10,000 years BP to present) are discussed below: the Early Holocene Period, the Early Horizon Period, the Middle Horizon Period, and the Late Horizon.

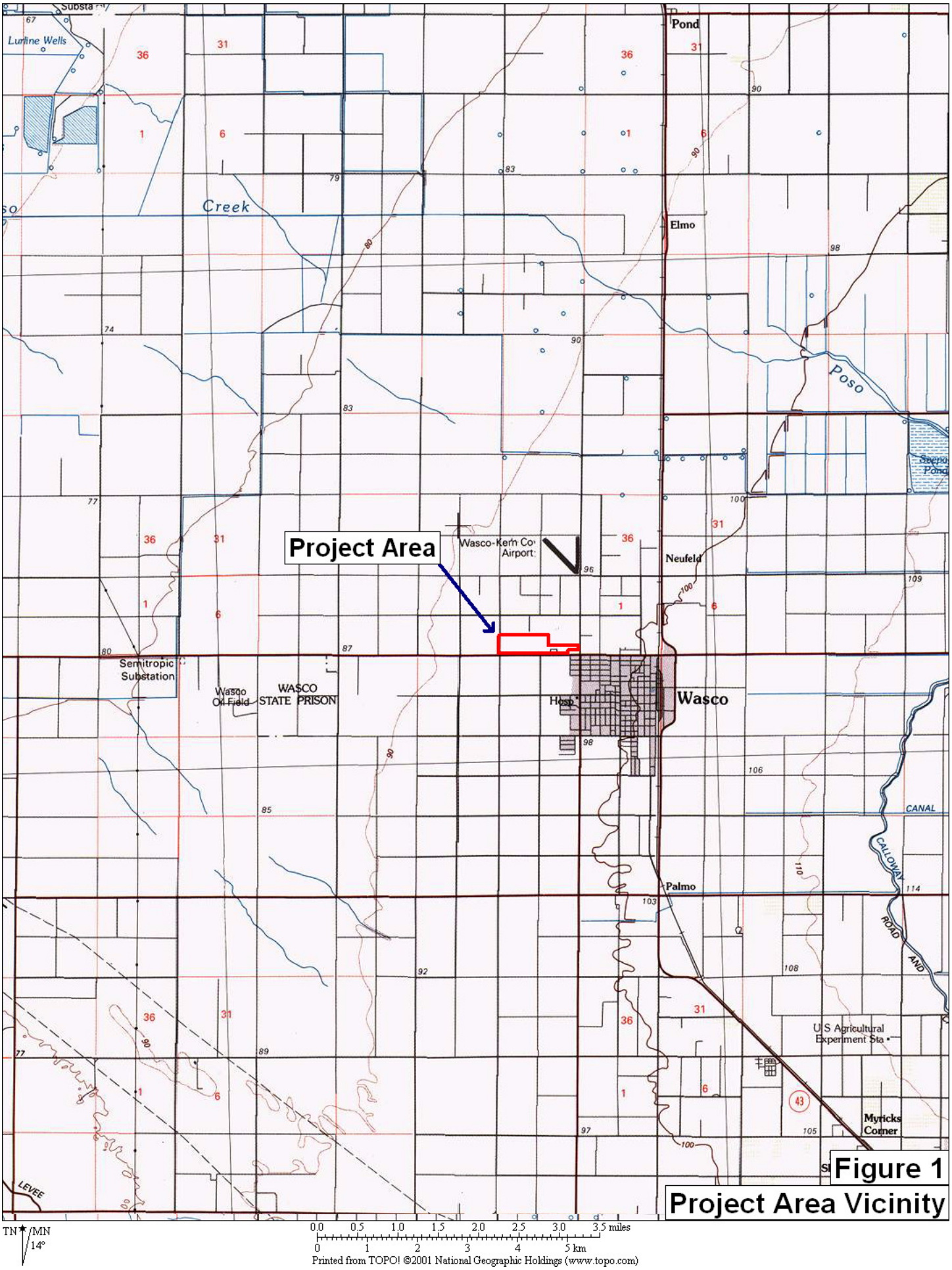

Figure 1

Project Area Vicinity

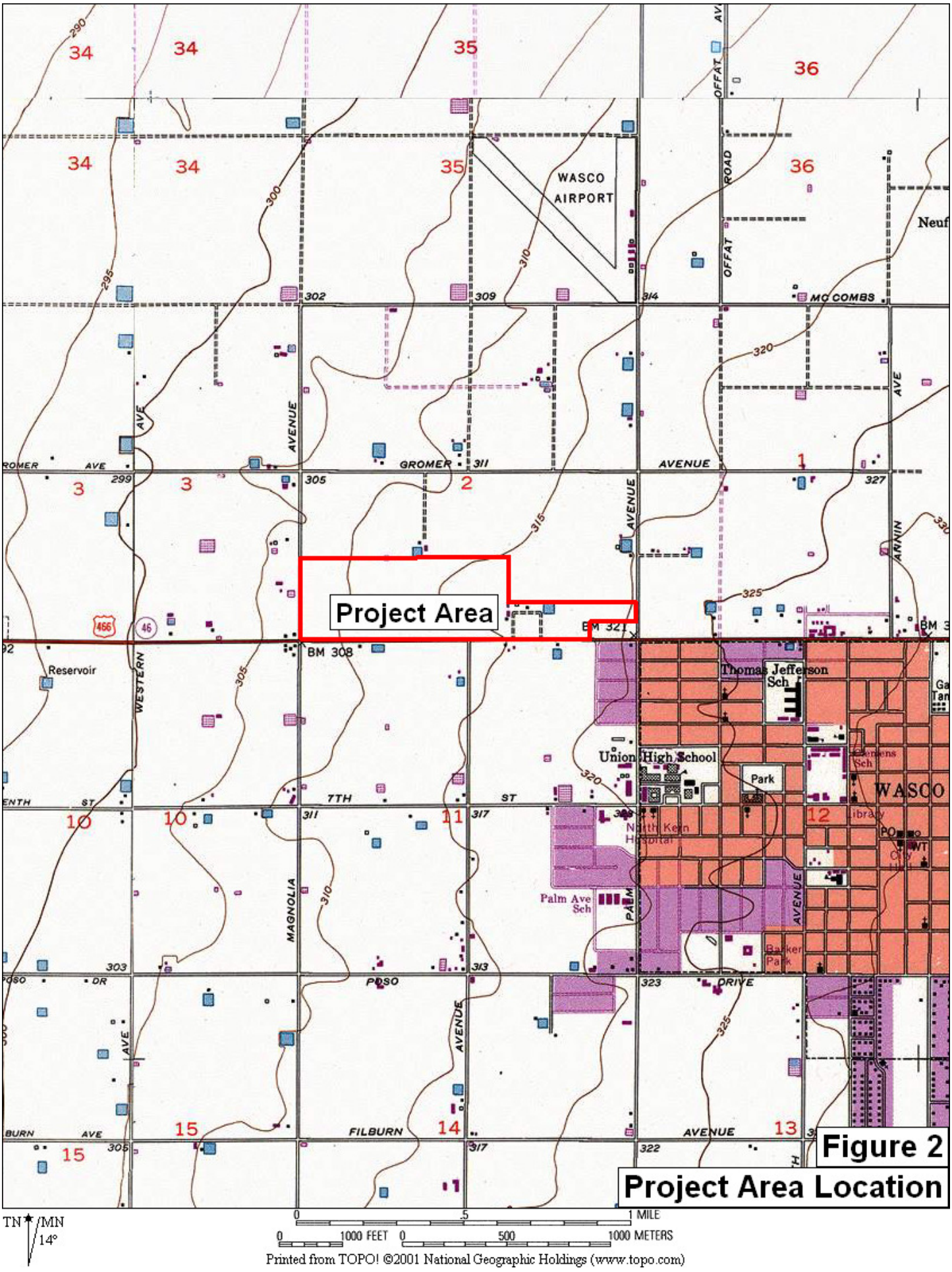

Figure 2

Project Area Location

TN ★ /MN 14°

0 .5 1 MILE

0 1000 FEET 0 500 1000 METERS

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During the Early Holocene Period (10,000 to 8,000 years BP), hunters/gatherers utilized lacustrine and marshland settings for the varied and abundant resources found there. Milling-related artifacts are lacking from archaeological sites dating to this period, but the atlatl and dart are common. Hunting of large and small game occurred, as well as fishing. A few, scattered permanent settlements were established near large water sources, but a nomadic lifestyle was more common (Erlandson 1994; Moratto 1984).

Milling-related artifacts first appear in archaeological sites dating to the Early Horizon Period (8,000 to 4,000 years BP). Hunting and gathering continued during this period, but with greater reliance on vegetal foods. Mussels and oysters were a staple among coastal groups. This gave way to greater consumption of shellfish in the Middle Horizon Period (4,000 to 2,000 years BP). Use of bone artifacts appears to have increased during this period, and baked-earth steaming ovens were developed. Occupation of permanent or semi-permanent villages occurred in this period, as did reoccupation of seasonal sites. During the Late Horizon Period (2,000 years BP to the time of European Contact (around A.D. 1769), population densities were high and settlement in permanent villages increased. Regional subcultures also developed, each with its own geographical territory and language or dialect. These groups, bound by shared cultural traits, maintained a high degree of interaction, including trading extensively with one another (Erlandson 1994; Moratto 1984).

The southern San Joaquin Valley was a unique lake-slough-marsh environment during much of the Holocene Epoch before it was dried out by massive historic drainage projects. Based on investigations along the shores of Buena Vista and Tulare lakes (Grossman 1968, Riddell and Olsen 1969), bands of hunters frequented the area as early as 8,000 BP, preying in herds of large game animals. Following the decline of the large game herds, the subsistence focus shifted to that of seed collecting, as evidenced by the preponderance of seed-grinding implements in temporally later artifact assemblages (Wallace 1978).

3.2 Ethnohistory

Ethnographic accounts of Native Americans indicate that the Southern Valley Yokuts once occupied the region that encompasses the project area. Their territory included Tulare, Buena Vista, and Kern lakes, their connecting sloughs, and the lower portions of the Kings, Kaweah, Tule, and Kern rivers. Adjacent to these rivers were extensive swamp or tulare, which shrank

and expanded seasonally (Wallace 1978). At the time of contact with Europeans, there were at least 15 Yokut groups within this area, all speaking a separate dialect of the Yokut language (Kroeber 1925). Following Kroeber (1925), the village nearest the Wasco project area was *Dulau*, approximately ten miles to the northwest.

The Southern Valley Yokuts occupied semi-permanent villages with populations of perhaps 350 inhabitants each. The majority of Yokuts had a single type of residential structure that was oval in floor plan. The structure was framed by two posts at either end and covered by woven tule mats. Yokut society was organized by villages, or clusters of villages, with each village collectively owning their hunting and gathering territories. Settlement patterns varied according to the availability of floral and faunal resources but for the most part communities tended to be stable (Kroeber 1962).

Wild seeds and roots comprised the majority of the Southern Yokut diet, especially the dried and pounded roots of tules which was prepared as a mush. Animals procured included fish, waterfowl, and shellfish. Larger game such as antelope or elk were only periodically taken (Wallace 1978).

With the Treaty of Guadalupe Hidalgo in 1848, the United States assumed control of California. It was then that the United States began to seize Indian lands. The Yokuts, Kitanemuk, Kawaiisu, and other groups became known collectively as the Tejon Indian Alliance with the signing of the Tejon Treaty of 1851. This treaty between the United States government and the Tejon Alliance guaranteed 1.2 million acres of the southern Central Valley and Tehachapi foothills for the alliance in exchange for relinquishing claims to potentially gold bearing mountain lands. In the years following, the Federal government reduced the Tejon reservation to 50,000 acres and then to 25,000 acres centered in the Grapevine Canyon. Eventually, the Tejon Ranch absorbed the last of the Tejon Reservation.

3.3 History

General California and Wasco History. The first significant European settlement of California began during the Spanish Period (1769 to 1821) when 21 missions and 4 presidios were established between San Diego and Sonoma. Although located primarily along the coast, the missions dominated economic and political life over the majority of the California region during this period. The purpose of the missions was primarily Indian control, along with economic

support to the presidios, forced assimilation of the Indians to Hispanic society, and conversion of the native population to Spanish Catholicism (Castillo 1978; Cleland 1941). The Spanish had little effect on the Yokuts until the early 19th century when the southern valley saw an influx of apostates fleeing from the missions. These newcomers brought alien ideas and practices that resulted in some social disruption.

The Mexican Period (1821 to 1848) began with the success of the Mexican Revolution in 1821, but changes to the mission system were slow to follow. When secularization of the missions occurred in the 1830s, the vast land holdings of the missions in California were divided into large land grants called *ranchos*. The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers (Castillo 1978). No ranchos were established in Yokut territory, thereby sparing them some disruption. The greatest blow to Yokut society came in 1833 with an epidemic that devastated the native population, with an estimated mortality rate of 75 percent.

In 1848, the Treaty of Guadalupe Hidalgo ended the Mexican-American War and marked the beginning of the American Period (1848 to present). The discovery of gold the same year initiated the 1849 California Gold Rush, bringing thousands of miners and settlers to California, most of who settled in the north. For those settlers who chose to come to southern California, much of their economic prosperity was fueled by cattle ranching rather than by gold. This prosperity, however, came to a halt in the 1860s as a result of severe floods and droughts, which put many ranchos into bankruptcy (Castillo 1978; Cleland 1941).

According to the City of Wasco's (2008) website, the history of Wasco dates to 1897 when the Santa Fe Railroad laid tracks through the area. During the next several years, over 300 families relocated to the area. Nine 640-acre sections, referred to as the "Fourth Home Extension Colony", were secured from the Kern County Land Company for resale to those settlers. The town of Wasco was originally designated "Dewey" and then "Deweyville". When a settler from Wasco County, Oregon, determined that there was a town already named "Deweyville" he proposed the area be renamed "Wasco", and in 1900, the Post Office recorded that as the town name. The town was incorporated in 1945. The economy of Wasco is based on agriculture, just as it has from its earliest days.

4.0 METHODS

4.1 Cultural Resources Record Search/Literature Review Methods

A record search/literature review was conducted on January 25, 2008 at the Southern San Joaquin Valley Archaeological Information Center (SSJVAIC), located at California State University, Bakersfield. The purpose of this review was to examine any existing cultural resources survey reports, archaeological site records, and historic maps to determine whether previously documented prehistoric or historic archaeological sites, architectural resources, cultural landscapes, or ethnic resources exist within or near the project area. The record search/literature review was also conducted to determine whether any historic properties listed on or determined eligible for listing on the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) exist within the project area.

4.2 Native American Coordination Methods

Chambers Group sent a letter to the Native American Heritage Commission (NAHC) notifying them of the proposed project activities. The NAHC was also asked to conduct a search of the Sacred Lands File and to make a recommendation as to whether any local Native American groups should be contacted regarding their concerns about potential impacts to cultural resources resulting from implementation of the proposed project (Appendix A).

4.3 Paleontological Resources Files/Database Search Methods

A search of the Paleontological files/database was conducted by the Division of Geological Sciences of the San Bernardino County Museum in Redlands, California on January 9, 2008. The purpose of the search was to provide information regarding previous paleontologic studies that have been conducted within or near the project area, known fossils or other paleontological resources that may have been identified within or near the project area, and the sensitivity of the project area to contain significant nonrenewable paleontologic resources (Appendix B).

4.4 Archaeological Field Survey Methods

On December 8, 2008 one Chambers Group archaeologist conducted an intensive pedestrian survey of the approximately 120-acre project area that is slated for construction. The surveyor walked transects spaced 20 meters apart in order to ensure overlapping fields of view. Notes were taken on the environmental setting and disturbances.

5.0 RESULTS

5.1 Cultural Resources Record Search/Literature Review Results

Results of the review of the survey reports and site records obtained from the SSJVAIC indicate that two previous cultural resources investigations have occurred within a one-half mile radius of the project area. These are McManus and Schuster (1986), and Thomas and Ptomey (2001). Both were surveys that followed Highway 46 across the southern edge of the project area that, together, included the majority of the Wasco Center project area. The record search also revealed that there are no previously recorded cultural resources within a one-half mile radius of the project area.

5.2 Native American Coordination Results

The search of the Sacred Lands File by the NAHC did not indicate the presence of Native American cultural resources in the immediate project area. A list of tribes, organizations, and/or individuals with traditional ties to the area was included in the NAHC response. All NAHC correspondence is provided in Appendix A

5.3 Paleontological Resources Files/Database Search Results

Results of the search of the paleontological files and database conducted with the San Bernardino County Museum on January 9, 2008 (Scott 2008) indicate that the project area is located on Holocene (recent) alluvial fan deposits (unit Qf). These sediments have no potential to contain paleontologic resources. “However, these recent sediments may form a thin sedimentary veneer overlying older, potentially fossiliferous sedimentary rock units” (Scott 2008). These older rock units would have high potential to contain significant nonrenewable

paleontological resources. The paleontological records search also indicated that there are no known paleontologic resource localities recorded within a one-mile radius surrounding the Wasco Center project area. A copy of the paleontological literature and records review is provided in Appendix B.

5.4 Archaeological Field Survey Results

No archaeological sites or isolates were found within or adjacent to the project area. It was noted that the entire area has been heavily disturbed through agricultural activities which probably included mechanical leveling of the ground.

6.0 MANAGEMENT SUMMARY AND RECOMMENDATIONS

Results of the review of the survey reports and site records obtained from the SSJVAIC indicate that two previous cultural resources investigations have occurred in the vicinity which included much of the current project area, and that there are no previously known archaeological sites or isolated finds within one-half mile of the project area. Also, the search of the Sacred Lands File by the NAHC did not indicate the presence of Native American cultural resources in the project area vicinity. No cultural resources were found during the pedestrian survey of the project area; therefore, no further cultural resources work is recommended.

In the event that any subsurface archaeological deposits are unearthed during ground-disturbing construction activities, all activities must be suspended in the vicinity of the find until the deposit(s) are recorded and evaluated by a qualified archaeologist. If human remains of any kind are found, all activities must cease immediately and a qualified archaeologist and the Kern County Coroner must be notified. If the coroner determines the remains to be of Native American origin, he or she will notify the NAHC. The NAHC will then identify the most likely descendants to be consulted regarding treatment and/or repatriation of the remains.

The search of the paleontological files/database indicates that the project area likely has low paleontologic sensitivity. The San Bernardino County Museum Division of Geological Sciences recommends, however, that if any older sedimentary rock units are encountered which have lithology conducive to paleontologic preservation, then a qualified vertebrate paleontologist must be retained to examine the depositional context to determine their potential to yield significant

paleontologic resources (Scott 2008). The paleontologist will then make recommendations regarding the need for a paleontologic monitor to be present during ground disturbing activities. If paleontologic specimens are encountered during ground disturbance, a paleontological monitor must be empowered to identify, remove, document, and evaluate those specimens. Recovered specimens must be curated in a museum repository with permanent retrievable storage (e.g., San Bernardino County Museum). A report must be prepared with an appended itemized inventory of specimens, if any are recovered. Implementation of this mitigation measure would reduce the potential impact to a level that is less than significant.

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1986 Department of Transportation Negative Archaeological Survey Report. Document number KE-00655 on file at the Southern San Joaquin Valley Archaeological Information Center, Cal State Bakersfield, 9001 Stockdale Highway, Bakersfield California.

Moratto, Michael J.
1984 *California Archaeology*. Academic Press, New York.

Riddell, Francis A. and William H. Olsen
1969 An Early Man Site in the San Joaquin Valley, California. *American Antiquity* 34(2)121-130.

Scott, Eric
2008 Letter Report titled "Paleontology Literature and Records Review, Wasco Center Project, City of Wasco, Kern County, California." On file at Chambers Group, Inc., 302 Brookside Avenue, Redlands, CA 92373.

Thomas, Denise, L. and Steve Ptomey
2001 Department of Transportation Negative Archaeological Survey Report. Document number KE-02613 on file at the Southern San Joaquin Valley Archaeological Information Center, Cal State Bakersfield, 9001 Stockdale Highway, Bakersfield California.

Wallace, William J.
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8.0 REPORT AND FIELD PERSONNEL

8.1 Report Preparer

Jay K. Sander, Principal Author
1998 M.A., Anthropology, University of California, Riverside
1993 B.A., Anthropology, University of Arizona, Tucson
Years of experience: 14

8.2 Field Personnel

Jay K. Sander, Senior Archaeologist
1998 M.A., Anthropology, University of California, Riverside
1993 B.A., Anthropology, University of Arizona, Tucson
Years of experience: 14

APPENDIX A CORRESPONDENCE WITH NATIVE AMERICAN HERITAGE COMMISSION

CHAMBERS GROUP, INC.

302 Brookside Avenue
Redlands, CA 92373
(909) 335-7068
(909) 335-6318 FAX

Via FAX (916) 657-5390

December 7, 2007

Mr. Dave Singleton
Associate Governmental Program Analyst
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

Subject: Record Search Request for Proposed Wasco Development Project, Wasco, Kern County, California

Dear Mr. Singleton:

We are requesting on behalf of our client that a review of the Sacred Lands file be conducted for the Wasco Center project, a proposed 120-acre mixed-use development on Paso Robles Highway (SR 46) in the City of Wasco, Kern County, California. It is located within Section 2 of Township 27 South, Range 24 East on the U.S. Geological Survey 7.5' *Wasco, California* (1973) topographic quadrangle sheet. A copy of this quadrangle sheet is enclosed for your convenience.

Along with the Sacred Lands file review, please also identify any recognized Native American groups or representatives to contact for consultation regarding the proposed project.

For correspondence, please use he project number **8522**. If you have any questions regarding this request, please contact me at (909) 335-7068.

Sincerely,

CHAMBERS GROUP, INC.

Jay K. Sander

Jay K. Sander, M.A.
Senior Archaeologist

Enclosures: as stated

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

December 11, 2007

Mr. Jay K. Sander, M.A., Senior Archaeologist
CHAMBERS GROUP, INC.
302 Brookside Avenue
Redlands, CA 92373

Sent by FAX to: 909-335-6318
Number of Pages: 2

Re: Request for a Sacred Lands File records search for the proposed Project 8522, Wasco Center Project located in the City of Wasco; Kern County, California

Dear Mr. Sander:

The Native American Heritage Commission was able to perform a record search of its Sacred Lands File (SLF) for the affected project area. The SLF failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the Sacred Lands File does not guarantee the absence of cultural resources in any project area. This project site is in close proximity to previously discovered prehistoric burial sites and is believed to hold numerous cultural resources.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed is the name of the nearest tribes that may have knowledge of cultural resources in the project area. A list of Native American contacts is attached to assist you. It is advisable to contact the persons listed; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area.

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 15064.5(f) and Section 15097.98 and Health & Safety Code Section 7050.6 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton, Program Analyst

Attachment: Native American Contact List

Native American Contacts
Kern County
December 11, 2007

Santa Rosa Rancheria
Clarence Atwell, Chairperson
P.O. Box 8
Lemoore , CA 93245
(559) 924-1278
(559) 924-3583 Fax

Tache
Tachi
Yokut

Tejon Indian Tribe
Kathy Morgan, Chairperson
2234 4th Street
Wasco , CA 93280

Yowlumne
Kitanemuk

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville , CA 93258
chairman@tulerivertribe.nsn.
(559) 781-4271
(559) 781-4610 FAX

Yokuts

Kenneth Woodrow
1179 Rock Haven Ct.
Salinas , CA 93906
831-443-9702

Foothill Yokuts
Mono

Ron Wermuth
P.O. Box 168
Kernville , CA 93238
warmoose@earthlink.net
(760) 376-4240 - Home
(916) 717-1176 - Cell

Tubatulabal
Kawaiisu
Koso
Yokuts

Robert L. Gomez, Jr.
2619 Driller Ave.
Bakersfield , CA 93306
(661) 871-4760

Paiute
Yokuts
Tubatulabal

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez
981 N. Virginia
Covina , CA 91722
(626) 339-6785

Yowlumne
Kitanemuk

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed Wasco Development Project located in the Community of Wasco; Kern County, California. The Project Number is 8522 and a Sacred Lands File and Native American Contacts list were requested.

CHAMBERS GROUP, INC.

302 Brookside Avenue
Redlands, CA 92373
(909) 335-7068
(909) 335-6318 FAX

Via FAX (909) 307-0539
JN 8522

December 7, 2007

Mr. Eric Scott
Curator of Paleontology
San Bernardino County Museum
2024 Orange Tree Lane
Redlands, CA 92374

Subject: Record Search Request for Wasco Development Project, Wasco, Kern County, California

Dear Mr. Scott:

We are requesting on behalf of our client that a review of the Sacred Lands file be conducted for the Wasco Center project, a proposed 120-acre mixed-use development on Paso Robles Highway (SR 46) in the City of Wasco, Kern County, California. The project area is located within Section 2 of Township 27 South, Range 24 East on the U.S. Geological Survey 7.5' *Wasco, California* (1973) topographic quadrangle sheet. A copy of this quadrangle sheet is enclosed for your convenience.

Please provide any information that you may have regarding previous paleontologic studies that have been conducted within or near the project area, fossils or other paleontologic resources that have been identified within or near the project area, and the sensitivity of the project area to contain paleontologic resources. Please also provide recommendations for avoiding impacts to sensitive paleontologic resources, as appropriate.

Please fax the results of the search to me at the above number and send the original via regular mail with your invoice. Please submit your invoice referencing our project number of **8522**.

Thank you for your assistance with this project. If you have any questions regarding this request, please call me at (909) 335-7068.

Sincerely,

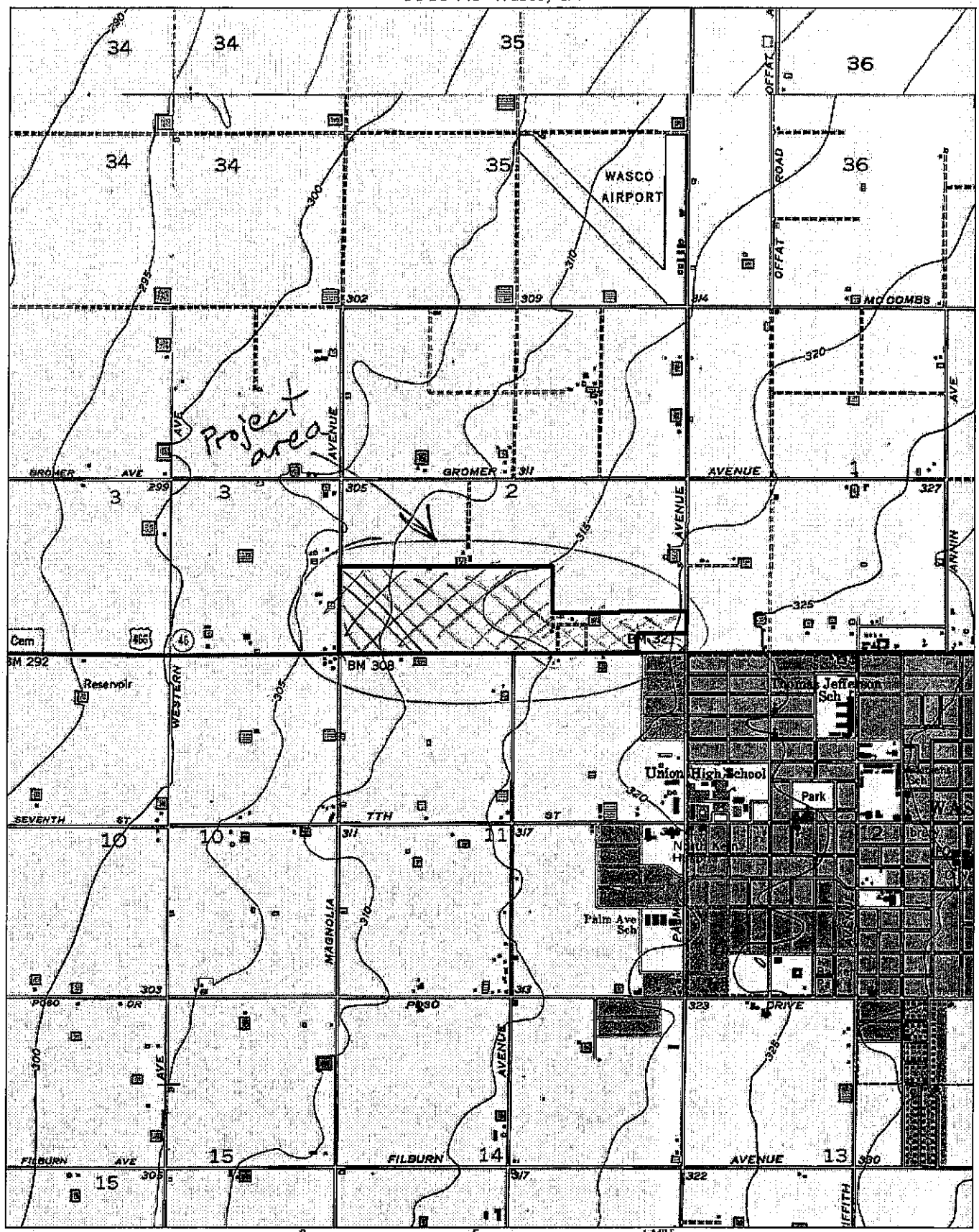
CHAMBERS GROUP, INC.

Jay K. Sander

Jay K. Sander, M.A.
Senior Archaeologist

enclosure: as stated

USGS 7.5' Wasco, CA



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9 January 2008

Chambers Group, Incorporated
attn: Jay K. Sander, M.A.
302 Brookside Avenue
Redlands, CA 92373

re: **PALEONTOLOGY LITERATURE AND RECORDS REVIEW, WASCO CENTER PROJECT, CITY OF WASCO, KERN COUNTY, CALIFORNIA**

Dear Mr. Sander,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-named property in the City of Wasco, Kern County, California. The proposed study area is located in the southern portion of section 2, Township 27 South, Range 24 East, Mount Diablo Base and Meridian, as seen on the Wasco, California 7.5' United States Geological Survey topographic quadrangle map (1953 edition, photorevised 1968).

Previous geologic mapping (Smith, 1964) indicates that the proposed property is situated upon Holocene (recent) alluvial fan deposits (= unit **Qf**). These sediments are too young geologically to have potential to contain significant fossil resources, and so are assigned low paleontologic sensitivity. However, these recent sediments may form a thin sedimentary veneer overlying older, potentially fossiliferous sedimentary rock units. These rock units would include any rock units of Pleistocene age and older. Should older sedimentary rock units be encountered during development-related excavation, these older rock units would have high paleontologic sensitivity.

For this review, Craig R. Manker of the Division of Geological Sciences, SBCM conducted a search of the Regional Paleontologic Locality Inventory (RPLI). The results of this search indicate that no previously-known paleontologic resource localities are recorded by the SBCM from within the boundaries of the study area, nor from within at least one mile in any direction.

Recommendations

The results of the literature review and the check of the RPLI at the SBCM demonstrate that excavation in surficial and subsurface exposures of recent alluvium within the boundaries of the proposed project property has low potential to adversely impact significant nonrenewable paleontologic resources. However, in the event that any older sedimentary rock units having a lithology conducive to the preservation of significant paleontologic resources are exposed at depth,

or if excavation is anticipated to extend to depths greater than ~6' below the present ground surface, or if fossils are encountered at any time during development-related excavation in this area, a qualified vertebrate paleontologist must be retained to develop a program to mitigate impacts to nonrenewable paleontologic resources. This mitigation program must be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations implemented by the County of Kern and with the proposed guidelines of the Society of Vertebrate Paleontology. This program should include, but not be limited to:

1. Monitoring of excavation into rock units having high potential to contain significant nonrenewable paleontologic resources. Based upon the results of this review, areas of concern would include any and all previously-undisturbed older sedimentary rock units present within the boundaries of the property; these sediments are not present at the surface, but may be present at depth. When paleontologic monitoring is initiated, paleontologic monitors should be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens.

2. Preparation of all recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential in order to fully mitigate adverse impacts to the resources (Scott and others, 2004).

3. Identification and curation of specimens into an established, accredited museum repository with permanent retrievable paleontologic storage (e.g., SBCM). These procedures are also essential steps in effective paleontologic mitigation (Scott and others, 2004) and CEQA compliance (Scott and Springer, 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented.

4. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, would signify completion of the program to mitigate impacts to paleontologic resources.

References

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Smith, A.R.,1964. Geologic map of California, Bakersfield sheet, scale 1:250,000. California Division of Mines and Geology, Regional Geologic Map Series.

Please do not hesitate to contact us with any further questions you may have.

Sincerely,

Eric Scott, Curator of Paleontology
Division of Geological Sciences
San Bernardino County Museum

APPENDIX E

Phase I Environmental Site Assessment

BSK

PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT

111-Acre Orchard Site
Northwest of Highway 46 and Palm Avenue
Wasco, California

BSK E07.005.01F

Prepared for:

Mr. William Barkett
Merjan Financial Corporation
7541 Eada Avenue, Suite F
La Jolla, California 92037

February 16, 2007

Engineers, Geologists, Environmental Scientists

BSK Associates

An Employee Owned Company

February 16, 2007 BSK E07.007.01F

Mr. Bill Barkett
Merjan Financial Corporation
7541 Eada Avenue, Suite F
La Jolla, California 92037

SUBJECT: Phase I ESA Report
111-Acre Orchard Site
Northwest of Highway 46 and Palm Avenue
Wasco, California

Dear Mr. Barkett:

BSK Associates has prepared this Phase I Environmental Site Assessment (ESA) Report for the subject 111-Acre Orchard Site in Wasco, California. This report presents the findings, summaries, and recommendations associated with the Phase I ESA.

BSK appreciates the opportunity to be of service you and Merjan Financial Corporation. If you have questions or require additional services, please call the undersigned at (559)497-2880.

Sincerely,
BSK ASSOCIATES

Anne G. Sehm
Environmental Assessor

Matthew W. Hutson, P.G.
Environmental Group Leader

AGS/MWH/mlt

Distribution: Mr. Bill Barkett, Merjan Financial Corporation (2 originals)
BSK (1 original + Ecopy)

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PHASE I ESA REPORT
111-ACRE ORCHARD SITE
NORTHWEST OF HIGHWAY 46 AND PALM AVENUE
WASCO, CALIFORNIA

EXECUTIVE SUMMARY

BSK Associates has preformed a Phase I ESA Site Assessment in general accordance with the scope and limitations of ASTM Practice E 1527-05 of the 111-acre orchard Site located northwest of Highway 46 and Palm Avenue in Wasco, Kern County, California. Exceptions to or deletions from this practice are described in Section 2.3 of the report. The assessment revealed no evidence of recognized environmental conditions in connection to the Site.

Historically, the Site has been used for agricultural purposes from as early as 1946 to current. The Site remains as a walnut and almond orchard today.

No structures were observed on Site during the reconnaissance. A small ponding basin was observed along the northern boundary of the Site and there were several unpaved access roads throughout the orchards.

The adjoining property to the north has been used for agricultural purposes with recent new-subdivision construction activity present. The immediate property to the south has been a rural residence since at least 1946 with structures added to the property over time. This adjoining property has an attached farm equipment and storage area associated with it, which is located to the west of the house. The adjoining properties further to the south were previously agricultural land with recent commercial development on the southwest corner. The adjoining property to the east is developed for commercial purposes and new residential subdivision construction. The adjoining property to the west is developed with rural residences and orchards.

PHASE I ESA REPORT
111-ACRE ORCHARD SITE
NORTHWEST OF HIGHWAY 46 AND PALM AVENUE
WASCO, CALIFORNIA

1.0 INTRODUCTION

BSK Associates has conducted a Phase I Environmental Site Assessment (ESA) of the 111-Acre Orchard Site property located northwest of Highway 46 and Palm Avenue, Wasco, California (Site). The Site has an associated address of 2360 Highway 46. The ESA was initiated per the authorization of Mr. William Barkett of Merjan Financial Corporation, La Jolla, California. BSK conducted the Phase I ESA of the Site in general adherence to the standards set by the American Society for Testing and Materials (ASTM) E1527-05 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.*

This ESA report presents BSK's findings and recommendations. This report includes a Vicinity Map (Figure 1) and a Site Map (Figure 2). Site photographs are included in Appendix A. The Sanborn Map Report is included in Appendix B. The Environmental Data Resources (EDR) Radius Map Report is included in Appendix C. Historical Aerial Photographs and Topographic Maps are included in Appendix D. Environmental liens documentation is included in Appendix E. Previous Site Investigations are included in Appendix F. All Appropriate Inquiry Questionnaire and Interview Documentation are included in Appendix G. Special Contractual Conditions between User and Environmental Professional are included in Appendix H. Professional Credentials are included in Appendix I.

2.0 PURPOSE

A Phase I ESA is designed to identify the presence of recognized environmental conditions (RECs) or the presence or likely presence of hazardous substances or petroleum products on the Site (or adjoining properties) under conditions that indicate an existing release, a past release, or a material threat of a release of the substance/product into structures, the ground, groundwater, or surface water of the Site. This ESA includes all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial practices. An additional use of the Phase I ESA is to permit the user to satisfy one of the requirements to qualify for what is commonly known as the "innocent landowner" defense to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability as described by 42 U.S.C. Section 9601 (35)(B). BSK will determine the applicability of the following terms in connection with the Site:

ASTM E1527-05 Section 3.3.52 *Material Threat* – A physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the *environmental professional,* is threatening and might result in impact to public health or the environment.

ASTM E1527-05 Section 3.3.74 *Recognized Environmental Conditions* (REC)–The term *recognized environmental conditions* means the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, groundwater, or surface water on the

property. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies. Conditions determined to be *de minimis* are not *recognized environmental conditions.*

2.1 Scope of Services

The scope of services for this Phase I ESA generally conforms to ASTM E1527-05 and included the following:

- A site reconnaissance of the Site and adjoining properties preformed by an Environmental Assessor under the guidance of an Environmental Professional as defined in 40 CFR § 312.10(b).
- Observed and documented existing land use and general environmental condition of the Site and immediately adjoining properties as they relate to ASTM standards. Documentation of existing uses was provided in color photographs.
- Provided a questionnaire conforming to the *All Appropriate Inquiry* standards to the client for their review and response.
- Interviewed persons knowledgeable of the former and current use of the Site and immediately adjoining properties.
- Researched and reviewed publicly available and reasonably ascertainable federal, state, and local regulatory agency files to identify known historic releases or uses of petroleum products and/or hazardous materials on the Site and immediately adjoining properties.
- Researched and reviewed historical information pertaining to the Site including information from publicly available and reasonably ascertainable historical aerial photographs, topographic maps, Sanborn fire insurance maps, street directories, and building department records.
- Prepared this report presenting findings, summaries and recommendations.

2.2 Significant Assumptions

Non-scope issues are those conditions and concerns that are beyond the scope of services of this ESA and include but are limited to: asbestos containing materials, radon, lead-based paint, lead in drinking water, wetlands delineation or identification, regulatory compliance, cultural concerns, industrial hygiene, ecological resources, endangered species, indoor air quality, and high voltage power lines. Sampling and analytical testing of soil, groundwater, air, radon gas, radioactive materials, urea-formaldehyde, mold, pesticides or polychlorinated biphenyls (PCBs) are also considered non-scope issues.

2.3 Limitations and Exceptions to Assessment

Along with all of the limitations set forth in various sections of the ASTM Standard E 1527-05 protocol, the accuracy and completeness of this report are necessarily limited by the following:

- Access Limitations – None
- Physical Obstructions to Observations – None
- Outstanding Information Requests – None
- Historical Data Source Failure – None
- Data Gaps – None
- Other – None

2.4 Special Terms and Conditions

2.4.1 Authorization

Authorization to perform this assessment was provided on February 2, 2007 by a signed copy of BSK Proposal No. EF07.0014, between Mr. Bill Barkett and BSK.

2.4.2 Property Access

Mr. Jack Farrior of L&J Farms provided instructions as to the location of the property, access, and an explanation of the property and facilities to be assessed, on February 5, 2007.

2.5 User Reliance

This report was prepared pursuant to the contract BSK has with Mr. Bill Barkett (Merjan Financial Corporation). That contractual relationship included an exchange of information about the property that was unique and between BSK and its client and serves as the basis upon which this report was prepared. Because of the importance of the communication between BSK and its client, reliance or any use of this report by anyone other than Merjan Financial Corporation, for whom it was prepared, is prohibited and therefore not foreseeable to BSK.

Reliance or use by any such third party without explicit authorization in the report does not make said third party a third party beneficiary to BSK's contract with Merjan Financial Corporation. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.

Third party reliance letters may be issued on request and upon payment of the, then current fee for such letters. All third parties relying on BSK's reports, by such reliance, agree to be bound by the proposal and BSK's *General Conditions for Environmental Consulting Services*. No reliance by any party is permitted without such agreement, regardless of the content of the reliance letter itself.

3.0 PROPERTY DESCRIPTION AND PHYSICAL SETTING

The site location and attributes have been obtained from a variety of sources including: Kern County Assessor Office, First American Title Company, Environmental Date Resources (EDR), State of California Department of Water Resources (DWR) *Lines of Equal Elevation of Water in Wells Unconfined Aquifer, San Joaquin Valley, Spring 2003*, wdl.water.ca.gov and U.S. Geological Survey, 7.5 minute topographic maps. General property information and property use are summarized below.

3.1 Property Location and Characteristics

The irregular-shaped property consists of approximately 111 acres and is located northwest of Highway 46 and Palm Avenue in Wasco, California. The address of 2360 Highway 46 is the only known address associated with the Site. The Site is also referenced by the following Assessor Parcel Numbers (APN):

487-010-04, approximately 38 acres
487-010-51, approximately 1 acre
487-010-37, approximately 57 acres
487-290-05, approximately 1 acre
487-290-06, approximately 1 acre
487-290-13, approximately 8 acres
487-290-14, approximately 2 acres
487-290-15, approximately 2 acres
487-290-16, approximately 1 acre

487-010-42, (approximately 10 acres), adjoins the Site to the south and is currently in escrow however, this parcel has been excluded from this Phase I ESA.

Mr. Dennis McNamara, Senior Planner with the City of Wasco, indicated that all of the above mentioned parcels are zoned as C-R (commercial/residential use).

New residential subdivision construction and fallow agricultural land are located to the north of the Site. A rural residence, Highway 46, orchards, and commercial development consisting of retail businesses are located to the south of the Site. A small commercial development is located to the southeast of the Site. Palm Avenue, Shell retail gasoline station, CFN Fueling, and new residential subdivision construction are located to the east of the Site. Magnolia Avenue, rural residential, and orchards are located to the west of the Site.

3.2 Utilities

Utility systems identified at the property, as specified in ASTM Standard E 1527-05 § 9.4.19 and § 9.4.1.10 are as follows:

- Sewage disposal: None
- Potable water: None
- Solid Waste Disposal Services: Unknown
- Electricity Provider: Southern California Edison

3.3 Current Use of Adjoining Properties

Based on observations by BSK during the Site and vicinity reconnaissance, the following summarizes the current use of properties immediately adjoining the Site:

ADJOINING STREETS AND PROPERTY USE

Direction	Adjoining Street	Adjoining Property Use
North	None	Fallow agricultural land and new residential subdivision development
South	Highway 46	A rural residence, commercial development and orchards
East	Palm Avenue	Commercial Development and new residential subdivision development
West	Magnolia Avenue	Rural Residences and orchards

3.4 Physical Setting

3.4.1 Geology

The Site is located within the San Joaquin Valley, a broad structural trough bound by the Sierra Nevada and Coast Ranges of California sloping westward to its greatest depth near the western margin of the valley. The San Joaquin Valley has been filled with several thousand feet of sedimentary deposits. Sediments in the valley, derived from the erosion of the Sierra Nevada, have deposited sands with lesser silts, minor clays, and gravel by major to minor west-flowing drainages and their tributaries. The sedimentary deposits in the region form large coalescing alluvial fans with gradual slopes.

The site is located in the southern half of Section 2, Township 27 south, Range 24 east on the Wasco, California 7.5 minute USGS Topographic Map, dated in 1953 and photo revised in 1973. The Site is relatively level and is situated at an average elevation of 315 feet above mean sea level.

3.4.2 Hydrogeology

Groundwater movement within the San Joaquin Valley generally flows from the flanks of the valley to the median of the trough on the western side of the valley and subsequently toward the San Joaquin - Sacramento Delta area. The San Joaquin Valley is an area of substantial groundwater withdrawal and recharge due to municipal, industrial, and agricultural use. The foregoing information regarding hydrogeologic conditions associated with the Site and vicinity is generalized, and additional information regarding local and regional hydrogeologic conditions could be obtained by additional investigation.

According to EDR there are seven public (federal and state) wells located within one mile of the Site however according to EDR none of the wells are located on the Site.

The Spring 2003 *Lines of Equal Elevation Map* issued by the California Department of Water Resources, reviewed as part of the ESA, indicates a depth to groundwater of approximately 255 feet beneath the site with a regional flow direction to the west.

4.0 USER PROVIDED INFORMATION

The user provided information was obtained by the questionnaires completed by Mr. William Barkett (property owner) and Mr. Jack Farrior of L&J Farms (property tenant). Copies of the questionnaires are included in Appendix B.

4.1 Copies of Title Records

Mr. Barkett did not provide a 50-year title report to BSK.

4.2 Environmental Liens or Activity and Use Limitations

Mr. Barkett is unaware of any environmental liens or activity and use limitations for the property.

Mr. Farrior is unaware of any environmental liens or activity and use limitations for the property.

4.3 Specialized Knowledge

Mr. Barkett purchased the property as a walnut orchard and it is currently operated as the same.

Mr. Farrior has no specialized knowledge of the property.

4.4 Commonly Known or Reasonably Ascertainable Information

Mr. Barkett is not aware of any commonly known or reasonably ascertainable information about the property.

Mr. Farrior is not aware of any commonly known or reasonably ascertainable information about the property.

4.5 Valuation Reduction for Environmental Issues

Mr. Barkett is the current owner of the property and indicated that the purchase price reasonably reflects the fair market value of the property.

4.6 Owner, Property Manager, and Occupant Information

The property owner of record is Mr. William Barkett (Merjan Financial Corporation). The current manager of the property is Mr. Jack Farrior (L&J Farms).

4.7 Reason for Performing the Phase I Environmental Site Assessment

The Phase I ESA is being conducted as part of a property refinance.

5.0 PREVIOUS SITE INVESTIGATION

Limited Phase I Environmental Site Assessment Report, 139 Acre Farm Site near the Northwest Corner of Highway 46 and Palm Avenue, Wasco, Kern County, California, BSK Associates, November 13, 2003

The report was prepared for Mr. William Barkett of Merjan Financial Corporation. The report indicated that the Site consisted of agricultural land dating back to approximately 1940. The report also indicated that there were no open cases for the Site or adjoining properties with the regulatory databases reviewed. In addition, the report did not identify any recognized environmental conditions at the Site.

6.0 SUMMARY OF REGULATORY AGENCIES RECORDS REVIEW

A review of local regulatory agency records was conducted to determine if petroleum products or hazardous materials have been handled, stored, or disposed of on the Site and/or the adjoining properties. The following agencies were contacted to obtain any available information pertaining to the Site and or adjoining properties; Environmental Data Resources, Inc. (EDR), the Kern County Environmental Health Department (KCEHD), California Environmental Protection Agency Department of Toxic Substance Control (DTSC), and California Division of Oil, Gas, and Geothermal Resources (DOGGR).

6.1 Summary of Federal and State Regulatory Records

BSK retained EDR to conduct an environmental record search of federal and state regulatory agency databases. The record search meets the government records search requirements of ASTM E 1527-05. EDR's findings are documented in *The EDR-Radius Map* report (EDR Report) dated February 6, 2007 included in Appendix C. Findings of the federal, state, and local regulatory agency records search/review reported by EDR are summarized below.

EDR RADIUS MAP SUMMARY

Database	Information Available	Search Distance from the Site (Miles)				
Federal ASTM Standard:		Site	<⅛	⅛-¼	¼-½	½-1
NPL	Sites for priority cleanup (Superfund)	0	0	0	0	0
Proposed NPL	Proposed NPL cleanup sites	0	0	0	0	0
Delisted NPL	Sites removed from the NPL	0	0	0	0	0
NPL Recovery	Federal Superfund Liens	0	---	---	---	---
CERCLIS	Potentially hazardous waste sites for possible inclusion on the NPL	0	0	0	0	---
CERC/NFRAP	Sites designated as No Further Action and removed from the CERCLIS	0	0	0	0	---
CORRACTS	Hazardous waste handler with corrective action activity	0	0	0	0	0
RCRA-TSD	Hazardous waste treatment, storage and disposal facility	0	0	0	0	---
RCRA Lg. Quan. Gen.	Large generators of hazardous waste	0	0	0	---	---
RCRA Sm. Quan. Gen.	Small generators of hazardous waste	0	0	1	---	---
ERNS	Unauthorized release of hazardous substances	0	---	---	---	---
HMIRS	Hazardous material spill incidents	0	---	---	---	---
US ENG CONTROLS	Engineering Control Sites List	0	0	0	0	---
US INST CONTROLS	Site with Institutional Controls	0	0	0	0	---
DOD	U.S Department of Defense sites >640 acres	0	0	0	0	0
FUDS	Formerly Used Defense Sites	0	0	0	0	0
US BROWN-FIELDS	A Listing Brownfields Sites	0	0	0	0	---
CONSENT	Sites with legal settlements associated with NPL sites	0	0	0	0	0

EDR RADIUS MAP SUMMARY						
ROD	Records of Decision associated with NPL sites	0	0	0	0	0
UMTRA	Uranium Mill Tailing Sites	0	0	0	0	---
ODI	Open Dump Inventory	0	0	0	0	
TRIS	Release and/or treatment of toxic chemicals	0	---	---	---	---
TSCA	Identifies manufacturers and importers of chemical substances	0	---	---	---	---
FTTS	Tracking system of pesticide enforcement actions and compliance activities	0	---	---	---	---
SSTS	Identified pesticides producing sites	0	---	---	---	---
ICIS	Integrated Compliance Information Systems	0	---	---	---	---
PADS	Generators, transporters, commercial storers and/or brokers and disposers of PCBs	0	---	---	---	---
MLTS	Sites which possess or use radioactive materials	0	---	---	---	---
MINES	Sites regulated by the U.S. Dept. of Labor, Mine Safety and Health Administration	0	0	0	---	---
FINDS	Regulated facilities potentially listed in other databases	0	0	0	0	---
RAATS	Records of enforcement actions issued to major violators	0	0	0	---	---
State and Local ASTM Standard:		**Site**	**<⅛**	**⅛-¼**	**¼-½**	**½-1**
AWP	Hazardous waste sites targeted for cleanup	0	0	0	0	0
Hist Cal-Sites	Potential hazardous waste sites	0	0	0	0	---
CA Bond Exp Plan	Sites targeted for hazardous substances cleanup	0	0	0	0	1
NFA	Evaluated sites with no further action needed	0	0	0	---	---
NFE	Unconfirmed contamination sites that require evaluation	0	0	0	---	---
REF	Unconfirmed contaminated sites	0	0	0	---	---
SCH	School sites being evaluated for hazardous substance contamination	0	0	0	---	---
Toxic Pits	Potential hazardous substances sites	0	0	0	0	---
SWF/LF (SWIS)	Active, inactive and closed solid waste disposal sites or transfer facilities	0	0	0	0	---
CA WDS	Sites issued waste discharge requirements	0	0	0	0	---
WMUDS/ SWAT	Tracking and inventory of waste management units	0	0	0	0	0
Cortese	Potential and confirmed hazardous waste & substances sites	0	0	0	0	---
SWRCY	Recycler Database	0	0	0	0	---
LUST	Leaking underground storage tanks sites	0	0	0	0	---
CA FID UST	Active and inactive UST locations	0	0	0	0	---
CA SLIC	Sites with non-UST spills, leaks, investigations and cleanups	0	0	0	0	---
UST	Registered underground storage tank sites	0	0	0	---	---
HIST UST	Historical list of UST sites	0	0	0	0	---
AST	Registered aboveground storage tank sites	0	0	0	---	---

EDR RADIUS MAP SUMMARY						
Fresno Co. CUPA	Sites that use/handle hazardous materials, USTs, ASTs and generate and/treat hazardous waste	---	---	---	---	---
SWEEPS UST	Sweeps UST Listing	0	0	0	---	---
CHMIRS	Hazardous material releases or spills sites	0	---	---	---	---
Notify 65	Impact to drinking water and potential health risk to the public	0	0	0	0	0
DEED	Sites with deed restrictions	0	0	0	0	---
VCP	Voluntary Cleanup Program	0	0	0	0	---
CLEANERS	List of dry cleaner related facilities	0	0	0	---	---
WIP	Well Investigation Program Case List	0	0	0	0	
CDL	Clandestine Drug Labs	0	---	---	---	---
RESPONSE	DTSC involved mitigation	0	0	0	0	0
HAZNET	Information of the management of hazardous material	0	---	0	0	---
ENVIROSTOR	DTSC Site Mitigation Database	0	0	0	0	0
EMI	Emissions Inventory Data	0	---	---	---	---
FINANCIAL ASSURANCE	Financial Assurance Information Listings	0	---	---	---	---
Tribal Records		Site	<⅛	⅛-¼	¼-½	½-1
INDIAN RESERVE	Indian Reservation	0	0	0	0	0
INDIAN LUST	Leaking USTs on Indian land	0	0	0	0	---
INDIAN UST	Underground storage tanks on Indian land	0	0	0	---	---
Additional Regulatory Agency Lists Information		Site	<⅛	⅛-¼	¼-½	½-1
US EPA, Federal Superfund Liens List and California Liens		0	0	0	0	0
Cal EPA, Recorded Deed Restrictions		0	0	0	0	0
The Munger Map Book California-Alaska Oil and Gas Fields Munger Maps, 2003		0	0	---	---	---

0 Number of sites identified
--- Not Searched

BSK contracted the Kern County Environmental Health Department (KCEHC) regarding the Site; however, the KCEHD indicated that they had no files or other information concerning the subject property.

7.0 RECORDS REVIEW

The following resources were researched to assess the history of the Site; Sanborn Fire Insurance Maps (Sanborn Maps), Historical USGS Topographic Maps, Historical Aerial Photographs, environmental lien report, and information provided by the Department of Conservation Division of Oil, Gas, and Geothermal Resources.

7.1 Review of Historical Sanborn Fire Insurance Maps

BSK retained EDR, of Milford, Connecticut to conduct a search of available historical Sanborn Fire Insurance Maps to obtain information regarding the former uses of the Site.

According to EDR's *Sanborn No Coverage Letter* dated February 6, 2007, fire insurance maps depicting the Site were not identified. The Sanborn Map Report issued by EDR indicated no

coverage for the Site and the adjoining properties. Appendix B includes a copy of the "No Coverage" Sanborn Map Report.

7.2 Review of Historical Topographic Maps

Historical topographic maps dated; 1930, 1947, 1953, 1968, and 1973 were obtained through EDR to gather information regarding the developmental history and land use of the Site and immediate vicinity. The following summarizes information obtained from the review of the subject topographic maps:

HISTORICAL TOPOGRAPHIC MAP REVIEW

Year	Site and Adjoining Property Observation
1930	Information on the subject map does not indicate the Site use; however, two apparent single-family residential structures appear on the Site. An unpaved road running north from Highway 46 toward one of the structures was located near the center of the Site and two ponding basins were located along the eastern boundary of the Site. The map indicates that paved roads extended along the same general course as Highway 46 and Palm Avenue. Properties immediately adjoining to the Site appear to be unimproved land with a few structures probably representative of single-family residences immediately south of the Site.
1947	Information on the map with respect to the Site and adjoining properties are generally the same as indicated on the 1930 map except there is an additional ponding basin located immediately adjoining to the south of the Site.
1953	Information on the map with respect to the Site and adjoining properties are generally the same as indicated on the 1947 map except there are no longer two ponding basins located along the eastern boundary of the Site.
1968	Information on the map with respect to the Site and adjoining properties are generally the same as indicated on the 1953 map.
1973	Information on the map with respect to the Site and adjoining properties is generally the same as indicated on the 1968 map.

To summarize, information on the subject map does not indicate the Site use. An unpaved road running north from Highway 46 was located near the center of the Site in 1930 and the road was converted to a "U" shaped road in 1953. Water ponding basins were located along the eastern boundary of the Site and they were no longer present in 1953. Properties immediately adjoining to the Site appear to be a rural residence immediately adjoining to the south of the Site and unimproved land to the north, east, and west.

7.3 Review of Historical Aerial Photographs

Historical aerial photographs dated 1946, 1956, 1967, 1975, 1984, 1994 and 2002 were obtained through EDR and were reviewed by BSK to gather information regarding the developmental history and land use of the Site and vicinity. The following summarizes information obtained from the review of the subject aerial photographs:

AERIAL PHOTOGRAPH REVIEW

Year/Scale	Site Use	Site and Adjoining Property Observation
1946 1" = 555'	Agricultural and Rural Residential	The Site appeared to be used for agricultural purposes. Paved roads extended along the same general course as Highway 46 and Palm Avenue. The adjoining property to the north shows vacant land, orchards, and two ponding basins. The adjoining property to the east is not visible on the photograph. The adjoining property to the south consists of a rural residence, and beyond Highway 46 to the south are additional rural residential developments. The adjoining property to the west is not visible on the photograph.
1956 1" = 555'	Agricultural and Rural Residential	The Site and adjoining properties appeared generally the same as indicated on the 1946 photograph.
1967 1" = 555'	Agricultural and Rural Residential	The Site and adjoining properties appeared generally the same as indicated on the 1956 photograph except there is a ponding basin located along the north property boundary.
1975 1" = 541'	Agricultural and Rural Residential	The Site and adjoining properties appeared generally the same as indicated on the 1967 photograph.
1984 1" = 690'	Agricultural and Rural Residential	The Site and adjoining properties appeared generally the same as indicated on the 1975 photograph.
1994 1" = 666'	Agricultural and Rural Residential	The Site and adjoining properties appeared generally the same as indicated on the 1984 photograph except there is commercial development adjacent to the southeast of the Site. In addition, there are large commercial/retail shopping centers on the properties to the south of the Site, across Highway 46.
2002 1" = 666'	Agricultural and Rural Residential	The Site and adjoining properties are generally the same as indicated on the 1994 photograph except there is further commercial development present on the southeast adjoining property.

To summarize, information on the subject Site photographs indicate the Site appeared to be used for agricultural purposes from 1946 to 2002. Two ponding basins were located on the property adjacent to the Site's northern border from 1946 to 2002. An additional ponding basin was present on the photographs along the northern boundary from 1967 to 2002. The adjoining property to the north appears to consist of vacant land, orchards, and two ponding basins. The adjoining property to the immediate southeast consisted of a rural residence from 1946 to 2002.

7.6 Review of Environmental Lien Report

BSK retained EDR to conduct a search for possible environmental liens, and other activities or use restrictions asssociated with the Site. According to EDR's February 15, 2007 Environmental Lien Seach Report, there are no environmental liens, use restrictions, or other related activies accociated with the Site. Appendix F inclused a copy of EDR's Environemtnal Lien Seach Report.

7.7 Review of Department of Conservation, Division of Oil, Gas, and Geothermal Resources

BSK contacted the California Division of Oil, Gas, and Geothermal Resources, Bakersfield Branch on February 12, 2007 to obtain information regarding pipeline/gas line(s) associated with the Site. According to Mr. Mark Gamache the office does not keep data on locations of pipelines outside of oilfields and the Site is not located within a known oilfield. In addition, maps and databases at their agency also have no record of any oil or gas wells located in the vicinity of the Site.

8.0 SITE RECONNAISSANCE OBSERVATIONS AND INTERVIEW

Mrs. Anne G. Sehm and Mr. Mike McKenzie of BSK conducted a site reconnaissance, which included an observation of the Site and adjoining properties, on February 5, 2007. Site photographs are included in Appendix A. The objective of the site reconnaissance was to obtain information indicating the likelihood of identifying RECs, including hazardous substances and petroleum products, in connection with the property and/or adjoining properties (including soils, surface waters, and groundwater).

8.1 Methodology and Limiting Conditions

The site reconnaissance included observations of the property including interior spaces, the exterior periphery, and immediately adjoining properties. In addition, a drive-by survey of nearby properties was conducted to determine if any adverse impacts to the site from these properties could be ascertained.

The following structures/conditions were observed on the Site during the reconnaissance.

SUMMARY OF SITE RECONNAISSANCE

Feature	Observed	Not Observed
Structures (existing)		X
Evidence of past uses (foundations, debris)		X
Hazardous substances and/or petroleum products (including containers)		X
Aboveground storage tanks (ASTs)		X
Underground storage tanks (USTs) or evidence of USTs		X
Potential polychlorinated biphenyl (PCB) containing equipment	X	
Wells (irrigation, domestic, dry, injection, abandoned, monitoring wells)		X
Drums (55 gallons or greater)		X
Unidentified substance containers		X
Strong, pungent, or noxious odors		X
Subsurface hydraulic equipment		X
Heating/ventilation/air conditioning (HVAC)		X
Stains or corrosion on floors, walls, or ceilings		X
Floor drains and sumps		X

Feature	Observed	Not Observed
Pits, ponds, or lagoons	X	
Stained soil and/or pavement		X
Stressed vegetation		X
Waste or wastewater discharges to surface or surface waters on Site (including stormwater)	X	
Pools of liquid likely to be hazardous materials or petroleum products		X
Septic Systems		X

The Site consists of an irregular-shaped property composed of several parcels with an approximate total of 111-acres located within the city limits of Wasco, California, near the northwest end of the city (Figure 1 and 2). The Site is located north of Highway 46 and between Palm Avenue and Magnolia Avenue. The Site includes the following Assessor Parcel Numbers (APN):

487-010-04, approximately 38 acres
487-010-51, approximately 1 acre
487-010-37, approximately 57 acres
487-290-05, approximately 1 acre
487-290-06, approximately 1 acre
487-290-13, approximately 8 acres
487-290-14, approximately 2 acres
487-290-15, approximately 2 acres
487-290-16, approximately 1 acre

APN# 487-010-42, (approximately 10 acres), adjoins the Site to the south; however, this parcel has been excluded from this Phase I ESA.

Mature walnut and almond orchards with an associated irrigation system occupy the Site (Photo 1). A ponding basin present along the northern Site boundary (Photo 2).

Eight pole-mounted electrical transformers were observed during the site reconnaissance. The transformers casings displayed no visual evidence of leakage or rusting, and the ground surface below the transformers displayed no evidence of discoloration. Southern California Edison (SCE) is the owner of the transformers. As of the date of this report, SCE has not responded to BSKs request pertaining to the date of installation for the on-site transformers. Consequently, it is unknown if the on-site transformers contain polychlorinated biphenyl (PCB) fluids. In the event of any observable future release/leak of insulating fluids from the on-site transformer, SCE should be contacted regarding the testing of the transformer for PCB fluids, or for its removal prior to any planned redevelopment of the Site.

According to Mr. Jack Farrior of L&J Farms, the current property manager, the Site has been farmed since the early 1940's by The Wedel Family until being purchased by Mr. Barkett approximately two years ago. Mr. Farrior has been associated with the Site for approximately

the last two years. He indicated that all agricultural chemicals are stored off-Site and mixed prior to entering the Site. He also stated that containers are not rinsed-out on the Site.

8.2 Adjoining Properties

During BSK's February 5, 2007, Site reconnaissance the following features were observed on the adjoining properties:

The adjoining property to the north appeared to be new-subdivision construction and fallow agricultural land. The adjoining property to the east is developed with commercial retail businesses including two gasoline stations and a new residential subdivision currently under construction. The adjoining property to the west is developed with rural residences and orchards. The adjoining property to the south is developed with commercial/retail businesses and orchards. Immediately adjoining the property to the south, just east of the center of the Site, was a rural residence with the following features:

- A two-story residential structure with piles of household debris near the structure's eastern and southern sides, a mobile home, a swimming pool, and several associated storage structures.
- A metal storage shed, a wooden storage house, and a large sheet metal covered pole barn with old railway cars located along the northern and southern sides of the pole barn.
- A concrete slab foundation for a former structure located to the south of the pole barn, along with other debris, including tires, containers, two mobile homes, and discarded vehicles.
- Additional debris within the western area of the property, including a wood pile, four corrugated steel storage cylinders, several 55-gallon drums, a 10,000-gallon AST (which appeared to be unused), and two empty tank-mounted trailers.

None of the materials or debris from this property appeared to encroach upon the boundaries of the subject Site.

9.0 INTERVIEWS

The Site owner, local regulatory officials, and others were interviewed to obtain additional Site information. The interview was used to obtain information regarding the Site history, develop a preliminary assessment of the environmental condition of the Site, and obtain information regarding the potential for soil, groundwater, and/or surface water contamination associated with the former or current generation, use, storage, handling, or disposal of hazardous materials and/or petroleum products on or in the vicinity of the Site.

NAME	FUNCTION	EMPLOYER	DATE	CONTACT
Mr. Jack Farrior	Site Contact	L&J Farms	2/5/2007	In person, by phone
Mr. Bill Barkett	Owner	Merjan Financial	2/5/2007	By Phone

NAME	FUNCTION	EMPLOYER	DATE	CONTACT
		Corporation		
Mr. Dennis McNamara	Senior Planner	City of Wasco	2/5/2007	In person
Mr. Marty Brownfiled	Specialist	Kern County Environmental Health Department	2/12/2007	By fax
Mr. Mark Gamache	Associate Oil and Gas Engineer	Department of Oil, Gas, and Geothermal Resources	2/14/2007	By fax and by phone
Ms. Mabel and Ms. Joan	Service Clerk	Kern County Building Permit	2/12/2007	By phone
Service Planner		Southern California Edison	2/14/2007	By phone

10.0 SUMMARY OF FINDINGS

Based on information obtained from the Site and Site-vicinity observations, interviews, and the review of historical and regulatory agency information, a summary of findings is presented.

Based on the available historic aerial photographs, the Site appears to have been used for agricultural purposes from as early as 1946 to this current date. Review of the 1930 topographic map did not indicate the Site use, other than the presence of two small structures.

The Site is currently occupied by walnut and almond orchards with unpaved access roads throughout the orchard. A ponding basin is also present along the northern Site boundary.

Eight pole-mounted electrical transformers were observed on the Site. No visual evidence of leakage or soil discoloration was observed around the transformers. Southern California Edison (SCE) owns the transformers. BSK contracted SCE; however to date, SCE has not responded to BSKs request pertaining to the date of installation for the on-site transformers.

The adjoining property to the north appeared to be new-subdivision residential and fallow agricultural land. The adjoining property to the east is developed with commercial/retail businesses that include two fuel stations in addition to a new residential subdivision under construction to the northeast. The adjoining property to the west is developed with rural residences and orchards. The adjoining property to the south appeared to be commercial development and orchards.

Immediately adjoining the property to the south, off of the center of the Site was a property with a rural residence and a number of storage structures, mobile homes, old railway cars, various debris piles, and unused tank-mounted trailers, drums and an AST. None of the materials or debris from this property appeared to encroach upon the boundaries of the subject Site.

11.0 CONCLUSIONS AND RECOMMENDATIONS

BSK has preformed a Phase I ESA Site Assessment in confidence with the scope and limitations of ASTM Practice E 1527-05 of the 111-acre orchard site in Wasco, California. Any exceptions to or deletions from, this practice and described in Section 2.3 of this report.

This assessment has revealed no evidence of any recognized environmental conditions in connection to the Site at this time.

12.0 LIMITATIONS

The findings presented in this report were based upon field observations during a Site reconnaissance and discussions with local regulatory agencies. Observations describe only the conditions present at the time of this investigation. The data reviewed and observations made are limited to accessible areas and available records searched during the course of this investigation. BSK cannot guarantee the completeness or accuracy of the regulatory agency records reviewed. Unless BSK otherwise expressly agrees in writing, no other party is entitled to rely upon the observations, research information, or conclusions presented in this report or in any other material obtained by BSK from the sources identified in this report. Additionally, in evaluating the property, BSK has relied in good faith upon information provided by the interview source noted in the report with respect to existing property conditions, and the historic uses of the property. It must also be understood that changing circumstances in the property usage, proposed property usage, Site zoning, and changes in the environmental status of the other nearby properties can alter the validity of conclusions and information contained in this report. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used.

This ESA report provides neither certification nor guarantee that the Site is free of hazardous-material and/or petroleum-product contamination or that there are no recognized environmental conditions associated with the Site that potentially pose an environmental risk/liability or that the Site is in compliance with current applicable federal, state, or local regulations. Findings of this ESA may have a potential for negative impact on the value or suitability of the property for the purpose intended. BSK cannot assume liability for such negative impact. No warranties, expressed or implied, are made as to the findings or conclusions presented in this report. Sampling and analytical testing of soil, groundwater, air, radon gas, biological agents and/or construction/building materials was not part of the scope of services for this ESA. This ESA did not include sampling or laboratory analysis of materials suspected of being radioactive or containing asbestos, lead, urea-formaldehyde, mold, pesticides or PCBs.

BSK ASSOCIATES

13.0 REFERENCES

Aerial Photographs obtained through Environmental Data Resources, Inc. (EDR) dated 1946, 1956, 1967, 1975, 1984, 1994, and 2002.

American Society for Testing and Materials (ASTM) E1527-05 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.*

BSK Associates, Limited Phase I Environmental Site Assessment Report, November 18, 2003

Barkett, Mr. William, Site Owner, Merjan Financial Corporation, Telecommunication, February 5th, 7th, and 14th, 2007

Farrior, Mr. Jack, L&J Farms, February 5, 2007

First American Title, from www.fastweb.com, February 5, 2007

Environmental Data Resources, Inc. (EDR), Environmental Lien and Activities Land Use Restrictions Report, ordered February 6, 2007

Kern County Building Permit Department, February 12, 2007

Kern County Environmental Health Department (KCEHD) File Review Request, February 12, 2007

Pacific Gas and Electric (PG&E), Telecommunications, February 12, 2007

Sanborn Fire Insurance Maps (Sanborn) on February 6, 2007

State of California Department of Water Resources (DWR), *Lines of Equal Elevation of Water in Wells Unconfined Aquifer, San Joaquin Valley, Spring 2003*

State of California, Division of Oil, Gas, and Geothermal, File Review of Pipeline Locations, February 14, 2007

U.S. Geological Survey Topographic Maps obtained through EDR, dated 1930, 1947, 1953, 1968 and 1973

Wasco, City of, Mr. Bill McNamara, Senior Planner, February 5, 2007

14.0 QUALIFICATIONS

This Phase I ESA was prepared by an Environmental Assessor under the direction of a California Professional Geologist, which meets the definition of an Environmental Professional as defined in §312.10 of 40 CFR 312. The assessment was conducted in general accordance with ASTM E 1527-05 for all appropriate inquiry, and generally accepted industry standards for environmental due diligence in the place and time of the preparation of this report.

If you have any questions or comments, please do not hesitate to contact the undersigned at (559)497-2880.

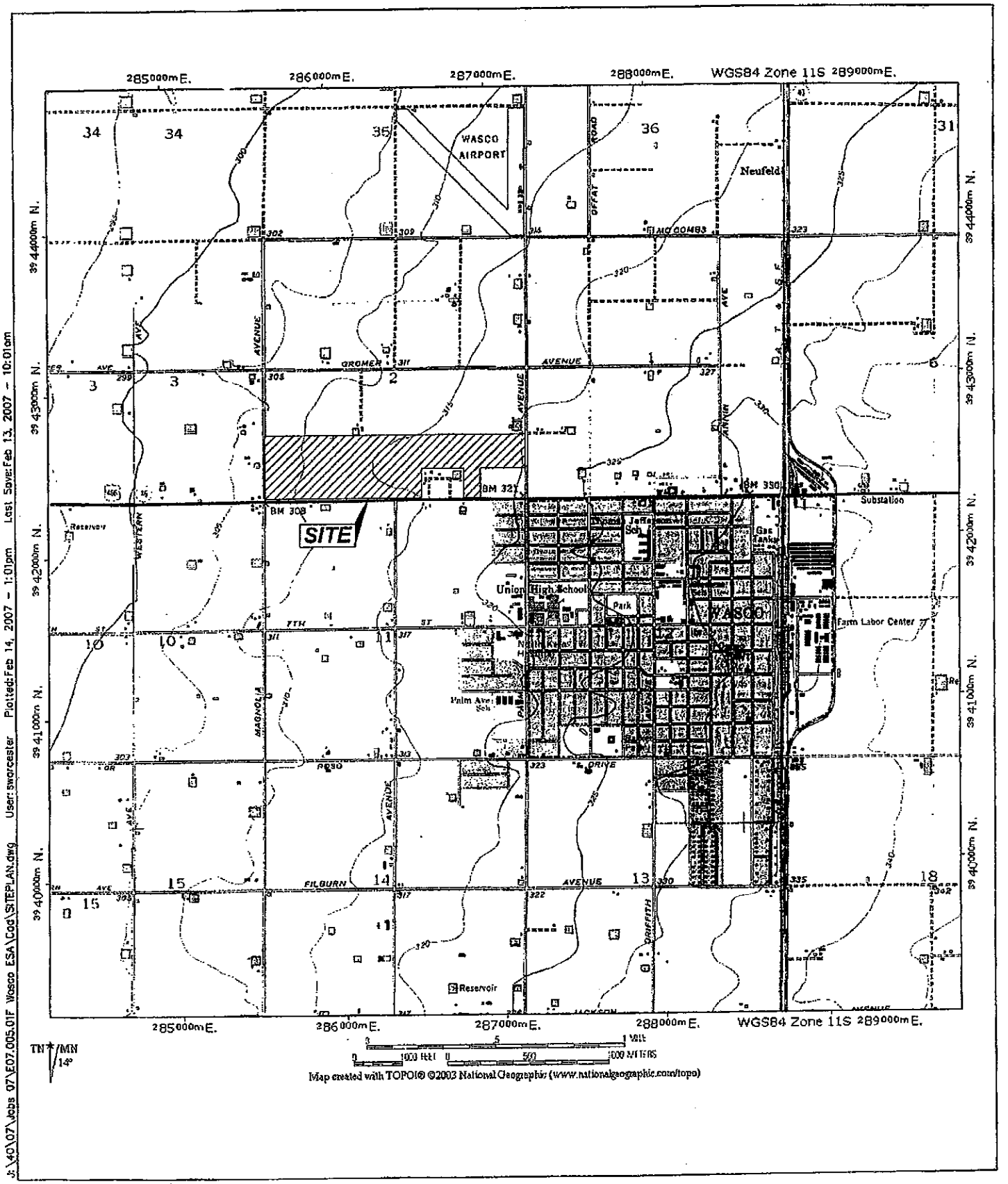
Sincerely,
BSK ASSOCIATES

FOR Anne G. Sehm
Environmental Assessor

I declare that to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in general conformance with the standards and practices set forth in 40 CFR Part 312.

FOR
C. Michael McKenzie, P.G. #8206
Project Geologist

FIGURES



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VICINITY MAP

Phase I ESA
121 Acre Farm Site
Wasco, California

BSK

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FIGURE 1

APPENDIX F

Noise Impact Assessment

NOISE IMPACT ANALYSIS REPORT
Wasco Center Project
Wasco, California

Prepared for:

Merjan Financial
800 Silverado Street, Suit 301
La Jolla, CA 92037

Prepared by:

CHAMBERS GROUP, INC.
302 Brookside Avenue
Redlands, California 92373
(909) 335-7068

April 2008

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SECTION 1:
INTRODUCTION AND SETTING

1.1 - Purpose of Report and Study Objectives

This noise study was prepared to address the potential for significant effects related to noise. The objectives of this study include the following:

- Determine if City of Wasco exterior noise standards would be exceeded;
- Discuss analytical methodology and parameters used for noise modeling and evaluate the noise level results; and
- Determine necessary mitigation measures that would maintain required noise levels.

1.2 - Project Description and Setting

1.2.1 - Site Location

The site is located north of Paso Robles (Hwy 46), east of Magnolia Avenue and west of Palm Ave in the City of Wasco, California.

1.2.2 - Development Description

The Project considered in this analysis proposes construction of the Wasco Center totaling approximately 584,000 s.f. of retail, 185,000 s.f. of residential, and 285,000 s.f. of recreation land uses on approximately 113 acres of land. The current and proposed General Plan land use designation for the site is Agricultural. The Project proposes the construction of commercial and residential land uses and therefore is not consistent with the current General Plan land use designation. A zoning change is required as part of the proposed Project.

The proposed Project will have access from Palm Avenue, Central Avenue, Magnolia Avenue, Margalo Street, and Paso Robles (Hwy 46). Palm Avenue will have three, full access driveways. Central Avenue, which divides the site, will have three full access, and three right-in/out only driveways. Magnolia Avenue will have four full access driveways. Margalo will have one full access intersection onto Center Street, portion of the Project Site. There will be one full access intersection onto Center, and one full access, and four right-in/out only driveways from Paso Robles. Trip generation rates were obtained from the Project specific *Traffic Study.* According to the *Traffic Study,* the Project will generate a total of 21,082 trip-ends per day at the 2015 buildout, with 12,563 trips added at the initial occupation in 2010.

1.2.3 - Existing Noise Levels

The Project site is currently agricultural, land. Land uses immediately adjacent to the Project site are designated as residential, commercial, and agricultural. Dominant noise sources at the Project site are vehicle traffic from Paso Robles, Magnolia Avenue, Central Avenue, and Palm Avenue.

SECTION 2:
DEFINITION OF TERMS

2.1 - Noise Terminology

Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance and, in the extreme, hearing impairment. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA. Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling a traffic volume, would increase the noise level by 3 dBA; a halving of the energy would result in a 3 dBA decrease. Table 1 shows the relationship of various noise levels to commonly experienced noise events.

Average noise levels over a period of minutes or hours are usually expressed as dB L_{eq}, or the equivalent noise level for that period of time. For example, $L_{eq(3)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed. Noise standards for land use compatibility, which are addressed in the City of Wasco General Plan Policies Statement, are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (Ldn). CNEL is a 24-hour weighted average measure of community noise. The computation of CNEL adds 5 dBA to the average hourly noise levels between 7 p.m. and 10 p.m. (evening hours), and 10 dBA to the average hourly noise levels between 10:00 p.m. and 7:00 a.m. (nighttime hours). This weighting accounts for the increased human sensitivity to noise in the evening and nighttime hours. Ldn is a very similar 24-hour weighted average that weights only the nighttime hours and not the evening hours.

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increases or decreases. A change of 5 dBA is readily perceptible, and that an increase or decrease of 10 dBA sounds twice (half) as loud (Caltrans 1998).

Table 1: Sound Levels of Typical Noise Sources and Noise Environments

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

SECTION 3: ANALYTICAL METHODOLOGY AND MODEL PARAMETERS

3.1 - Noise Standards

The City of Wasco has adopted the following noise standards:

- An area shall be recognized as noise impacted if exposed to existing or projected future noise levels at the exterior of buildings which exceed 65 dB L_{dn} (or CNEL)
- Noise sensitive land uses should be discourged in noise impacted areas unless effective mitigation measures are incorporated into the specific design of such projects to reduce exterior noise levels to 65 dB L_{dn} (or CNEL) or less, and interior living spaces to 45 dB L_{dn} (or CNEL) or less. Noise sensitive land uses include hospitals, residences, schools, churches, and other uses of a similar nature as determined by the Planning Director.
- Industrial, commercial or other noise generating land uses (including roadways, railroads, and airports) should be discouraged if resulting noise levels will exceed 65 dB L_{dn} (or CNEL) at the boundary of planned or zoned noise sensitive land uses.

The Project generated impacts to sensitive receptors in the Project area are of concern. Portions of the Project itself are considered sensitive receptors, along with neighboring residential sites. Noise generated on the proposed Project site that impacts noise sensitive receptors off-site are subject to the Noise Standards listed above, which restricts roadway noise and exterior noise levels to 65 dBA CNEL and internal noise levels to 45 dBA CNEL in any habitable room for residential designations.

3.2 - Noise Model and Noise Model Input

Future offsite peak hour traffic noise levels were modeled using the Federal Highway Administration Noise Prediction Model (FHWA-RD-77-108). The model can calculate noise levels for varying traffic volumes, mix and speeds. Output sheets from this model are included as Appendix A. Onsite noise generated by the proposed Project was modeled to assess onsite noise impacts and noise impact to the nearest sensitive receptors to the Project site. The output calculation sheets for the onsite noise are also included in Appendix A.

3.2.1 - Sensitive Receptors

Sensitive receptors are activities or land uses that may be subject to the stress of significant interference from noise. Noise sensitive land uses generally include hospitals, residences, schools, and churches. Sensitive receptors in the form of residential properties are located immediately to the north, and south (across Hwy 46) of the eastern portion of the Project site.

SECTION 4:
FINDINGS AND RECOMMENDATIONS

4.1 - Construction Noise Impacts

Development of the Project would require site preparation (i.e., potential demolition, land clearing, grading, excavation and trenching) and construction of the buildings and infrastructure. These activities typically involve the use of heavy equipment, such as graders, backhoes, and cranes. Trucks would be used to deliver equipment and building materials, and to haul away waste materials. Smaller equipment, such as air compressors, pneumatic tools, plate compactors, and concrete vibrators would also be used throughout the site during its development. This equipment would generate noise that would be heard both on and off the Project site. Table 2 lists typical construction equipment noise levels for equipment that typically would be used during construction of the proposed Project. Construction activities are carried out in discrete steps, each of which has a unique mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise levels surrounding the construction site as work progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow noise ranges to be categorized by work phase.

Table 2: Noise Associated with Typical Construction Equipment

Type of Equipment	Maximum Noise Levels Measured (dBA at 50 feet)
Grader	89
Backhoe	90
Pneumatic Tools	88
Air Compressor	86
Crane	83
Plate Compactor	89
Concrete Vibrator	85
Trucks	87
Source: Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, BBN 1971.	

The demolition, grading and site preparation phases tend to create the highest noise levels, because the noisiest construction equipment is used in these equipment phases. These equipment categories include

excavating machinery (backhoes) and earthmoving and compacting equipment (graders compactors etc.). Typical operating cycles may involve 1 or 2 minutes of full power operation producing noise levels similar to those shown in Table 2, followed by 3 or 4 minutes of lower power settings. Combined instantaneous noise levels at 50 feet from earthmoving equipment range from 73 to 96 dBA while combined L_{eq} noise levels range up to 89 dBA.

The most proximate residential area that is subject to potential construction noise impacts are the residential units adjacent to the northeastern Project boundary. Maximum 1-hour construction noise is estimated to be greater than 89 dBA CNEL at the backyards of these dwellings when grading equipment is closest to these receptors. Noise levels would be 30 to 40 dBA lower during the majority of the construction period due to lower power settings. Attenuation due to distance will occur as construction activities move away from the perimeters closest to the residential land use.

Restricting the time construction activities are allowed to occur between the hours of 7:00 A.M. to 7:00 P.M. Monday through Friday, and 9:00 A.M. and 6:00 P.M. on Saturdays and Sundays, as shown within the City of Wasco General Plan Draft Environmental Impact Report (SCH 202051154), will reduce this impact to less than significant. The time constraints on construction activities will reduce this potential impact to less than significant because construction noise will only occur during a time of day when in general people are either not at home or are awake. In addition, locating the staging areas as far away from the sensitive receptors as possible will further reduce these impacts. With the incorporation of these stipulations, impacts from construction activities will be mitigated to a level of less than significant.

Another potential noise impact resulting from construction of the proposed Project is groundborne vibrations. Perceptible groundborne vibrations are typically associated with blasting operations and potentially the use of pile drivers, neither of which will be used during construction of the proposed Project. As such, no excessive groundborne vibration would be created by the proposed Project and, therefore, impacts due to Project generated groundborne vibrations are less than significant.

4.2 - Long-Term Vehicular Noise Impacts

Outdoor Roadway Noise Levels: In reviewing project impacts, future noise levels will be compared with the City standards for residential uses since these are the noise-sensitive land uses in the project area and has the most restrictive noise standards. The City of Wasco Exterior Noise Standard for residential outdoor noise is 65 dBA CNEL.

Impacts to the project vicinity from the increase in offsite traffic was modeled based on existing, future without project, and future with project traffic volumes obtained from the Wasco Center Traffic Impact Study, Psomas, January 2008 (*Traffic Study).* The impacts were modeled using the Federal Highway Administration Noise Prediction Model (FHWA-RD-77-108). Model output is included in Appendix A.

Centerline distance was determined using the roadway right-of-way (for Hwy 46 the future 120" right-of-way) plus either the distance to the walkway of the onsite buildings where people would be most likely to encounter the roadway noise, or the distance to the nearest closest receptor, whichever was closer.

Based on this information, Project related impacts will range from an overall increase of 0.31dBA on Highway 46 east of J street, to 11.55 dBA on Magnolia Avenue between Highway 46 and the Southern Project driveway as shown in Table 3.

Table 3: Existing and Future Year 2030 Noise Impacts

Segment	Existing	Future without project	Future With Project	Change from Future With no Project	Noise Sensitive Land Use on Roadway Segment	Standard (dBA)
Highway 46 west of Magnolia	64.49	64.84	65.92	1.08	None	65
Highway 46: Magnolia to West Driveway 1	64.65	64.99	67.58	2.60	None	65
Highway 46: West Driveway 1 to West Driveway 2	64.65	64.99	67.76	2.77	Residential	65
Highway 46: West Driveway 2 to West Driveway 3	64.65	64.99	67.88	2.89	None	65
Highway 46: West Driveway 3 to Central Avenue	64.61	64.92	68.05	3.12	None	65
Highway 46: Central Avenue to East Driveway	63.60	63.94	67.34	3.40	None	65
Highway 46: East Driveway to Beckas Street	63.54	63.90	67.53	3.63	None	65
Highway 46: Beckas Street to Palm Avenue	63.78	65.69	68.65	2.96	Residential	65
Highway 46: Palm Avenue to Griffith	64.03	64.37	66.99	2.62	Residential	65
Highway 46: Griffith Avenue to F Street/South Hwy 43	63.54	64.02	65.78	1.75	Residential	65
Highway 46: F Street to J Street/North Highway 43	61.46	61.80	62.71	0.92	None	65
Highway 46: East of J Street	60.97	61.31	61.62	0.31	None	65
Magnolia Avenue: South of Highway 46	52.87	53.28	58.73	5.45	Residential	65
Magnolia Avenue: Highway 46 to South Driveway	48.70	48.83	60.39	11.55	Residential	65
Magnolia Avenue: South Driveway to North Driveway	N/A	N/A	58.62	N/A	None	65
Magnolia Avenue: North Driveway to Margalo	N/A	N/A	53.69	N/A	Residential	65
Magnolia Avenue: North of Margalo	N/A	N/A	51.84	N/A	None	65
Central Avenue: South of Highway 46	53.41	53.77	57.26	3.49	Residential	65
Central Avenue: Highway 46 to Margalo	N/A	N/A	59.71	N/A	Residential	65
Beckas Street: South of Highway 46	60.11	60.47	62.04	1.56	Residential	65
Palm Avenue: South of Highway 46	57.49	57.84	60.54	2.70	Residential	65
Palm Avenue: Highway 46 to South Driveway	58.16	58.51	61.91	3.41	Residential	65
Palm Avenue: South Driveway to North Driveway	N/A	N/A	61.45	N/A	Residential	65
Palm Avenue: North of North Driveway	N/A	N/A	60.32	N/A	Residential	65
F Street: North of Highway 46	57.81	58.18	60.40	2.22	None	65
Highway 43: South of Highway 46	63.73	64.08	65.94	1.86	None	65
Highway 43: North of Highway 46	61.23	62.55	62.88	0.33	None	65
J Street: South of Highway 46	61.23	61.57	62.55	0.98	None	65

Source: CGI 2008

Measured from roadway centerline to approximate location of the closest edge of residential property lines or school grounds, or to door of nearest commercial/industrial site. Where applicable sound walls were included in the modeling.

In order for the project to be considered significant for roadway noise, the predicted future with project noise levels must exceed the outdoor noise standard at noise-sensitive land uses (65 dBA CNEL) and project generated noise must show a change from future without project of more than 3 dBA, as 3 dBA is the threshold at which a noise becomes readily discernable to the human ear. Note that there are no roadway segments that generates roadway noise over the City Exterior Noise Standard of 65 dBA CNEL for residential land uses at a noise-sensitive land use and have Project generated noise that results in an increase of 3 dBA from the future without project noise level. There are several roadway segments that have predicted roadway noise levels over the 65 dBA CNEL Exterior Noise Standards, but the Project generated increase in noise levels is less than 3 dBA or the roadway segment does not include noise-sensitive land uses. In other cases, there are roadway segments that have a Project Generated increase above 3 dBA but total roadway noise on those roadway segments are below the 65 dBA CNEL Exterior Noise Standard for residential land uses or the roadway segment does not include noise-sensitive-land uses.

Roadway noise impacting the project's onsite noise sensitive land uses (residential townhouses) will be attenuated to below the City's Exterior Noise Standard by the a six-foot-high screen wall that will be constructed around the entire Project site as a design feature of the Project.

Since none of the noise-sensitive land uses will experience total roadway noise above the 65 dBA CNEL Exterior Noise Standard in combination with the Project increasing Roadway by 3 dBA or higher, project specific noise impacts are less than significant.

Onsite Generated Noise Levels. In addition to roadway noise impacts, the analysis needs to address noise impacts to residential land uses closest to the site related to the onsite activities. The primary sources of noise onsite include vehicles in the parking lot, delivery vehicle activity, public address system, and rooftop air conditioning/heating and ventilation units (ACHV). Some noise sources such as the delivery activities, will be periodic, while others such as ACHV units will be fairly constant throughout the day. For analysis purposes it is assumed that the daily trips generated by the Project would result in brief idling noise (1 minute per trip) and onsite traveling noise within the parking lot (at 15 mph within the parking lot). Deliveries are assumed to occur once per day. Analysis of the on-site noise levels show that a 66.57 dBA noise level for operational activities will exist at buildout. As this is above the 65 dBA CNEL City Exterior Noise Standard, the project has the potential to be significant for on-site noise impacts. The closest sensitive receptors are the on-site residential units. These are townhouses have no yards or other exterior living areas, therefore significance can be avoided by mitigating the interior noise levels of the residential units to maintain noise levels at or below the 45 dBA

CNEL City Interior Noise Standard through use of duel-pane windows with sound transmission class (STC) rating of 25 or grater.

Onsite generated noise levels at other offsite noise-sensitive land uses in the Project area will be attenuated to below the City's Exterior Noise Standard by distance and the a six-foot-high screen wall that will be constructed around the entire Project site as a design feature of the Project.

4.3 - Recommendations

Noise Mitigation 1 As a Condition of Approval, the developer shall require that all construction equipment is properly maintained with operating mufflers and air intake silencers, and prioritized the location of equipment staging and storage as far as practical from the existing residential units and school. This measure shall be implemented to the satisfaction of the City Planning Director.

Noise Mitigation 2 As a Condition of Approval, the developer shall require that all construction equipment activities are restricted to occur only between the hours of 7:00 a.m. to 7.00 p.m. Monday through Friday and 9:00 a.m. to 6:00 p.m. on weekends. This measure shall be implemented to the satisfaction of the City Planning Director.

Noise Mitigation 3 Locate construction staging areas as far from existing noise-sensitive land uses as feasible.

Noise Mitigation 4 All windows within the residential townhouses shall be duel-pane windows with sound transmission class (STC) rating of 25 or more to reduce interior noise levels at or below the 45 dBA CNEL Interior Noise Standard.

With these mitigation measures in place Project noise impacts are reduced to a level of less than significant.

SECTION 5:
REFERENCES

California Air Resources Board

2007 URBEMIS2007 Computer Model, Version 9.2.

California Department of Transportation (Caltrans)

1983 California Vehicle Emission Noise Levels (Calveno). Report No. FHWA/CA/TI-84/13. August 1983.

1998 Traffic Noise Analysis Protocol for New Highway and Reconstruction Projects, including Technical Noise Supplement. October 1998.

City of Wasco Planning Department

2002 City of Wasco General Plan, Noise Element.

2002 City of Wasco General Plan Draft Environmental Impact Report

2007 City of Wasco Municipal Code, Revised June 5, 2007.

Federal Highway Administration (FHWA)

1979 FHWA Highway Noise Prediction Model. Report No. FHWA-RD-77-108.

Governor's Office of Planning and Research

2003 State of California General Plan Guidelines, October 2003.

Psomas Engineering

2008 Traffic Impact Study for Wasco Center, January 2008.

Appendix A:
FHWA-RD-77-108 Model Output and Onsite Noise Model Worksheets

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: Magnolia to West Driveway 1

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 meters)	88 (27 meters)	176 (54 meters)	352 (107 meters)	704 (215 meters)	1408 (429 meters)	2816 (858 meters)
EXISTING										
Autos	6223	609	65.8	65.7	61.97	57.5	52.9	48.4	43.9	39.4
Med Trucks	262	26	62.8	62.7	59.01	54.5	50.0	45.5	40.9	36.4
Hvy Trucks	66	6	61.2	61.1	57.37	52.9	48.3	43.8	39.3	34.8
TOTAL	6550	641	68.4	68.3	**64.65**	60.1	55.6	51.1	46.6	42.1
FUTURE NO PROJECT										
Autos	6726	659	66.1	66.0	62.31	57.8	53.3	48.8	44.2	39.7
Med Trucks	283	28	63.1	63.0	59.35	54.8	50.3	45.8	41.3	36.8
Hvy Trucks	71	7	61.5	61.4	57.71	53.2	48.7	44.2	39.6	35.1
TOTAL	7080	693	68.8	68.7	**64.99**	60.5	56.0	51.4	46.9	42.4
FUTURE WITH PROJECT										
Autos	12236	1198	68.7	68.6	64.91	60.4	55.9	51.4	46.8	42.3
Med Trucks	515	50	65.7	65.6	61.95	57.4	52.9	48.4	43.9	39.4
Hvy Trucks	129	13	64.1	64.0	60.30	55.8	51.3	46.8	42.2	37.7
TOTAL	12880	1261	71.4	71.3	**67.58**	63.1	58.6	54.0	49.5	45.0
CHANGE FROM EXISTING										
Autos	6014	589	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Med Trucks	253	25	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Hvy Trucks	63	6	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
TOTAL	6330	620	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
CHANGE FROM FUTURE NO PROJECT										
Autos	5510	540	2.6	2.6	2.60	2.6	2.6	2.6	2.6	2.6
Med Trucks	232	23	2.6	2.6	2.60	2.6	2.6	2.6	2.6	2.6
Hvy Trucks	58	6	2.6	2.6	2.60	2.6	2.6	2.6	2.6	2.6
TOTAL	5800	568	2.6	2.6	2.60	2.6	2.6	2.6	2.6	2.6

Average speed: 80.5 km/hr= 50.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46 west of Magnolia

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) 81 (25 meters)	88 (27 meters)	176 (54 meters)	352 (107 meters)	704 (215 meters)	1408 (429 meters)	2816 (858 meters)
EXISTING										
Autos	5995	587	65.6	62.3	61.81	57.3	52.8	48.3	43.7	39.2
Med Trucks	252	25	62.6	59.4	58.85	54.3	49.8	45.3	40.8	36.3
Hvy Trucks	63	6	61.0	57.7	57.21	52.7	48.2	43.7	39.1	34.6
TOTAL	6310	618	68.3	65.0	**64.49**	60.0	55.5	50.9	46.4	41.9
FUTURE NO PROJECT										
Autos	6498	636	65.9	62.7	62.16	57.6	53.1	48.6	44.1	39.6
Med Trucks	274	27	63.0	59.7	59.20	54.7	50.2	45.7	41.1	36.6
Hvy Trucks	68	7	61.3	58.1	57.56	53.0	48.5	44.0	39.5	35.0
TOTAL	6840	670	68.6	65.4	**64.84**	60.3	55.8	51.3	46.8	42.3
FUTURE WITH PROJECT										
Autos	8341	817	67.0	63.8	63.24	58.7	54.2	49.7	45.2	40.7
Med Trucks	351	34	64.1	60.8	60.28	55.8	51.3	46.7	42.2	37.7
Hvy Trucks	88	9	62.4	59.2	58.64	54.1	49.6	45.1	40.6	36.1
TOTAL	8780	860	69.7	66.5	**65.92**	61.4	56.9	52.4	47.9	43.3
CHANGE FROM EXISTING										
Autos	2347	230	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Med Trucks	99	10	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Hvy Trucks	25	2	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
TOTAL	2470	242	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
CHANGE FROM FUTURE NO PROJECT										
Autos	1843	180	1.1	1.1	1.08	1.1	1.1	1.1	1.1	1.1
Med Trucks	78	8	1.1	1.1	1.08	1.1	1.1	1.1	1.1	1.1
Hvy Trucks	19	2	1.1	1.1	1.08	1.1	1.1	1.1	1.1	1.1
TOTAL	1940	190	1.1	1.1	1.08	1.1	1.1	1.1	1.1	1.1

Average speed: 80.5 km/hr= 50.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: West Driveway 1 to West Driveway 2

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	6223	609	65.8	65.7	61.97	57.5	52.9	48.4	43.9	39.4
Med Trucks	262	26	62.8	62.7	59.01	54.5	50.0	45.5	40.9	36.4
Hvy Trucks	66	6	61.2	61.1	57.37	52.9	48.3	43.8	39.3	34.8
TOTAL	6550	641	68.4	68.3	**64.65**	60.1	55.6	51.1	46.6	42.1
FUTURE NO PROJECT										
Autos	6726	659	66.1	66.0	62.31	57.8	53.3	48.8	44.2	39.7
Med Trucks	283	28	63.1	63.0	59.35	54.8	50.3	45.8	41.3	36.8
Hvy Trucks	71	7	61.5	61.4	57.71	53.2	48.7	44.2	39.6	35.1
TOTAL	7080	693	68.8	68.7	**64.99**	60.5	56.0	51.4	46.9	42.4
FUTURE WITH PROJECT										
Autos	12749	1248	68.9	68.8	65.09	60.6	56.1	51.5	47.0	42.5
Med Trucks	537	53	65.9	65.8	62.13	57.6	53.1	48.6	44.1	39.5
Hvy Trucks	134	13	64.3	64.2	60.48	56.0	51.5	46.9	42.4	37.9
TOTAL	13420	1314	71.5	71.4	**67.76**	63.2	58.7	54.2	49.7	45.2
CHANGE FROM EXISTING										
Autos	6527	639	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Med Trucks	275	27	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Hvy Trucks	69	7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
TOTAL	6870	673	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
CHANGE FROM FUTURE NO PROJECT										
Autos	6023	590	2.8	2.8	2.78	2.8	2.8	2.8	2.8	2.8
Med Trucks	254	25	2.8	2.8	2.78	2.8	2.8	2.8	2.8	2.8
Hvy Trucks	63	6	2.8	2.8	2.78	2.8	2.8	2.8	2.8	2.8
TOTAL	6340	621	2.8	2.8	2.78	2.8	2.8	2.8	2.8	2.8

Average speed: 80.5 km/hr= 50.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: West Driveway 2 to West Driveway 3

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	6223	609	65.8	65.7	61.97	57.5	52.9	48.4	43.9	39.4
Med Trucks	262	26	62.8	62.7	59.01	54.5	50.0	45.5	40.9	36.4
Hvy Trucks	66	6	61.2	61.1	57.37	52.9	48.3	43.8	39.3	34.8
TOTAL	6550	641	68.4	68.3	**64.65**	60.1	55.6	51.1	46.6	42.1
FUTURE NO PROJECT										
Autos	6726	659	66.1	66.0	62.31	57.8	53.3	48.8	44.2	39.7
Med Trucks	283	28	63.1	63.0	59.35	54.8	50.3	45.8	41.3	36.8
Hvy Trucks	71	7	61.5	61.4	57.71	53.2	48.7	44.2	39.6	35.1
TOTAL	7080	693	68.8	68.7	**64.99**	60.5	56.0	51.4	46.9	42.4
FUTURE WITH PROJECT										
Autos	13091	1282	69.0	68.9	65.20	60.7	56.2	51.7	47.1	42.6
Med Trucks	551	54	66.0	65.9	62.24	57.7	53.2	48.7	44.2	39.7
Hvy Trucks	138	13	64.4	64.3	60.60	56.1	51.6	47.1	42.5	38.0
TOTAL	13780	1349	71.7	71.6	**67.88**	63.4	58.8	54.3	49.8	45.3
CHANGE FROM EXISTING										
Autos	6869	673	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Med Trucks	289	28	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Hvy Trucks	72	7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
TOTAL	7230	708	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
CHANGE FROM FUTURE NO PROJECT										
Autos	6365	623	2.9	2.9	2.89	2.9	2.9	2.9	2.9	2.9
Med Trucks	268	26	2.9	2.9	2.89	2.9	2.9	2.9	2.9	2.9
Hvy Trucks	67	7	2.9	2.9	2.89	2.9	2.9	2.9	2.9	2.9
TOTAL	6700	656	2.9	2.9	2.89	2.9	2.9	2.9	2.9	2.9

Average speed: 80.5 km/hr= 50.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: West Driveway 3 to Central Avenue

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	6166	604	65.7	65.6	61.93	57.4	52.9	48.4	43.9	39.4
Med Trucks	260	25	62.8	62.7	58.97	54.5	49.9	45.4	40.9	36.4
Hvy Trucks	65	6	61.1	61.0	57.33	52.8	48.3	43.8	39.3	34.8
TOTAL	6490	635	68.4	68.3	**64.61**	60.1	55.6	51.1	46.5	42.0
FUTURE NO PROJECT										
Autos	6631	649	66.0	65.9	62.25	57.7	53.2	48.7	44.2	39.7
Med Trucks	279	27	63.1	63.0	59.29	54.8	50.3	45.7	41.2	36.7
Hvy Trucks	70	7	61.4	61.3	57.64	53.1	48.6	44.1	39.6	35.1
TOTAL	6980	683	68.7	68.6	**64.92**	60.4	55.9	51.4	46.9	42.3
FUTURE WITH PROJECT										
Autos	13614	1333	69.2	69.1	65.37	60.9	56.3	51.8	47.3	42.8
Med Trucks	573	56	66.2	66.1	62.41	57.9	53.4	48.9	44.3	39.8
Hvy Trucks	143	14	64.6	64.5	60.77	56.3	51.7	47.2	42.7	38.2
TOTAL	14330	1403	71.8	71.7	**68.05**	63.5	59.0	54.5	50.0	45.5
CHANGE FROM EXISTING										
Autos	7448	729	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Med Trucks	314	31	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Hvy Trucks	78	8	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
TOTAL	7840	768	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
CHANGE FROM FUTURE NO PROJECT										
Autos	6983	684	3.1	3.1	3.12	3.1	3.1	3.1	3.1	3.1
Med Trucks	294	29	3.1	3.1	3.12	3.1	3.1	3.1	3.1	3.1
Hvy Trucks	74	7	3.1	3.1	3.12	3.1	3.1	3.1	3.1	3.1
TOTAL	7350	720	3.1	3.1	3.12	3.1	3.1	3.1	3.1	3.1

Average speed: 80.5 km/hr= 50.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: Central Avenue to East Driveway

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 meters)	88 (27)	176 (54)	352 (107)	704 (215)	1408 (429)	2816 (858)
EXISTING										
Autos	6318	619	64.5	64.4	60.75	56.2	51.7	47.2	42.7	38.2
Med Trucks	266	26	61.8	61.7	57.98	53.5	49.0	44.4	39.9	35.4
Hvy Trucks	67	7	60.6	60.4	56.77	52.3	47.7	43.2	38.7	34.2
TOTAL	6650	651	67.4	67.3	**63.60**	59.1	54.6	50.1	45.5	41.0
FUTURE NO PROJECT										
Autos	6821	668	64.9	64.8	61.08	56.6	52.1	47.5	43.0	38.5
Med Trucks	287	28	62.1	62.0	58.32	53.8	49.3	44.8	40.3	35.7
Hvy Trucks	72	7	60.9	60.8	57.10	52.6	48.1	43.6	39.0	34.5
TOTAL	7180	703	67.7	67.6	**63.94**	59.4	54.9	50.4	45.9	41.4
FUTURE WITH PROJECT										
Autos	14925	1461	68.3	68.2	64.48	60.0	55.5	50.9	46.4	41.9
Med Trucks	628	62	65.5	65.4	61.72	57.2	52.7	48.2	43.7	39.1
Hvy Trucks	157	15	64.3	64.2	60.50	56.0	51.5	47.0	42.4	37.9
TOTAL	15710	1538	71.1	71.0	**67.34**	62.8	58.3	53.8	49.3	44.8
CHANGE FROM EXISTING										
Autos	8607	843	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Med Trucks	362	35	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Hvy Trucks	91	9	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
TOTAL	9060	887	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
CHANGE FROM FUTURE NO PROJECT										
Autos	8104	793	3.4	3.4	3.40	3.4	3.4	3.4	3.4	3.4
Med Trucks	341	33	3.4	3.4	3.40	3.4	3.4	3.4	3.4	3.4
Hvy Trucks	85	8	3.4	3.4	3.40	3.4	3.4	3.4	3.4	3.4
TOTAL	8530	835	3.4	3.4	3.40	3.4	3.4	3.4	3.4	3.4

Average speed: 72.4 km/hr= 45.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: East Driveway to Beckas Street

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 meters)	88 (27 meters)	176 (54 meters)	352 (107 meters)	704 (215 meters)	1408 (429 meters)	2816 (858 meters)
EXISTING										
Autos	6232	610	64.5	64.4	60.69	56.2	51.7	47.1	42.6	38.1
Med Trucks	262	26	61.7	61.6	57.92	53.4	48.9	44.4	39.9	35.3
Hvy Trucks	66	6	60.5	60.4	56.71	52.2	47.7	43.2	38.6	34.1
TOTAL	6560	642	67.3	67.2	**63.54**	59.0	54.5	50.0	45.5	41.0
FUTURE NO PROJECT										
Autos	6764	662	64.8	64.7	61.05	56.5	52.0	47.5	43.0	38.5
Med Trucks	285	28	62.1	62.0	58.28	53.8	49.2	44.7	40.2	35.7
Hvy Trucks	71	7	60.8	60.7	57.06	52.5	48.0	43.5	39.0	34.5
TOTAL	7120	697	67.7	67.6	**63.90**	59.4	54.9	50.4	45.8	41.3
FUTURE WITH PROJECT										
Autos	15609	1528	68.5	68.4	64.68	60.2	55.6	51.1	46.6	42.1
Med Trucks	657	64	65.7	65.6	61.91	57.4	52.9	48.4	43.8	39.3
Hvy Trucks	164	16	64.5	64.4	60.69	56.2	51.7	47.1	42.6	38.1
TOTAL	16430	1609	71.3	71.2	**67.53**	63.0	58.5	54.0	49.5	45.0
CHANGE FROM EXISTING										
Autos	9377	918	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Med Trucks	395	39	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Hvy Trucks	99	10	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
TOTAL	9870	966	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
CHANGE FROM FUTURE NO PROJECT										
Autos	8845	866	3.6	3.6	3.63	3.6	3.6	3.6	3.6	3.6
Med Trucks	372	36	3.6	3.6	3.63	3.6	3.6	3.6	3.6	3.6
Hvy Trucks	93	9	3.6	3.6	3.63	3.6	3.6	3.6	3.6	3.6
TOTAL	9310	912	3.6	3.6	3.63	3.6	3.6	3.6	3.6	3.6

Average speed: 72.4 km/hr= 45.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: Beckas Street to Palm Avenue

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	6584	645	64.7	64.6	60.93	56.4	51.9	47.4	42.9	38.4
Med Trucks	277	27	61.9	61.8	58.16	53.6	49.1	44.6	40.1	35.6
Hvy Trucks	69	7	60.7	60.6	56.94	52.4	47.9	43.4	38.9	34.4
TOTAL	6930	679	67.6	67.5	**63.78**	59.3	54.8	50.2	45.7	41.2
FUTURE NO PROJECT										
Autos	10222	1001	66.6	66.5	62.84	58.3	53.8	49.3	44.8	40.3
Med Trucks	430	42	63.9	63.8	60.07	55.6	51.0	46.5	42.0	37.5
Hvy Trucks	108	11	62.6	62.5	58.86	54.3	49.8	45.3	40.8	36.3
TOTAL	10760	1054	69.5	69.4	**65.69**	61.2	56.7	52.1	47.6	43.1
FUTURE WITH PROJECT										
Autos	20216	1979	69.6	69.5	65.80	61.3	56.8	52.3	47.7	43.2
Med Trucks	851	83	66.8	66.7	63.03	58.5	54.0	49.5	45.0	40.5
Hvy Trucks	213	21	65.6	65.5	61.82	57.3	52.8	48.3	43.8	39.2
TOTAL	21280	2084	72.4	72.3	**68.65**	64.1	59.6	55.1	50.6	46.1
CHANGE FROM EXISTING										
Autos	13633	1335	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Med Trucks	574	56	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Hvy Trucks	144	14	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
TOTAL	14350	1405	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
CHANGE FROM FUTURE NO PROJECT										
Autos	9994	979	3.0	3.0	2.96	3.0	3.0	3.0	3.0	3.0
Med Trucks	421	41	3.0	3.0	2.96	3.0	3.0	3.0	3.0	3.0
Hvy Trucks	105	10	3.0	3.0	2.96	3.0	3.0	3.0	3.0	3.0
TOTAL	10520	1030	3.0	3.0	2.96	3.0	3.0	3.0	3.0	3.0

Average speed: 72.4 km/hr= 45.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: Palm Avenue to Griffith

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 meters)	88 (27 meters)	176 (54 meters)	352 (107 meters)	704 (215 meters)	1408 (429 meters)	2816 (858 meters)
EXISTING										
Autos	9253	906	64.8	64.7	60.97	56.5	51.9	47.4	42.9	38.4
Med Trucks	390	38	62.2	62.1	58.42	53.9	49.4	44.9	40.4	35.8
Hvy Trucks	97	10	61.5	61.4	57.68	53.2	48.6	44.1	39.6	35.1
TOTAL	9740	954	67.8	67.7	**64.03**	59.5	55.0	50.5	46.0	41.5
FUTURE NO PROJECT										
Autos	10004	980	65.1	65.0	61.31	56.8	52.3	47.8	43.2	38.7
Med Trucks	421	41	62.5	62.4	58.76	54.2	49.7	45.2	40.7	36.2
Hvy Trucks	105	10	61.8	61.7	58.01	53.5	49.0	44.5	40.0	35.4
TOTAL	10530	1031	68.2	68.1	**64.37**	59.9	55.3	50.8	46.3	41.8
FUTURE WITH PROJECT										
Autos	18278	1790	67.7	67.6	63.93	59.4	54.9	50.4	45.9	41.4
Med Trucks	770	75	65.2	65.1	61.37	56.9	52.3	47.8	43.3	38.8
Hvy Trucks	192	19	64.4	64.3	60.63	56.1	51.6	47.1	42.6	38.1
TOTAL	19240	1884	70.8	70.7	**66.99**	62.5	58.0	53.4	48.9	44.4
CHANGE FROM EXISTING										
Autos	9025	884	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Med Trucks	380	37	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Hvy Trucks	95	9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
TOTAL	9500	930	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
CHANGE FROM FUTURE NO PROJECT										
Autos	8275	810	2.6	2.6	2.62	2.6	2.6	2.6	2.6	2.6
Med Trucks	348	34	2.6	2.6	2.62	2.6	2.6	2.6	2.6	2.6
Hvy Trucks	87	9	2.6	2.6	2.62	2.6	2.6	2.6	2.6	2.6
TOTAL	8710	853	2.6	2.6	2.62	2.6	2.6	2.6	2.6	2.6

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix: 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: Griffith Avenue to F Street/South Hwy 43

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	8265	809	64.3	64.2	60.48	56.0	51.4	46.9	42.4	37.9
Med Trucks	348	34	61.7	61.6	57.93	53.4	48.9	44.4	39.9	35.4
Hvy Trucks	87	9	61.0	60.9	57.19	52.7	48.2	43.6	39.1	34.6
TOTAL	8700	852	67.3	67.2	**63.54**	59.0	54.5	50.0	45.5	41.0
FUTURE NO PROJECT										
Autos	9234	904	64.7	64.6	60.96	56.4	51.9	47.4	42.9	38.4
Med Trucks	389	38	62.2	62.1	58.41	53.9	49.4	44.9	40.3	35.8
Hvy Trucks	97	10	61.5	61.3	57.67	53.2	48.6	44.1	39.6	35.1
TOTAL	9720	952	67.8	67.7	**64.02**	59.5	55.0	50.5	46.0	41.4
FUTURE WITH PROJECT										
Autos	13823	1353	66.5	66.4	62.71	58.2	53.7	49.2	44.7	40.1
Med Trucks	582	57	63.9	63.8	60.16	55.6	51.1	46.6	42.1	37.6
Hvy Trucks	146	14	63.2	63.1	59.42	54.9	50.4	45.9	41.4	36.8
TOTAL	14550	1425	69.6	69.5	**65.78**	61.3	56.7	52.2	47.7	43.2
CHANGE FROM EXISTING										
Autos	5558	544	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Med Trucks	234	23	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Hvy Trucks	59	6	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
TOTAL	5850	573	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
CHANGE FROM FUTURE NO PROJECT										
Autos	4589	449	1.8	1.8	1.75	1.8	1.8	1.8	1.8	1.8
Med Trucks	193	19	1.8	1.8	1.75	1.8	1.8	1.8	1.8	1.8
Hvy Trucks	48	5	1.8	1.8	1.75	1.8	1.8	1.8	1.8	1.8
TOTAL	4830	473	1.8	1.8	1.75	1.8	1.8	1.8	1.8	1.8

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: F Street to J Street/North Highway 43

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	5121	501	62.2	62.1	58.4	53.9	49.4	44.9	40.3	35.8
Med Trucks	216	21	59.6	59.5	55.8	51.3	46.8	42.3	37.8	33.3
Hvy Trucks	54	5	58.9	58.8	55.1	50.6	46.1	41.6	37.0	32.5
TOTAL	5390	528	65.2	65.1	**61.5**	56.9	52.4	47.9	43.4	38.9
FUTURE NO PROJECT										
Autos	5529	541	62.5	62.4	58.7	54.2	49.7	45.2	40.7	36.2
Med Trucks	233	23	60.0	59.9	56.2	51.7	47.2	42.6	38.1	33.6
Hvy Trucks	58	6	59.2	59.1	55.4	50.9	46.4	41.9	37.4	32.9
TOTAL	5820	570	65.6	65.5	**61.8**	57.3	52.8	48.2	43.7	39.2
FUTURE WITH PROJECT										
Autos	6831	669	63.4	63.3	59.7	55.1	50.6	46.1	41.6	37.1
Med Trucks	288	28	60.9	60.8	57.1	52.6	48.1	43.6	39.0	34.5
Hvy Trucks	72	7	60.1	60.0	56.4	51.8	47.3	42.8	38.3	33.8
TOTAL	7190	704	66.5	66.4	**62.7**	58.2	53.7	49.2	44.7	40.1
CHANGE FROM EXISTING										
Autos	1710	167	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Med Trucks	72	7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Hvy Trucks	18	2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TOTAL	1800	176	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
CHANGE FROM FUTURE NO PROJECT										
Autos	1302	127	0.9	0.9	0.92	0.9	0.9	0.9	0.9	0.9
Med Trucks	55	5	0.9	0.9	0.92	0.9	0.9	0.9	0.9	0.9
Hvy Trucks	14	1	0.9	0.9	0.92	0.9	0.9	0.9	0.9	0.9
TOTAL	1370	134	0.9	0.9	0.92	0.9	0.9	0.9	0.9	0.9

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 46: East of J Street

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	4570	447	61.7	61.6	57.9	53.4	48.9	44.4	39.8	35.3
Med Trucks	192	19	59.1	59.0	55.4	50.8	46.3	41.8	37.3	32.8
Hvy Trucks	48	5	58.4	58.3	54.6	50.1	45.6	41.1	36.6	32.0
TOTAL	4810	471	64.8	64.7	**61.0**	56.5	51.9	47.4	42.9	38.4
FUTURE NO PROJECT										
Autos	4940	484	62.0	61.9	58.2	53.7	49.2	44.7	40.2	35.7
Med Trucks	208	20	59.5	59.4	55.7	51.2	46.7	42.1	37.6	33.1
Hvy Trucks	52	5	58.7	58.6	55.0	50.4	45.9	41.4	36.9	32.4
TOTAL	5200	509	65.1	65.0	**61.3**	56.8	52.3	47.8	43.2	38.7
FUTURE WITH PROJECT										
Autos	5311	520	62.3	62.2	58.6	54.0	49.5	45.0	40.5	36.0
Med Trucks	224	22	59.8	59.7	56.0	51.5	47.0	42.5	37.9	33.4
Hvy Trucks	56	5	59.1	58.9	55.3	50.7	46.2	41.7	37.2	32.7
TOTAL	5590	547	65.4	65.3	**61.6**	57.1	52.6	48.1	43.6	39.0
CHANGE FROM EXISTING										
Autos	741	73	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Med Trucks	31	3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Hvy Trucks	8	1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
TOTAL	780	76	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
CHANGE FROM FUTURE NO PROJECT										
Autos	371	36	0.3	0.3	0.31	0.3	0.3	0.3	0.3	0.3
Med Trucks	16	2	0.3	0.3	0.31	0.3	0.3	0.3	0.3	0.3
Hvy Trucks	4	0	0.3	0.3	0.31	0.3	0.3	0.3	0.3	0.3
TOTAL	390	38	0.3	0.3	0.31	0.3	0.3	0.3	0.3	0.3

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Magnolia Avenue: South of Highway 46

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 meters)	77 (23 meters)	154 (47 meters)	308 (94 meters)	616 (188 meters)	1232 (376 meters)	2464 (751 meters)
EXISTING										
Autos	580	57	52.7	52.6	49.8	45.3	40.8	36.3	31.7	27.2
Med Trucks	24	2	50.2	50.1	47.3	42.7	38.2	33.7	29.2	24.7
Hvy Trucks	6	1	49.4	49.3	46.5	42.0	37.5	33.0	28.5	23.9
TOTAL	610	60	55.8	55.7	**52.9**	48.4	43.8	39.3	34.8	30.3
FUTURE NO PROJECT										
Autos	637	62	53.1	53.0	50.2	45.7	41.2	36.7	32.2	27.6
Med Trucks	27	3	50.6	50.5	47.7	43.1	38.6	34.1	29.6	25.1
Hvy Trucks	7	1	49.8	49.7	46.9	42.4	37.9	33.4	28.9	24.3
TOTAL	670	66	56.2	56.1	**53.3**	48.8	44.2	39.7	35.2	30.7
FUTURE WITH PROJECT										
Autos	2233	219	58.6	58.5	55.7	51.2	46.6	42.1	37.6	33.1
Med Trucks	94	9	56.0	55.9	53.1	48.6	44.1	39.6	35.1	30.5
Hvy Trucks	24	2	55.3	55.2	52.4	47.9	43.3	38.8	34.3	29.8
TOTAL	2350	230	61.6	61.5	**58.7**	54.2	49.7	45.2	40.7	36.2
CHANGE FROM EXISTING										
Autos	1653	162	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Med Trucks	70	7	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Hvy Trucks	17	2	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
TOTAL	1740	170	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
CHANGE FROM FUTURE NO PROJECT										
Autos	1596	156	5.4	5.4	5.45	5.4	5.4	5.4	5.4	5.4
Med Trucks	67	7	5.4	5.4	5.45	5.4	5.4	5.4	5.4	5.4
Hvy Trucks	17	2	5.4	5.4	5.45	5.4	5.4	5.4	5.4	5.4
TOTAL	1680	165	5.4	5.4	5.45	5.4	5.4	5.4	5.4	5.4

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Magnolia Avenue: Highway 46 to South Driveway

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	77 / 23	154 / 47	308 / 94	616 / 188	1232 / 376	2464 / 751
EXISTING										
Autos	304	30	48.3	48.2	45.4	40.9	36.3	31.8	27.3	22.8
Med Trucks	13	1	46.0	45.9	43.1	38.6	34.0	29.5	25.0	20.5
Hvy Trucks	3	0	45.8	45.7	42.9	38.3	33.8	29.3	24.8	20.3
TOTAL	320	31	51.6	51.5	**48.7**	44.2	39.7	35.2	30.6	26.1
FUTURE NO PROJECT										
Autos	314	31	48.4	48.3	45.5	41.0	36.5	32.0	27.4	22.9
Med Trucks	13	1	46.1	46.0	43.2	38.7	34.2	29.7	25.1	20.6
Hvy Trucks	3	0	45.9	45.8	43.0	38.5	34.0	29.5	24.9	20.4
TOTAL	330	32	51.7	51.6	**48.8**	44.3	39.8	35.3	30.8	26.3
FUTURE WITH PROJECT										
Autos	4484	439	60.0	59.9	57.1	52.5	48.0	43.5	39.0	34.5
Med Trucks	189	18	57.7	57.6	54.8	50.2	45.7	41.2	36.7	32.2
Hvy Trucks	47	5	57.5	57.4	54.6	50.0	45.5	41.0	36.5	32.0
TOTAL	4720	462	63.3	63.2	**60.4**	55.9	51.4	46.8	42.3	37.8
CHANGE FROM EXISTING										
Autos	4180	409	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
Med Trucks	176	17	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
Hvy Trucks	44	4	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
TOTAL	4400	431	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
CHANGE FROM FUTURE NO PROJECT										
Autos	4171	408	11.6	11.6	11.55	11.6	11.6	11.6	11.6	11.6
Med Trucks	176	17	11.6	11.6	11.55	11.6	11.6	11.6	11.6	11.6
Hvy Trucks	44	4	11.6	11.6	11.55	11.6	11.6	11.6	11.6	11.6
TOTAL	4390	430	11.6	11.6	11.55	11.6	11.6	11.6	11.6	11.6

Average speed: 56.3 km/hr= 35.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Magnolia Avenue: South Driveway to North Driveway

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 meters)	77 (23 meters)	154 (47 meters)	308 (94 meters)	616 (188 meters)	1232 (376 meters)	2464 (751 meters)
EXISTING										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE NO PROJECT										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE WITH PROJECT										
Autos	2983	292	58.2	58.1	55.3	50.8	46.3	41.7	37.2	32.7
Med Trucks	126	12	55.9	55.8	53.0	48.5	44.0	39.4	34.9	30.4
Hvy Trucks	31	3	55.7	55.6	52.8	48.3	43.8	39.2	34.7	30.2
TOTAL	3140	307	61.5	61.4	**58.6**	54.1	49.6	45.1	40.6	36.0
CHANGE FROM EXISTING										
Autos	2983	292	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	126	12	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	31	3	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	3140	307	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
CHANGE FROM FUTURE NO PROJECT										
Autos	2983	292	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	126	12	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	31	3	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	3140	307	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

Average speed: 56.3 km/hr= 35.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Magnolia Avenue: North Driveway to Margalo

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	77 / 23	154 / 47	308 / 94	616 / 188	1232 / 376	2464 / 751
EXISTING										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE NO PROJECT										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE WITH PROJECT										
Autos	960	94	53.3	53.2	50.4	45.9	41.3	36.8	32.3	27.8
Med Trucks	40	4	51.0	50.9	48.1	43.5	39.0	34.5	30.0	25.5
Hvy Trucks	10	1	50.8	50.7	47.9	43.3	38.8	34.3	29.8	25.3
TOTAL	1010	99	56.6	56.5	**53.7**	49.2	44.7	40.1	35.6	31.1
CHANGE FROM EXISTING										
Autos	960	94	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	40	4	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	10	1	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	1010	99	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
CHANGE FROM FUTURE NO PROJECT										
Autos	960	94	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	40	4	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	10	1	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	1010	99	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

Average speed: 56.3 km/hr= 35.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Magnolia Avenue: North of Margalo

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 meters)	77 (23 meters)	154 (47 meters)	308 (94 meters)	616 (188 meters)	1232 (376 meters)	2464 (751 meters)
EXISTING										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE NO PROJECT										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE WITH PROJECT										
Autos	627	61	51.4	51.3	48.5	44.0	39.5	35.0	30.5	25.9
Med Trucks	26	3	49.1	49.0	46.2	41.7	37.2	32.7	28.1	23.6
Hvy Trucks	7	1	48.9	48.8	46.0	41.5	37.0	32.5	27.9	23.4
TOTAL	660	65	54.8	54.7	**51.8**	47.3	42.8	38.3	33.8	29.3
CHANGE FROM EXISTING										
Autos	627	61	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	26	3	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	7	1	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	660	65	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
CHANGE FROM FUTURE NO PROJECT										
Autos	627	61	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	26	3	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	7	1	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	660	65	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

Average speed: 56.3 km/hr= 35.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Central Avenue: South of Highway 46

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	110 / 34	220 / 67	440 / 134	880 / 268	1760 / 536	3520 / 1073
EXISTING										
Autos	1121	110	55.6	55.5	50.4	45.8	41.3	36.8	32.3	27.8
Med Trucks	47	5	53.0	52.9	47.8	43.3	38.8	34.3	29.7	25.2
Hvy Trucks	12	1	52.3	52.2	47.1	42.5	38.0	33.5	29.0	24.5
TOTAL	1180	116	58.7	58.5	**53.4**	48.9	44.4	39.9	35.4	30.8
FUTURE NO PROJECT										
Autos	1216	119	55.9	55.8	50.7	46.2	41.7	37.2	32.6	28.1
Med Trucks	51	5	53.4	53.3	48.2	43.6	39.1	34.6	30.1	25.6
Hvy Trucks	13	1	52.6	52.5	47.4	42.9	38.4	33.9	29.3	24.8
TOTAL	1280	125	59.0	58.9	**53.8**	49.2	44.7	40.2	35.7	31.2
FUTURE WITH PROJECT										
Autos	2717	266	59.4	59.3	54.2	49.7	45.2	40.6	36.1	31.6
Med Trucks	114	11	56.9	56.8	51.6	47.1	42.6	38.1	33.6	29.1
Hvy Trucks	29	3	56.1	56.0	50.9	46.4	41.9	37.4	32.8	28.3
TOTAL	2860	280	62.5	62.4	**57.3**	52.7	48.2	43.7	39.2	34.7
CHANGE FROM EXISTING										
Autos	1596	156	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Med Trucks	67	7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Hvy Trucks	17	2	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
TOTAL	1680	165	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
CHANGE FROM FUTURE NO PROJECT										
Autos	1501	147	3.5	3.5	3.49	3.5	3.5	3.5	3.5	3.5
Med Trucks	63	6	3.5	3.5	3.49	3.5	3.5	3.5	3.5	3.5
Hvy Trucks	16	2	3.5	3.5	3.49	3.5	3.5	3.5	3.5	3.5
TOTAL	1580	155	3.5	3.5	3.49	3.5	3.5	3.5	3.5	3.5

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Central Avenue: Highway 46 to Margalo

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	110 / 34	220 / 67	440 / 134	880 / 268	1760 / 536	3520 / 1073
EXISTING										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE NO PROJECT										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE WITH PROJECT										
Autos	6546	641	61.6	61.5	56.4	51.9	47.4	42.8	38.3	33.8
Med Trucks	276	27	59.3	59.2	54.1	49.6	45.0	40.5	36.0	31.5
Hvy Trucks	69	7	59.1	59.0	53.9	49.4	44.8	40.3	35.8	31.3
TOTAL	6890	675	64.9	64.8	**59.7**	55.2	50.7	46.2	41.6	37.1
CHANGE FROM EXISTING										
Autos	6546	641	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	276	27	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	69	7	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	6890	675	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
CHANGE FROM FUTURE NO PROJECT										
Autos	6546	641	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	276	27	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	69	7	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	6890	675	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

Average speed: 56.3 km/hr= 35.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Beckas Street: South of Highway 46

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	43 / 13	86 / 26	172 / 52	344 / 105	688 / 210	1376 / 419
EXISTING										
Autos	1758	172	55.9	55.8	56.8	52.3	47.8	43.2	38.7	34.2
Med Trucks	74	7	53.6	53.5	54.5	50.0	45.5	40.9	36.4	31.9
Hvy Trucks	19	2	53.4	53.3	54.3	49.8	45.2	40.7	36.2	31.7
TOTAL	1850	181	59.2	59.1	**60.1**	55.6	51.1	46.6	42.1	37.5
FUTURE NO PROJECT										
Autos	1910	187	56.3	56.2	57.2	52.6	48.1	43.6	39.1	34.6
Med Trucks	80	8	54.0	53.9	54.8	50.3	45.8	41.3	36.8	32.3
Hvy Trucks	20	2	53.8	53.7	54.6	50.1	45.6	41.1	36.6	32.1
TOTAL	2010	197	59.6	59.5	**60.5**	56.0	51.4	46.9	42.4	37.9
FUTURE WITH PROJECT										
Autos	2736	268	57.8	57.7	58.7	54.2	49.7	45.2	40.7	36.1
Med Trucks	115	11	55.5	55.4	56.4	51.9	47.4	42.9	38.3	33.8
Hvy Trucks	29	3	55.3	55.2	56.2	51.7	47.2	42.7	38.1	33.6
TOTAL	2880	282	61.2	61.1	**62.0**	57.5	53.0	48.5	44.0	39.5
CHANGE FROM EXISTING										
Autos	979	96	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Med Trucks	41	4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Hvy Trucks	10	1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
TOTAL	1030	101	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
CHANGE FROM FUTURE NO PROJECT										
Autos	827	81	1.6	1.6	1.56	1.6	1.6	1.6	1.6	1.6
Med Trucks	35	3	1.6	1.6	1.56	1.6	1.6	1.6	1.6	1.6
Hvy Trucks	9	1	1.6	1.6	1.56	1.6	1.6	1.6	1.6	1.6
TOTAL	870	85	1.6	1.6	1.56	1.6	1.6	1.6	1.6	1.6

Average speed: 56.3 km/hr= 35.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Palm Avenue: South of Highway 46

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	2812	275	58.0	57.9	54.2	49.7	45.1	40.6	36.1	31.6
Med Trucks	118	12	55.6	55.5	51.9	47.3	42.8	38.3	33.8	29.3
Hvy Trucks	30	3	55.4	55.3	51.7	47.1	42.6	38.1	33.6	29.1
TOTAL	2960	290	61.3	61.2	**57.5**	53.0	48.5	43.9	39.4	34.9
FUTURE NO PROJECT										
Autos	3050	299	58.3	58.2	54.5	50.0	45.5	41.0	36.5	31.9
Med Trucks	128	13	56.0	55.9	52.2	47.7	43.2	38.7	34.1	29.6
Hvy Trucks	32	3	55.8	55.7	52.0	47.5	43.0	38.5	33.9	29.4
TOTAL	3210	314	61.6	61.5	**57.8**	53.3	48.8	44.3	39.8	35.3
FUTURE WITH PROJECT										
Autos	5681	556	61.0	60.9	57.2	52.7	48.2	43.7	39.2	34.6
Med Trucks	239	23	58.7	58.6	54.9	50.4	45.9	41.4	36.9	32.3
Hvy Trucks	60	6	58.5	58.4	54.7	50.2	45.7	41.2	36.6	32.1
TOTAL	5980	586	64.3	64.2	**60.5**	56.0	51.5	47.0	42.5	38.0
CHANGE FROM EXISTING										
Autos	2869	281	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Med Trucks	121	12	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Hvy Trucks	30	3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
TOTAL	3020	296	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
CHANGE FROM FUTURE NO PROJECT										
Autos	2632	258	2.7	2.7	2.70	2.7	2.7	2.7	2.7	2.7
Med Trucks	111	11	2.7	2.7	2.70	2.7	2.7	2.7	2.7	2.7
Hvy Trucks	28	3	2.7	2.7	2.70	2.7	2.7	2.7	2.7	2.7
TOTAL	2770	271	2.7	2.7	2.70	2.7	2.7	2.7	2.7	2.7

Average speed: 56.3 km/hr= 35.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Palm Avenue: Highway 46 to South Driveway

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	2394	234	58.9	58.8	55.1	50.6	46.1	41.6	37.0	32.5
Med Trucks	101	10	56.3	56.2	52.5	48.0	43.5	39.0	34.5	30.0
Hvy Trucks	25	2	55.6	55.5	51.8	47.3	42.8	38.3	33.7	29.2
TOTAL	2520	247	61.9	61.8	**58.2**	53.6	49.1	44.6	40.1	35.6
FUTURE NO PROJECT										
Autos	2594	254	59.2	59.1	55.4	50.9	46.4	41.9	37.4	32.9
Med Trucks	109	11	56.7	56.6	52.9	48.4	43.9	39.3	34.8	30.3
Hvy Trucks	27	3	55.9	55.8	52.2	47.6	43.1	38.6	34.1	29.6
TOTAL	2730	267	62.3	62.2	**58.5**	54.0	49.5	45.0	40.4	35.9
FUTURE WITH PROJECT										
Autos	5681	556	62.6	62.5	58.9	54.3	49.8	45.3	40.8	36.3
Med Trucks	239	23	60.1	60.0	56.3	51.8	47.3	42.8	38.2	33.7
Hvy Trucks	60	6	59.3	59.2	55.6	51.0	46.5	42.0	37.5	33.0
TOTAL	5980	586	65.7	65.6	**61.9**	57.4	52.9	48.4	43.9	39.3
CHANGE FROM EXISTING										
Autos	3287	322	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Med Trucks	138	14	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Hvy Trucks	35	3	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
TOTAL	3460	339	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
CHANGE FROM FUTURE NO PROJECT										
Autos	3088	302	3.4	3.4	3.41	3.4	3.4	3.4	3.4	3.4
Med Trucks	130	13	3.4	3.4	3.41	3.4	3.4	3.4	3.4	3.4
Hvy Trucks	33	3	3.4	3.4	3.41	3.4	3.4	3.4	3.4	3.4
TOTAL	3250	318	3.4	3.4	3.41	3.4	3.4	3.4	3.4	3.4

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Palm Avenue: South Driveway to North Driveway

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	88 / 27	176 / 54	352 / 107	704 / 215	1408 / 429	2816 / 858
EXISTING										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE NO PROJECT										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE WITH PROJECT										
Autos	5111	500	62.2	62.1	58.4	53.9	49.4	44.8	40.3	35.8
Med Trucks	215	21	59.6	59.5	55.8	51.3	46.8	42.3	37.8	33.3
Hvy Trucks	54	5	58.9	58.8	55.1	50.6	46.1	41.6	37.0	32.5
TOTAL	5380	527	65.2	65.1	**61.5**	56.9	52.4	47.9	43.4	38.9
CHANGE FROM EXISTING										
Autos	5111	500	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	215	21	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	54	5	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	5380	527	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
CHANGE FROM FUTURE NO PROJECT										
Autos	5111	500	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	215	21	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	54	5	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	5380	527	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Palm Avenue: North of North Driveway

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 meters)	88 (27 meters)	176 (54 meters)	352 (107 meters)	704 (215 meters)	1408 (429 meters)	2816 (858 meters)
EXISTING										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE NO PROJECT										
Autos	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	0	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	0	0	#NUM!	#NUM!	**#NUM!**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
FUTURE WITH PROJECT										
Autos	3933	385	61.0	60.9	57.3	52.7	48.2	43.7	39.2	34.7
Med Trucks	166	16	58.5	58.4	54.7	50.2	45.7	41.2	36.6	32.1
Hvy Trucks	41	4	57.7	57.6	54.0	49.4	44.9	40.4	35.9	31.4
TOTAL	4140	405	64.1	64.0	**60.3**	55.8	51.3	46.8	42.3	37.7
CHANGE FROM EXISTING										
Autos	3933	385	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	166	16	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	41	4	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	4140	405	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
CHANGE FROM FUTURE NO PROJECT										
Autos	3933	385	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Med Trucks	166	16	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
Hvy Trucks	41	4	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
TOTAL	4140	405	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: F Street: North of Highway 46

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) 50 (15 m)	35 (11 m)	70 (21 m)	140 (43 m)	280 (85 m)	560 (171 m)	1120 (341 m)
EXISTING										
Autos	760	74	52.3	52.2	54.5	50.0	45.5	40.9	36.4	31.9
Med Trucks	32	3	50.0	49.9	52.2	47.7	43.2	38.6	34.1	29.6
Hvy Trucks	8	1	49.8	49.7	52.0	47.5	43.0	38.4	33.9	29.4
TOTAL	800	78	55.6	55.5	**57.8**	53.3	48.8	44.3	39.8	35.2
FUTURE NO PROJECT										
Autos	827	81	52.6	52.5	54.9	50.3	45.8	41.3	36.8	32.3
Med Trucks	35	3	50.3	50.2	52.5	48.0	43.5	39.0	34.5	30.0
Hvy Trucks	9	1	50.1	50.0	52.3	47.8	43.3	38.8	34.3	29.8
TOTAL	870	85	56.0	55.9	**58.2**	53.7	49.1	44.6	40.1	35.6
FUTURE WITH PROJECT										
Autos	1378	135	54.9	54.8	57.1	52.6	48.0	43.5	39.0	34.5
Med Trucks	58	6	52.5	52.4	54.8	50.3	45.7	41.2	36.7	32.2
Hvy Trucks	15	1	52.3	52.2	54.6	50.0	45.5	41.0	36.5	32.0
TOTAL	1450	142	58.2	58.1	**60.4**	55.9	51.4	46.9	42.3	37.8
CHANGE FROM EXISTING										
Autos	618	60	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Med Trucks	26	3	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Hvy Trucks	7	1	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
TOTAL	650	64	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
CHANGE FROM FUTURE NO PROJECT										
Autos	551	54	2.2	2.2	2.22	2.2	2.2	2.2	2.2	2.2
Med Trucks	23	2	2.2	2.2	2.22	2.2	2.2	2.2	2.2	2.2
Hvy Trucks	6	1	2.2	2.2	2.22	2.2	2.2	2.2	2.2	2.2
TOTAL	580	57	2.2	2.2	2.22	2.2	2.2	2.2	2.2	2.2

Average speed: 56.3 km/hr= 35.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 43: South of Highway 46

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	45 / 14	90 / 27	180 / 55	360 / 110	720 / 219	1440 / 439
EXISTING										
Autos	3154	309	60.1	60.0	60.7	56.2	51.6	47.1	42.6	38.1
Med Trucks	133	13	57.5	57.4	58.1	53.6	49.1	44.6	40.1	35.5
Hvy Trucks	33	3	56.8	56.7	57.4	52.9	48.3	43.8	39.3	34.8
TOTAL	3320	325	63.1	63.0	**63.7**	59.2	54.7	50.2	45.7	41.2
FUTURE NO PROJECT										
Autos	3420	335	60.4	60.3	61.0	56.5	52.0	47.5	43.0	38.4
Med Trucks	144	14	57.9	57.8	58.5	53.9	49.4	44.9	40.4	35.9
Hvy Trucks	36	4	57.1	57.0	57.7	53.2	48.7	44.2	39.7	35.1
TOTAL	3600	353	63.5	63.4	**64.1**	59.6	55.0	50.5	46.0	41.5
FUTURE WITH PROJECT										
Autos	5254	514	62.3	62.2	62.9	58.4	53.9	49.3	44.8	40.3
Med Trucks	221	22	59.7	59.6	60.3	55.8	51.3	46.8	42.3	37.8
Hvy Trucks	55	5	59.0	58.9	59.6	55.1	50.6	46.0	41.5	37.0
TOTAL	5530	541	65.4	65.3	**65.9**	61.4	56.9	52.4	47.9	43.4
CHANGE FROM EXISTING										
Autos	2100	206	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Med Trucks	88	9	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Hvy Trucks	22	2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
TOTAL	2210	216	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
CHANGE FROM FUTURE NO PROJECT										
Autos	1834	180	1.9	1.9	1.86	1.9	1.9	1.9	1.9	1.9
Med Trucks	77	8	1.9	1.9	1.86	1.9	1.9	1.9	1.9	1.9
Hvy Trucks	19	2	1.9	1.9	1.86	1.9	1.9	1.9	1.9	1.9
TOTAL	1930	189	1.9	1.9	1.86	1.9	1.9	1.9	1.9	1.9

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: Highway 43: North of Highway 46

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	45 / 14	90 / 27	180 / 55	360 / 110	720 / 219	1440 / 439
EXISTING										
Autos	2223	218	58.6	58.5	59.1	54.6	50.1	45.6	41.1	36.6
Med Trucks	94	9	56.0	55.9	56.6	52.1	47.6	43.0	38.5	34.0
Hvy Trucks	23	2	55.3	55.2	55.9	51.3	46.8	42.3	37.8	33.3
TOTAL	2340	229	61.6	61.5	**62.2**	57.7	53.2	48.7	44.1	39.6
FUTURE NO PROJECT										
Autos	2404	235	58.9	58.8	59.5	55.0	50.5	45.9	41.4	36.9
Med Trucks	101	10	56.3	56.2	56.9	52.4	47.9	43.4	38.9	34.4
Hvy Trucks	25	2	55.6	55.5	56.2	51.7	47.2	42.6	38.1	33.6
TOTAL	2530	248	62.0	61.9	**62.5**	58.0	53.5	49.0	44.5	40.0
FUTURE WITH PROJECT										
Autos	2594	254	59.2	59.1	59.8	55.3	50.8	46.3	41.8	37.2
Med Trucks	109	11	56.7	56.6	57.3	52.7	48.2	43.7	39.2	34.7
Hvy Trucks	27	3	55.9	55.8	56.5	52.0	47.5	43.0	38.5	33.9
TOTAL	2730	267	62.3	62.2	**62.9**	58.4	53.8	49.3	44.8	40.3
CHANGE FROM EXISTING										
Autos	371	36	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Med Trucks	16	2	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Hvy Trucks	4	0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
TOTAL	390	38	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
CHANGE FROM FUTURE NO PROJECT										
Autos	190	19	0.3	0.3	0.33	0.3	0.3	0.3	0.3	0.3
Med Trucks	8	1	0.3	0.3	0.33	0.3	0.3	0.3	0.3	0.3
Hvy Trucks	2	0	0.3	0.3	0.33	0.3	0.3	0.3	0.3	0.3
TOTAL	200	20	0.3	0.3	0.33	0.3	0.3	0.3	0.3	0.3

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

8522 Wasco - Phase 1

Table 1

TRAFFIC NOISE IMPACT

0

Location: J Street: South of Highway 46

Vehicle Type	Traffic Volume 24-hr volume	Traffic Volume Equiv 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Centerline Distance (feet) (meters) 50 / 15	45 / 14	90 / 27	180 / 55	360 / 110	720 / 219	1440 / 439
EXISTING										
Autos	1777	174	57.6	57.5	58.2	53.7	49.1	44.6	40.1	35.6
Med Trucks	75	7	55.0	54.9	55.6	51.1	46.6	42.1	37.6	33.0
Hvy Trucks	19	2	54.3	54.2	54.9	50.4	45.8	41.3	36.8	32.3
TOTAL	1870	183	60.7	60.5	**61.2**	56.7	52.2	47.7	43.2	38.7
FUTURE NO PROJECT										
Autos	1919	188	57.9	57.8	58.5	54.0	49.5	45.0	40.4	35.9
Med Trucks	81	8	55.4	55.3	56.0	51.4	46.9	42.4	37.9	33.4
Hvy Trucks	20	2	54.6	54.5	55.2	50.7	46.2	41.7	37.2	32.6
TOTAL	2020	198	61.0	60.9	**61.6**	57.1	52.5	48.0	43.5	39.0
FUTURE WITH PROJECT										
Autos	2404	235	58.9	58.8	59.5	55.0	50.5	45.9	41.4	36.9
Med Trucks	101	10	56.3	56.2	56.9	52.4	47.9	43.4	38.9	34.4
Hvy Trucks	25	2	55.6	55.5	56.2	51.7	47.2	42.6	38.1	33.6
TOTAL	2530	248	62.0	61.9	**62.5**	58.0	53.5	49.0	44.5	40.0
CHANGE FROM EXISTING										
Autos	627	61	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Med Trucks	26	3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Hvy Trucks	7	1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TOTAL	660	65	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
CHANGE FROM FUTURE NO PROJECT										
Autos	485	47	1.0	1.0	0.98	1.0	1.0	1.0	1.0	1.0
Med Trucks	20	2	1.0	1.0	0.98	1.0	1.0	1.0	1.0	1.0
Hvy Trucks	5	0	1.0	1.0	0.98	1.0	1.0	1.0	1.0	1.0
TOTAL	510	50	1.0	1.0	0.98	1.0	1.0	1.0	1.0	1.0

Average speed: 64.4 km/hr= 40.0 mi/hr

Time of day: 70.0% Day Fleet Mix 95.0% Autos

15.0% Evening 4.0% Medium Trucks

Table 1
ONSITE NOISE GENERATION IMPACTS

Location: Wal-Mart/Home Depot Shopping Center, Hesperia California)

Noise Source	Traffic Volume 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Distance to Point of Reception (feet) 20 (6 Meters)	100 (30)	120 (37)	160 (49)	180 (55)	200 (61)	240 (73)	280 (85)	300 (91)	360 (110)	380 (116)	400 (122)	440 (134)	500 (152)	600 (183)
Building 1: Commercial																	
Idling Trucks	2	61.0				50.8											
Attenuation from wall						42.8											
Fork Lifts Truck	2	55.0				44.8											
Attenuation from wall						36.8											
Roof Mounted AC	2	68.0						55.8									
Attenuation for Screen								48.8									
Roof Mounted AC	2	68.0									52.3						
Attenuation for Screen											45.3						
Trash Compactor	1	62.0				51.7											
Building 2: Commercial																	
Idling Trucks	2	61.0													42.0		
Attenuation from wall															34.0		
Fork Lifts Truck	2	55.0													36.0		
Attenuation from wall															28.0		
Roof Mounted AC	2	68.0														47.9	
Attenuation for Screen																40.9	
Roof Mounted AC	2	68.0															46.3
Attenuation for Screen																	39.3
Trash Compactor	1	62.0													43.0		
Building 3: Commercial																	
Idling Trucks	2	61.0				50.8											
Attenuation from wall						42.8											
Fork Lifts Truck	2	55.0				44.8											
Attenuation from wall						36.8											
Roof Mounted AC	2	68.0						55.8									
Attenuation for Screen								48.8									
Roof Mounted AC	2	68.0									52.3						
Attenuation for Screen											45.3						
Trash Compactor	1	62.0				51.7											
Building 4: Movie Theatre & Restaurant																	
Idling Trucks	1	58.0						45.8									
Attenuation from wall								37.8									
Roof Mounted AC	1	65.0								49.9							
Attenuation for Screen										42.9							
Roof Mounted AC	1	65.0											47.2				
Attenuation for Screen													40.2				
Trash Compactor	1	62.0						49.8									
Parcle 5: Retail/Restaurant																	
Idling Trucks	1	55.0				44.7											
Attenuation from building						44.7											
Roof Mounted AC	1	65.0						52.8									
Attenuation for Screen								45.8									

Noise Source	Traffic Volume 1-hr	Noise Reference Level (15 meters)	20 (6 m)	100 (30 m)	120 (37 m)	160 (49 m)	180 (55 m)	200 (61 m)	240 (73 m)	280 (85 m)	300 (91 m)	360 (110 m)	380 (116 m)	400 (122 m)	440 (134 m)	500 (152 m)	600 (183 m)
			--Distance to Point of Reception (feet)--														
Building 5.1: Restaurant																	
Idling Trucks	1	55.0				44.7											
Attenuation from building						36.7											
Roof Mounted AC	1	65.0						52.8									
Attenuation for Screen								45.8									
Building 5.2: Restaurant																	
Idling Trucks	1	55.0			47.2												
Attenuation from building					39.2												
Roof Mounted AC	1	65.0						52.8									
Attenuation for Screen								45.8									
Building 5.4: Restaurant																	
Idling Trucks	1	55.0			47.2												
Attenuation from building					39.2												
Roof Mounted AC	1	65.0						52.8									
Attenuation for Screen								45.8									
Building 6: Residential																	
Roof Mounted AC	2	68.0		60.3													
Attenuation for Screen				53.3													
Roof Mounted AC	2	68.0				56.7											
Attenuation for Screen						49.7											
Roof Mounted AC	2	68.0										50.3					
Attenuation for Screen												43.3					
Building 7: Residential																	
Roof Mounted AC	5	72.0		64.2													
Attenuation for Screen				57.2													
Roof Mounted AC	5	72.0												53.0			
Attenuation for Screen														46.0			
Roof Mounted AC	2	68.0			57.8												
Attenuation for Screen					50.8												
Roof Mounted AC	2	68.0							52.9								
Attenuation for Screen									45.9								
Roof Mounted AC	2	68.0										50.3					
Attenuation for Screen												43.3					
Building 8: Residential																	
Roof Mounted AC	2	68.0									50.7						
Attenuation for Screen											43.7						
Roof Mounted AC	2	68.0										50.3					
Attenuation for Screen												43.3					
Building 9 & 10: Commercial																	
Idling Trucks	1	58.0						45.8									
Attenuation from wall								37.8									
Fork Lifts Truck	1	52.0						39.8									
Attenuation from wall								31.8									
Roof Mounted AC	1	65.0									49.3						
Attenuation for Screen											42.3						
Roof Mounted AC	1	65.0												46.8			
Attenuation for Screen														39.8			
Trash Compactor	1	62.0						49.8									

Noise Source	Traffic Volume 1-hr	Noise Reference Level (15 meters)	20 (6 m)	100 (30 m)	120 (37 m)	160 (49 m)	180 (55 m)	200 (61 m)	240 (73 m)	280 (85 m)	300 (91 m)	360 (110 m)	380 (116 m)	400 (122 m)	440 (134 m)	500 (152 m)	600 (183 m)
Building 11 & 12: Commercial																	
Idling Trucks	1	58.0						45.8									
Attenuation from wall								37.8									
Fork Lifts Truck	1	52.0						39.8									
Attenuation from wall								31.8									
Roof Mounted AC	1	65.0									49.3						
Attenuation for Screen											42.3						
Roof Mounted AC	1	65.0												46.8			
Attenuation for Screen														39.8			
Trash Compactor	1	62.0						49.8									
Building 13: Commercial																	
Idling Trucks	1	58.0						45.8									
Attenuation from wall								37.8									
Fork Lifts Truck	1	52.0						39.8									
Attenuation from wall								31.8									
Roof Mounted AC	1	65.0									49.3						
Attenuation for Screen											42.3						
Roof Mounted AC	1	65.0												46.8			
Attenuation for Screen														39.8			
Trash Compactor	1	62.0						49.8									
Moving Vehicles																	
Autos	20028	66.2							58.7								
Med Trucks	843	53.7							46.2								
Hvy Trucks	211	68.7							61.1								

Average speed: 24.1 km/hr= 15.0 mi/hr

TOTAL ONSITE SOUND GENERATION LEVEL AT POINT OF RECEPTION: 66.57

Table 1
ONSITE NOISE GENERATION IMPACTS

Location: Wal-Mart/Home Depot Shopping Center, Hesperia California)

Noise Source	Traffic Volume 1-hr	Noise Reference Level (15 meters)	Noise Level (dB Ldn) Distance to Point of Reception (feet) 20 (6 Meters)	100 (30)	120 (37)	160 (49)	180 (55)	200 (61)	240 (73)	280 (85)	300 (91)	360 (110)	380 (116)	400 (122)
Building 1: Commercial														
Roof Mounted AC	2	68.0						55.8						
Attenuation for Screen								48.8						
Roof Mounted AC	2	68.0									52.3			
Attenuation for Screen											45.3			
Building 2: Commercial														
Roof Mounted AC	2	68.0												
Attenuation for Screen														
Roof Mounted AC	2	68.0												
Attenuation for Screen														
Building 3: Commercial														
Roof Mounted AC	2	68.0						55.8						
Attenuation for Screen								48.8						
Roof Mounted AC	2	68.0									52.3			
Attenuation for Screen											45.3			
Building 4: Movie Theatre & Restaurant														
Roof Mounted AC	1	65.0								49.9				
Attenuation for Screen										42.9				
Roof Mounted AC	1	65.0											47.2	
Attenuation for Screen													40.2	
Parcle 5: Retail/Restaurant														
Roof Mounted AC	1	65.0						52.8						
Attenuation for Screen								45.8						
Building 5.1: Restaurant														
Roof Mounted AC	1	65.0						52.8						
Attenuation for Screen								45.8						
Building 5.2: Restaurant														
Roof Mounted AC	1	65.0						52.8						
Attenuation for Screen								45.8						
Building 5.4: Restaurant														

Noise Source	Traffic Volume 1-hr	Noise Reference Level (15 meters)	20 6	100 30	120 37	160 49	180 55	200 61	240 73	280 85	300 91	360 110	380 116	400 122
			--Distance to Point of Reception (feet)--											
			Meters											
Roof Mounted AC	1	65.0						52.8						
Attenuation for Screen								45.8						
Building 6: Residential														
Roof Mounted AC	2	68.0		60.3										
Attenuation for Screen				53.3										
Roof Mounted AC	2	68.0				56.7								
Attenuation for Screen						49.7								
Roof Mounted AC	2	68.0										50.3		
Attenuation for Screen												43.3		
Building 7: Residential														
Roof Mounted AC	5	72.0		64.2										
Attenuation for Screen				57.2										
Roof Mounted AC	5	72.0												53.0
Attenuation for Screen														46.0
Roof Mounted AC	2	68.0			57.8									
Attenuation for Screen					50.8									
Roof Mounted AC	2	68.0							52.9					
Attenuation for Screen									45.9					
Roof Mounted AC	2	68.0										50.3		
Attenuation for Screen												43.3		
Building 8: Residential														
Roof Mounted AC	2	68.0									50.7			
Attenuation for Screen											43.7			
Roof Mounted AC	2	68.0										50.3		
Attenuation for Screen												43.3		
Building 9 & 10: Commercial														
Roof Mounted AC	1	65.0									49.3			
Attenuation for Screen											42.3			
Roof Mounted AC	1	65.0												46.8
Attenuation for Screen														39.8
Building 11 & 12: Commercial														
Roof Mounted AC	1	65.0									49.3			
Attenuation for Screen											42.3			
Roof Mounted AC	1	65.0												46.8
Attenuation for Screen														39.8
Building 13: Commercial														

Noise Source	Traffic Volume 1-hr	Noise Reference Level (15 meters)	--Distance to Point of Reception (feet)-- 20	100	120	160	180	200	240	280	300	360	380	400
			Meters											
			6	30	37	49	55	61	73	85	91	110	116	122
Roof Mounted AC	1	65.0									49.3			
Attenuation for Screen											42.3			
Roof Mounted AC	1	65.0												46.8
Attenuation for Screen														39.8
Moving Vehicles														
Autos	2003	56.2							48.7					
Med Trucks	0													
Hvy Trucks	0													

Average speed: 24.1 km/hr= 15.0 mi/hr

TOTAL ONSITE SOUND GENERATION LEVEL AT POINT OF RECEPTION: 62.30

Chambers Group, Incorporated