OLD PLACERVILLE ROAD RESIDENTIAL AND OFFICE PROJECT

Final Mitigated Negative Declaration

City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, Ca 95670

August 2006

MITIGATED NEGATIVE DECLARATION

FOR

OLD PLACERVILLE ROAD RESIDENTIAL AND OFFICE PROJECT

CITY OF RANCHO CORDOVA, CALIFORNIA

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AUGUST 2006

APPENDICES

1.0 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is an Initial Study and Mitigated Negative Declaration (IS/MND) prepared pursuant to the California Environmental Quality Act (CEQA) for the proposed Old Placerville Road Residential and Office project (hereafter referred to as "the proposed project"). This MND has been prepared in accordance with the CEQA, Public Resources Code Sections 21000 et seq., and the State CEQA Guidelines.

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment. In accordance with the CEQA Guidelines, Section 15064, an Environmental Impact Report (EIR) must be prepared if the Initial Study indicates that the proposed project under review may have a potentially significant impact on the environment. A negative declaration may be prepared instead, if the lead agency prepares a written statement describing the reasons why a proposed project would not have a significant effect on the environment, and, therefore, why it does not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a negative declaration shall be prepared for a project subject to CEQA when either:

(b) The Initial Study shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or

(c) The Initial Study identified potentially significant effects, but:

(1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

If revisions are adopted into the proposed project in accordance with the CEQA Guidelines Section 15070(b), a Mitigated Negative Declaration (MND) is prepared. This document includes such revisions in the form of mitigation measures. Therefore, this document is a MND and incorporates all of the elements of an Initial Study. Hereafter this document is referred to as an MND.

1.2 LEAD AGENCY

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, State CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. State CEQA Guidelines 15051(b) states:

(b) If the project is to be carried out by a nongovernmental person or entity, the lead agency shall be the public agency with the greatest responsibility for supervising or approving the project as a whole.

(1) The lead agency will normally be the agency with the general governmental powers, such as a city of county, rather than an agency with a single or limited purpose such as an air pollution control district or a district which will provide public serve or public utility to the project.

As the project is to be carried out by a private development company and as the City of Rancho Cordova has general governmental powers over the proposed project, the lead agency for the proposed project is the City of Rancho Cordova.

1.3 PURPOSE AND ORGANIZATION OF THE DOCUMENT

The purpose of this Mitigated Negative Declaration is to evaluate the potential environmental impacts of the proposed project.

This document is divided into the following sections:

- **1.0 Introduction** - Provides an introduction and describes the purpose and organization of this document.
- **2.0 Project Description** - Provides a detailed description of the proposed project.
- **3.0 Environmental Setting, Impacts and Mitigation Measures** - Describes the environmental setting for each of the environmental subject areas (as described in Appendix G of the State CEQA Guidelines), evaluates a range of impacts classified as "no impact," "less than significant," or "less than significant with mitigation incorporation" in response to the environmental checklist, and provides mitigation measures, where appropriate, to mitigate potentially significant impacts to a less than significant level.
- **4.0 Cumulative Impacts** - Provides a discussion of cumulative impacts of this project.
- **5.0 Determination** - Provides the environmental determination for the project.
- **6.0 Report Preparation and Consultations** - Identifies staff and consultants responsible for preparation of this document.
- **7.0 References** – Provides a list of references used to prepare the MND.

1.4 REGULATORY FRAMEWORK AND ASSUMPTIONS

The City of Rancho Cordova was incorporated July 1, 2003. At that time, the City adopted Sacramento County's General Plan by reference until the formal adoption of its own General Plan. The City adopted the General Plan on June 26, 2006 and certified the Environmental Impact Report for the General Plan as adequate and complete at that time. The proposed project is subject to the policies and designations of the City of Rancho Cordova General Plan (hereafter referred to as the General Plan). Earlier draft versions of the General Plan are no longer valid and were not considered when determining the proposed project's consistency with City Policies.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The proposed Old Placerville Road Residential and Office project (hereafter referred to as the "proposed project") is located within the City of Rancho Cordova approximately 0.15 miles from the intersection of Bradshaw Road and Old Placerville Road. The site is currently bounded by Old Placerville Road to the south, a retail center to the west, a mobile home park to the north, and an apartment complex to the east. The project location is shown in **Figures 1** and **2**.

2.2 EXISTING CONDITIONS

The project area is surrounded by previously developed land including both residential and commercial properties. Nearby significant features include US-50 (approximately 0.5 miles to the north of the project area), the American River (approximately 1.5 miles to the north), Mather Airport (approximately one mile to the east), and SR-16 (approximately two miles to the south). The project is located within the City of Rancho Cordova, just north and east of the incorporated limits of the City. The project area currently consists of undeveloped, flat land with a few trees and grasses located on-site. The project area is not within any Special Planning Areas or other overriding planning documents or areas. More information on the existing conditions of the project area is included in Section 3.0 of this MND.

2.3 PROJECT CHARACTERISTICS

The proposed project requires a rezone, a tentative subdivision map, a special development permit, a development agreement, and a design review. The proposed project includes two major portions – a residential portion on approximately two-thirds of the property and an office portion on one-third of the property. These two portions may be constructed separately or together. However, as both portions of the project occur on the same parcel and both would be constructed by the same proponent, they are analyzed together in this document. Any reference to "the proposed project" in this document refers to both portions of the project. The proposed rezone for both portions of the project is shown in **Figure 3**.

The residential portion of the project proposes to construct eight duplex units (four buildings, eight dwelling units) and 27 detached single-family homes for a total of 35 dwelling units. No other features commonly found in residential developments, such as parks, are included in the project. Each dwelling unit has a garage and an approximately 20 foot driveway. On-street parking will not be allowed on streets within the residential portion of the project due to the narrowness of the streets and fire department access requirements. Four visitor parking spaces will be provided in addition to garage and driveway parking for residents. The site plan for the residential portion is shown in **Figure 4**.

The office portion of the proposed project includes four separate one-story office buildings. The square footage of these buildings is shown in **Table 1**. Included in the office portion of the proposed project are 86 parking spaces for employees and visitors. The site plan for the office portion is shown in **Figure 4**.

TABLE 1
OFFICE BUILDING SQUARE FOOTAGE

Building Number	Square Footage
Office 1	4,256
Office 2	5,074
Office 3	5,212
Office 4	4,169
Total Floor Area	18,711

Source: Loving & Campos Architects Inc.

A small public use space is included in the proposed project located between the office uses and the residential uses on the western side of the project. This public use space includes landscaping and picnic benches and is approximately 4,200 square feet in size. The proposed project also includes frontage improvements along Old Placerville Road (sidewalks, landscaping, etc.) and two driveways onto Old Placerville Road (see **Figure 4**). A thirteen-foot, four-inch utility easement is included along the frontage on Old Placerville Road.

2.4 REQUIRED PROJECT APPROVALS

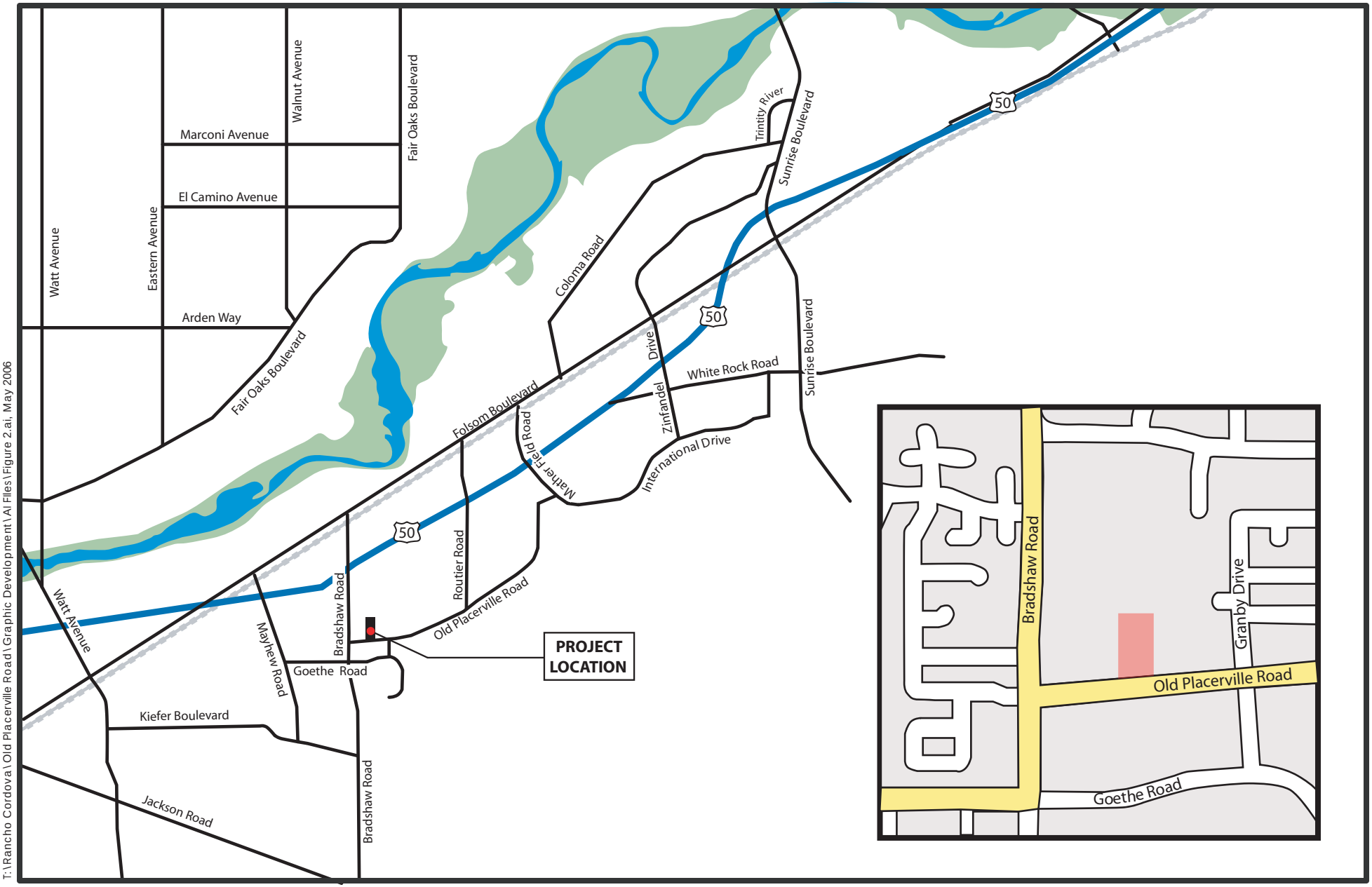
In addition to the approval of the proposed project by the Rancho Cordova City Council, the following agency approvals may be required (depending on the final project design):

1. California American Water Company (Cal-Am)
2. County Sanitation District 1 (CSD-1)
3. Central Valley Regional Water Quality Control Board (CVRWQB)
4. Sacramento Metropolitan Air Quality Management District (SMAQMD)
5. Sacramento Metropolitan Fire District (SMFD)
6. Sacrament Municipal Utility District (SMUD)

T:\Rancho Cordova\Old Placerville Road\Graphic Development\AI Files\Figure 1.ai, June 2006

City of Rancho Cordova
Planning Development

FIGURE 1
REGIONAL LOCATION MAP

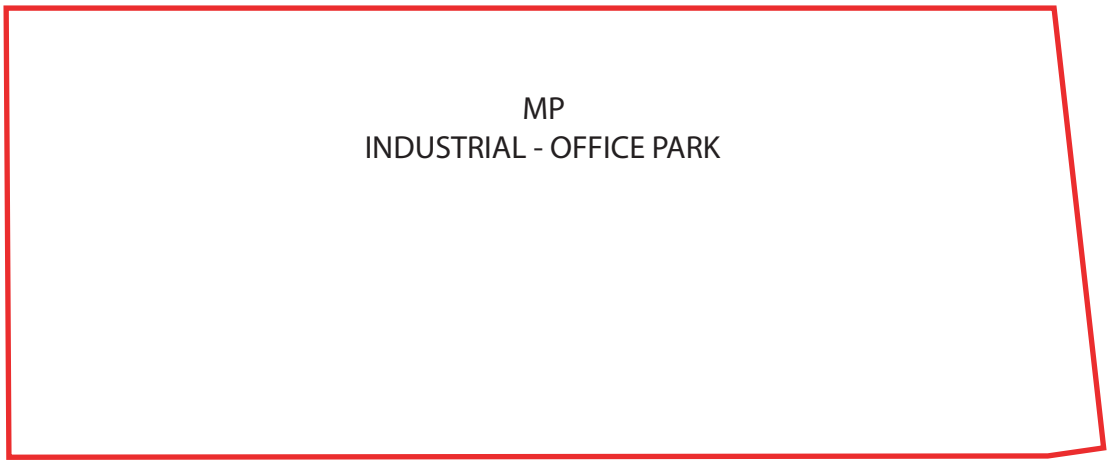


T:\Rancho Cordova\Old Placerville Road\Graphic Development\AI Files\Figure 2.ai, May 2006

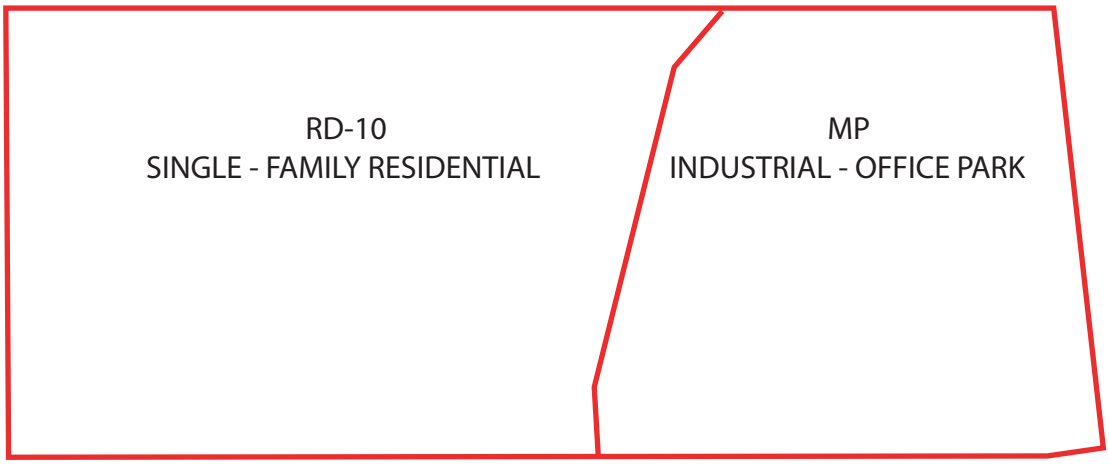
City of Rancho Cordova
Planning Development

FIGURE 2
PROJECT LOCATION

CURRENT ZONING



PROPOSED ZONING

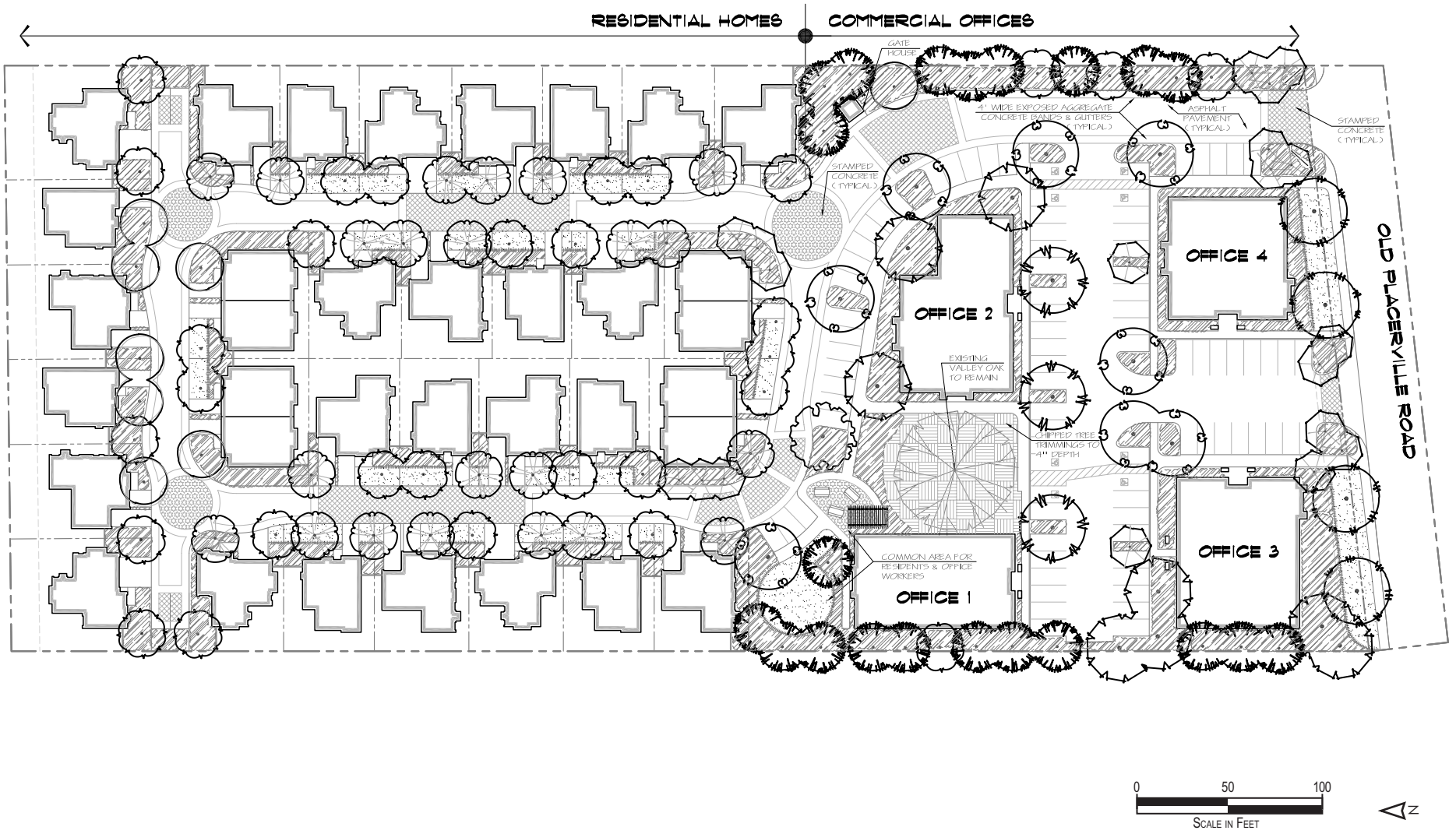


Not to Scale

T:\Rancho Cordova\Old Placerville Road\Graphic Development\AI Files\Figure 3.ai, June 2006

City of Rancho Cordova
Planning Development

FIGURE 3
CUURENT AND PROPOSED ZONING



Source: Garth Ruffner, August 2006

T:\Rancho Cordova\Old Placerville Road\Graphic Development\AI Files\Figure 4.ai, August 2006

City of Rancho Cordova
Planning Development

FIGURE 4
SITE PLAN

3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.1 INTRODUCTION

This section provides an evaluation of the potential environmental impacts of the proposed project, including the California Environmental Quality Act (CEQA) Mandatory Findings of Significance. There are 16 specific environmental issues evaluated in this chapter. Cumulative impacts to these issues are evaluated in Section 4.0. The environmental issues evaluated in this chapter include:

- Aesthetics
- Agriculture
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards & Hazardous Materials
- Hydrology and Water Quality
- Land Use Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Circulation
- Utilities and Services Systems

For each issue area, one of four conclusions is made:

- **No Impact**: No project-related impact to the environment would occur with project development;

- **Less than Significant Impact**: The proposed projects would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures;

- **Less than Significant Impact with Mitigation Incorporation**: The proposed projects would result in an environmental impact or effect that is potentially significant, but the incorporation of mitigation measure(s) would reduce the project-related impact to a less than significant level; or,

- **Potentially Significant Impact**: The proposed projects would result in an environmental impact or effect that is potentially significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

- **Reviewed Under Previous Document:** The impact has been adequately addressed in previous environmental documents, and further analysis is not required. The discussion will include reference to the previous documents.

3.2 INITIAL ENVIRONMENTAL STUDY

1. **Project Title:** Old Placerville Road Residential and Office Project

2. **Lead Agency Name and Address:** City of Rancho Cordova
   2729 Prospect Park Place
   Rancho Cordova, CA 95670

3. **Contact Person and Phone Number:** Ben Ritchie (916) 361-8384

4. **Project Location:** On the north side of Old Placerville Road, 0.15 miles east of the intersection of Bradshaw Road and Old Placerville Road, in the City of Rancho Cordova.

5. **Project Sponsor's Name and Address:** Ted Kopecko, Tower Development
   4378 Auburn Boulevard, Suite 300
   Sacramento, CA 95841

6. **Current Zoning:** MP – Industrial/Office Park

7. **General Plan and Planning Area:** City of Rancho Cordova General Plan
   Countryside-Lincoln Village Planning Area
   Designated for Low Density Residential

8. **APN Number(s):** 068-0030-044

9. **Description of the Project:** See Section 2.3 of this MND.

10. **Surrounding Land Uses and Setting:** The site is bounded by an adjacent retail development to the west, a mobile home park to the north, an apartment complex to the east, and Old Placerville Road to the south. General land uses in the vicinity include low-density residential with come retail/commercial uses along Bradshaw Road.

11. **Other public agencies whose approval may be required:** (e.g., permits, financing approval, or participation agreement)

    1) California American Water Company (Cal-Am)
    2) County Sanitation District 1 (CSD-1)
    3) Central Valley Regional Water Quality Control Board (CVRWQB)
    4) Sacramento Metropolitan Air Quality Management District (SMAQMD)
    5) Sacramento Metropolitan Fire District (SMFD)
    6) Sacrament Municipal Utility District (SMUD)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the project, involving at least one impact that is a "Less Than Significant Impact with Mitigation Incorporation" or "Potentially Significant/Reviewed Under Previous Document" as indicated by the checklist on the following pages.

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

PURPOSE OF THIS INITIAL STUDY

This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the North Douglas II project (hereafter referred to as the "proposed project"), as proposed, may have a significant effect upon the environment. This document incorporates both an Initial Study and a Mitigated Negative Declaration (MND). The discussion below demonstrates that there are no potentially significant impacts identified that cannot be mitigated to a less than significant level or impacts that have not been fully addressed under a previous environmental document. Therefore, an Environmental Impact Report (EIR) is not warranted.

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 cited. A "*No Impact*" answer is adequately supported if the referenced information sources show that the impact simply does not apply to a project 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.

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, and construction as well as operational impacts.

3) A "*Less than Significant Impact*" applies when the proposed project would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.

4) "*Potentially Significant Impact*" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "*Potentially Significant Impact*" entries when the determination is made, an EIR is required.

5) "*Less than Significant Impact with Mitigation Incorporation*" applies where the incorporation of mitigation measures has reduced an effect from "*Potentially Significant Impact*" to a "*Less than Significant Impact*". The initial study must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

6) "*Reviewed Under Previous Document*" applies where the impact has been evaluated and discussed in a previous document. Discussion will include reference to the previous documents. If an impact is reviewed under a previous document, an impact of "Potentially Significant" does not necessarily require an EIR. If the Program EIR identified a significant and unavoidable impact, and the proposed project was adequately described in the Program EIR, an impact of "Potentially Significant/Reviewed Under Previous Document" does not require an EIR, pursuant to Pub. Res. Code Section 21083.3.

7) Earlier analyses may be used where, pursuant to the tiering, program Environmental Impact Report, or other CEQA process, an impact has been adequately analyzed in an earlier EIR or negative declaration.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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 that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐	☐

EXISTING SETTING

The proposed site is currently undeveloped. However, the site is surrounded by similar uses as those proposed by the project. To the west is a large retail development. To the north, east, and south are other residential developments of a similar nature.

DISCUSSION OF IMPACTS

a) *No Impact*. The proposed project is not located within line-of-sight of any scenic vista. While the American River and the associated American River Parkway are located within two miles of the project, ground features and existing development prevent those aesthetic features from being visible from the project area. Therefore, the proposed project would result in *no impact* to any scenic vista.

b) *Less Than Significant Impact*. Several trees are located on site. A large native oak is located in the center of the project site and will be preserved by the proposed project. Several smaller trees will be removed according to the City's Tree Preservation Ordinance. These smaller trees do not qualify as landmark trees and do not provide any significant aesthetic resource. No other aesthetic features such as rock outcroppings exist on-site. A Cultural Resources Study was conducted for the property in May 2005 (see **Appendix A**). No historic buildings were found on the project site. Due to the above factors, the proposed project would have a *less than significant* impact on scenic resources.

c) *Less Than Significant Impact*. The project site is surrounded by similar residential and commercial development. Residential land uses surround the project on three sides and a large retail development is located immediately adjacent to the project to the west. Therefore, the existing character of the immediate vicinity matches the proposed uses of the project. The proposed project would have a *less than significant* impact on the visual character of the site and its surroundings.

d) *Less Than Significant Impact*. The proposed project would be required to comply with City of Rancho Cordova lighting standards and the City's Design Guidelines. Additionally, light sources on-site are limited to overhead lighting in the office portion of the project and typical house lighting on the residential portion. Both of these light source types are found in close proximity to the project. Any effects on nighttime views in the area have already occurred

with development of the surrounding land uses, prior to incorporation of the City. Therefore, the proposed project would have a *less than significant* impact associated with light and glare.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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 Department 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?	☐	☐	☐	☒	☐

EXISTING SETTING

The proposed project is not located on any active agricultural land. Some evidence of prior orchard uses on the property was discovered as part of the Cultural Resources Study performed in May 2005. The Cultural Resources Study is attached as **Appendix A**. However, these orchards were abandoned long before incorporation of the City and prior to development of the local area.

DISCUSSION OF IMPACTS

a) *No Impact*. The project area does not include any prime farmland, unique farmland, or farmland of statewide importance. Previous agricultural uses existed on-site, but not since the early twentieth century (Historic Resource Associates, 2005, p. 7). Therefore, the proposed project would have *no impact* on farmland of these types.

b) *No Impact*. The project site is not under a Williamson Act contract. Therefore, the proposed project would have *no impact*.

c) *No Impact*. No uses, features, or characteristics of the project site are used by or facilitate agricultural operations in the vicinity. The nearest agricultural operations exist south of SR-16, more than two miles to the south. The project area is surrounded by residential, commercial, and office land uses. Therefore, the proposed project would have *no impact* on agriculture and agricultural resources in the vicinity.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
III. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. 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?	☐	☒	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐	☐

EXISTING SETTING

Pollutant emissions modeling for the proposed project was conducted by City of Rancho Cordova Planning Department staff using the URBEMIS 2002 version 8.7.0 software provided by the Sacramento Metropolitan Air Quality Management District (SMAQMD) in May 2006 (see **Appendix B**). The results of the model found that the proposed project would result in the emissions shown in **Table 2** below.

TABLE 2
ESTIMATED AIR EMISSIONS (POUNDS PER DAY)

	ROG	NO_x	CO	SO_2	PM10
Construction Phase (2006)	9.13	64.93	72.11	0	52.80
Construction Phase (2007)	4.92	32.49	39.93	0	1.33
Construction Phase (2008)	91.66	52.35	70.18	0	1.92
Operational Phase	5.30	6.05	62.46	0.05	4.94

Source: URBEMIS2002 v.8.7.0
Notes: ROG = Reactive Organic Gasses, NO_X = Nitrogen Oxides, CO = Carbon Monoxide, SO2 = Sulfur Dioxide, PM10 = Particulate Matter, 10 Micron

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. In order to assist local agencies and municipalities with analyzing project-specific impacts to air quality and compliance with local air district attainment plans, SMAQMD has provided a "Guide to Air Quality Assessment in Sacramento". This guide includes information on significance and mitigation for common air

emissions issues. Additionally, SMAQMD will review all development projects, including the proposed project, to ensure their compliance with local, State, and federal plans. According to the significance standards set by SMAQMD, the proposed project would not result in emissions above the significance thresholds identified in SMAQMD's "Guide to Air Quality Assessment in Sacramento County" (2004). SMAQMD's current standards are shown in **Table 3** below. Therefore, the proposed project would not interfere with the Metropolitan Air Quality Attainment Plan and impacts would be *less than significant*

TABLE 3
CURRENT SMAQMD EMISSIONS THRESHOLDS (POUNDS PER DAY)

Pollutant	Threshold of Significance
NO_x During Construction	85
ROG During Operation	65
NO_X During Operation	65

Source: SMAQMD Guide to Air Quality Assessment in Sacramento County, 2004.

b) *Less Than Significant Impact with Mitigation Incorporation*. The proposed project will not produce significant quantities of any pollutant currently tracked by SMAQMD. Current thresholds for emissions of NO_x and ROG are shown in **Table 3**. The proposed project would not violate the standards set by SMAQMD and the City of Rancho Cordova for pollutant emissions during both the construction and operational phases of the project. However, as with any construction, the possibility exists that PM10 emissions throughout the grading and building construction phases could result in short-term instances of significant PM10 emissions not anticipated by the air emissions model. The following mitigation measures are proposed to reduce potential PM10 emissions from the project area:

Mitigation Measures

MM 3.1a The project proponent shall ensure that all exposed surfaces, graded areas, storage piles, and haul roads are watered at least twice daily during construction activities. This requirement shall be included as a note on all improvement plans.

Timing/Implementation: *Measure shall be included on all improvement plans prior to issuance of grading permits and/or approval of improvement plans. Compliance with this requirement shall continue until the completion of construction activities.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 3.1b The project proponent shall ensure that the amount of material actively worked, the amount of disturbed ground, and the amount of material stockpiled is minimized throughout the construction of the project. This requirement shall be includes as a note on all improvement plans.

Timing/Implementation: *Measure shall be included on all improvement plans prior to issuance of grading permits*

and/or approval of improvement plans. Compliance with this requirement shall continue until the completion of construction activities.

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 3.1c The project proponent shall require that paved streets adjacent to the project site are washed or swept at least once daily to remove accumulated dust. This requirement shall be included as a note on all improvement plans.

Timing/Implementation: *Measure shall be included on all improvement plans prior to issuance of grading permits and/or approval of improvement plans. Compliance with this requirement shall continue until the completion of construction activities.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measures MM 3.1a, MM 3.1b, and MM3.1c will ensure that the proposed project would result in *less than significant* impacts associated with construction PM10.

c) *Less Than Significant Impact*. See discussion a) above. Just as with project-specific impacts, the proposed project is not expected to create any significant emissions that would contribute to the cumulative attainment status of the area. Therefore, the proposed project would result in *less than significant* impacts related to attainment status.

d) *Less Than Significant Impact*. See discussion a) and b) above. The proposed project will not emit significant pollutants that would affect sensitive receptors. Additionally, the proposed project is not located in the vicinity of any acutely sensitive receptors such as hospitals, nursing homes, schools, or child care facilities. Therefore, the proposed project would result in *less than significant* impacts to sensitive receptors.

e) *Less Than Significant Impact*. The proposed project includes uses similar to land uses surrounding the project. Office land uses rarely emit odors and residential odors are not typically considered to be offensive. Therefore, the proposed project would result in *less than significant* odor impacts.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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 U.S. Fish and Wildlife Service?	☐	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption or other means?	☐	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	☐	☐	☐	☒	☐

EXISTING SETTING

A Natural Resources Due Diligence Report was conducted for the property in May 2005. This study included literature searches, coordination with federal and state biological resources agencies (i.e. U.S. Fish and Wildlife Service) and site surveys in April 2005. The study found that the site contained primarily non-native grasses and a few oak and almond trees. No special status species were found on-site and none were expected as habitat was not suitable for these species. There was no evidence of wetland features on site. Suitable foraging habitat for raptors was not found due the high level of prior site disturbance, the property's small size, lack of a prey base, and the urban location of the project area. The Natural Resources Due Diligence Report is attached as **Appendix C**.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact With Mitigation Incorporation.* No special status species were found on-site during the site survey conducted in April 2005. Suitable habitat for special status species commonly found in the Carmichael USGS topographic quad was not found either. Suitable foraging habitat for raptors, including Swainson's hawk, was not found on-

site. Existing on-site trees could potentially provide nesting habitat for raptors and birds. Ultimately, new trees will be planted on-site that will provide new nesting opportunities. However, construction of the project includes the removal of several small trees and may result in impacts to nesting birds and raptors. Therefore, the following mitigation measures shall be incorporated into the project in order to prevent significant impacts to these species:

Mitigation Measures

MM 4.1 Prior to each phase of grading and construction, the project proponent shall ensure that a preconstruction survey is performed between February 1 and September 1 to determine if active nesting is taking place by raptors or special status birds on the project site. This survey shall be conducted by a person of adequate qualifications to make such a determination, such as a certified biologist or other such professional. If nesting is observed, consultation with the California Department of Fish and Game (CDFG) shall occur in order to determine the protective measure which must be implemented for the nesting birds. If nesting is not observed, further action will not be required.

If all construction occurs between September 2 and January 31, no preconstruction survey is required.

Timing/Implementation: *All contractors working on the project shall be notified of this measure and this measure shall be included on all improvement plans. Surveys to be performed prior to site disturbance between February 1 and September 1.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 4.1 would ensure that all impacts to special status species from implementation of the proposed project are *less than significant*.

b) *Less Than Significant Impact*. The project area does not include any sensitive community habitats such as riparian habitats. No wetlands or jurisdictional waters of the U.S. are located on-site, as shown in the results of the Natural Resources Report (**Appendix C**). Therefore, the proposed project would have a *less than significant* impact on sensitive habitats.

c) *No Impact*. No wetlands are located on-site or adjacent to the project site [see discussion b) above]. Therefore, the proposed project would result in *no impact* to jurisdictional waters or other wetlands.

d) *Less Than Significant Impact with Mitigation Incorporation*. The Natural Resources Report (**Appendix C**) found no evidence of nesting birds on the project site. The area is heavily developed and the project site is unsuitable for forage for migratory or local species. However, nearly one year has elapsed since the last site survey, and as the raptor and bird nesting season has begun for 2006, impacts to local or migratory bird nursery sites may occur. Nesting was not observed, but trees on site could potentially provide nesting and shelter habitat. Implementation of mitigation measure MM 4.1 would ensure that impacts to

raptors and special status birds would be *less than significant*. Other impacts to migration routes or movement corridors would be *less than significant*.

e) *Less Than Significant Impact with Mitigation Incorporation*. The proposed project includes the removal of trees on-site that may be in conflict with the City's adopted Tree Preservation Ordinance (Article 19.12). A large native oak of 45 inches diameter at breast height (dbh) is located near the middle of the project area. This large oak will be preserved by the project proponent and incorporated into the landscaping for the office portion of the project. However, several other native oaks are located within the project area and are proposed for removal by the applicant. The following mitigation measures are included in order to ensure adherence to the City's Tree Ordinance:

Mitigation Measures

MM 4.2a The large oak tree in the middle of the project area shall be preserved. Prior to the removal of the remaining trees on-site the project proponent shall submit to the City a Tree Removal Plan identifying each tree to be removed and the species, size, location, and relative health of each tree. Removal of any trees on the project site shall be conducted pursuant to the City of Rancho Cordova Tree Preservation Ordinance. Removal of trees shall not occur until the Rancho Cordova Planning Department approves the Tree Removal Plan.

Timing/Implementation: *Tree removal plan shall be submitted and approved prior to removal of oak trees on the project site.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 4.2b The large oak tree in the middle of the project area shall be protected from any impacts during construction and from landscaping or structures in the project area. The ground under the oak tree within the drip line shall be maintained in its natural state. Landscaping and irrigation of the area within the drip line shall be conducted only after approval by the City of Rancho Cordova of the landscaping plan. During construction, the tree shall be protected by construction fencing at least six feet from the drip line of the tree. All contractors working on-site shall be notified of the tree's location and its protected status. This mitigation measure shall be included on all improvement plans for the project.

Timing/Implementation: *Measure shall be included on all approval plans prior to approval of those plans. Protective measures shall be in place prior to site disturbance. Landscaping requirements under the tree shall be maintained for the life of the tree.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measures MM 4.2a and MM 4.2b would ensure that impacts from implementation of the proposed project would be *less than significant*.

f) *No Impact*. The City of Rancho Cordova and Sacramento County do not currently have an adopted Habitat Conservation Plan. The South Sacramento Habitat Conservation Plan (SSHCP) is being prepared by the County and will be adopted within the next few years. However, the SSHCP is still being formulated and no portion of the plan has been adopted. No Natural Community Conservation Plans are in effect in the project vicinity. Therefore, the proposed project would have *no impact* on any adopted Habitat Conservation Plans or Natural Community Conservation Plans.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
V. CULTURAL RESOURCES Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	☐

EXISTING SETTING

A Cultural Resources Study was performed by Historic Resource Associates in May 2005. The Cultural Resources Study includes a record search at the North Central Information Center of the California Historical Resources Information System. Additionally, Historic Resource Associates performed a site survey of the project area. During the study no significant prehistoric or historic archaeological sites were found. No existing historic buildings, structures, or objects were found on the project site. The Cultural Resources Study is attached to this MND as **Appendix A**.

DISCUSSION OF IMPACTS

a) *No Impact*. During the site survey of the project area performed by Historic Resource Associates, no historical resources, as defined by State CEQA Guidelines 15064.5, were found on the project site. Historical evidence identifies the project site as previously containing an orchard. However, this orchard is long abandoned and no evidence of structures or other historical resources such as barns or home sites were found in the project area. Therefore, the proposed project would have *no impact* on historical resources.

b) *Less Than Significant Impact with Mitigation Incorporation*. The Cultural Resources Study did not find any significant evidence of archeological resources in the project area. Additionally, the report "Archaeological and Historical Investigations for the City of Rancho Cordova General Plan" prepared by Pacific Municipal Consultants in 2005 found that archaeological sites in the City were generally limited to the areas near the American River (Pacific Municipal Consultants, 2005, p. 27). However, as the general vicinity is known to have contained historic and prehistoric uses, the possibility for discovery of a previously unknown archeological resource, paleontological resource, or human remains still exists. In order to protect any previously unknown resources from impacts related to implementation of the proposed project, the following mitigation measure is provided:

Mitigation Measure

MM 5.1 Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during development activities, work shall be suspended and the

City shall be immediately notified. The applicant shall coordinate any necessary investigation of the site with appropriate specialists, as needed. The applicant shall be required to implement any mitigation necessary for the protection of the cultural resources. In addition, pursuant to Section 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work is to stop and the County Coroner shall be immediately notified. If remains are determined to be Native American, guidelines of the Native American Heritage Commission are to be adhered to in the treatment and disposition of the remains. This measure shall be included as a note on all project plans.

Timing/Implementation: *Throughout all phases of construction. This measure is to be included on all improvement plans.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 5.1 would ensure that the project's potential cultural, historical, paleontological, and archeological resource impacts are *less than significant*.

c) See discussion b) above.

d) *Less Than Significant Impact with Mitigation Incorporation*. There are no known cemeteries on the project site. Historical research performed by both Historic Resource Associates and Pacific Municipal Consultants found no evidence of cemeteries on the project site. However, due to the large Native American population known to reside in the general area in the past, the primary concern is the disturbance of hidden or unmarked grave sites. The proposed project area is not expected to contain any such sites. However, implementation of mitigation measure MM 5.1 above would ensure that any impacts to human remains would be *less than significant*.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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?	☐	☐	☒	☐	☐
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 projects, 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a)

i) *Less Than Significant Impact*. The proposed project is not located within an Alquist-Priolo Earthquake Fault Zone. No active faults are located within 30 miles of the project site. Additionally, construction on the project site will be subject to California Building Standards Code, which increases the requirements above the Uniform Building Code, partly in order to protect buildings in California from earthquakes and seismic events. Therefore, the proposed project would have a *less than significant* impact.

ii) See discussion under i) above.

iii) *Less Than Significant Impact*. The soil type underlying the project area is Kimball Silt Loam. This soil type is typically well drained and is not typically associated with liquefaction. Therefore, the proposed project would have a *less than significant* impact associated with seismic-related ground failure.

iv) *No Impact*. The project site is generally flat and does not include any features that would create the possibility of landslide. Adjacent properties are also flat. Therefore, the proposed project would have *no impact* associated with landslides.

b) *Less Than Significant Impact*. Construction activities on previously undeveloped land can result in significant erosion related impacts. However, the proposed project will be required to adhere to the City of Rancho Cordova Erosion Control Ordinance. Additionally, the project proponent will be required to submit and adhere to a Storm Water Pollution Prevention Program (SWPPP), further reducing any erosion-related impacts. Therefore, the proposed project would result in *less than significant* erosion impacts.

c) *Less Than Significant Impact*. The proposed project is located on Kimball Silt Loam, a stable and well drained soil type. Landslides, lateral spread, and subsidence are not a concern as the general area surrounding the project and the project area itself is characterized by flat terrain. Liquefaction is not a significant concern due to the well drained condition of the soil, the depth to the groundwater table, and the relatively long distances between the project and any active seismic faults. Collapse is not a significant concern as the area shows no sign of, nor is any evidence available that shows subterranean voids or mining in the project vicinity. Therefore, the proposed project would result in *less than significant* impacts associated with these types of hazards.

d) *Less Than Significant Impact*. Kimball Silt Loam is prone to high shrink-swell potential in the project area. However, compliance with the California Building Standards Code would ensure that structures on-site would not be subject to significant risk from this type of event. Therefore, the proposed project would result in *less than significant* impacts associated with expansive soils.

e) *No Impact*. The proposed project will be served by County Sanitation District 1 (CSD-1) for wastewater conveyance from the site. Sewer service already exists at the street and every use within the project area will be connected to CSD-1's service infrastructure. The proposed project will not rely on septic tanks or other alternative wastewater disposal systems. Therefore, the proposed project will have *no impact* associated with alternative wastewater systems.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
VII. HAZARDS AND 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 § 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 area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	☐
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. The proposed project does not include any uses that would require routine transport of hazardous materials. However, construction of the proposed project may include the limited use of hazardous materials usually associated with building construction. Any transportation, storage, or use of hazardous materials for the proposed project would be subject to local, State, and federal laws. Consistency with these laws would result in *less than significant* hazardous materials impacts.

b) *Less Than Significant Impact with Mitigation Incorporation*. Construction of the proposed project would include the limited use, storage, or disposal of hazardous materials, as is normal for residential and office construction. This limited use would likely not result in significant potential for upset or release. However, as the site has lain vacant for some time, illegally dumped or buried material could be located on-site, causing the potential for

significant impacts. The following mitigation measures are included in order to reduce the impact from any unknown hazardous materials:

Mitigation Measures

MM 7.1a The project proponent shall coordinate with the Sacramento Municipal Utilities District (SMUD) to ensure that all transformers on-site or immediately adjacent to the site that predate 1979/1980 are sampled and analyzed as needed to determine the presence or absence of PCBs. All PCB-containing transformers shall be removed and replaced with PCB-free transformers according to the requirements of SMUD.

Timing/Implementation: *Prior to issuance of building permits.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 7.1b As construction occurs, all debris, trash, refuse, and abandoned, discarded, and/or out-of-service items shall be removed from the proposed project sites and deposited off-site in an appropriate disposal facility. This mitigation measure shall be included on all improvement plans.

Timing/Implementation: *Throughout all phases of construction. All such materials shall be completely removed prior to issuance of building permits.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 7.1c If any underground storage tanks (UST) are discovered during construction activities, the UST shall be removed as required by the County Environmental Management Department (EMD), Hazardous Materials Division. In addition, groundwater and soil investigation for contamination and remediation in the tank vicinity shall be conducted if required by the EMD. This mitigation measure shall be included on all improvement plans.

Timing/Implementation: *Throughout all phases of construction.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department in coordination with the County Environmental Management Department..*

Implementation of mitigation measures MM 7.1a through MM 7.1c would ensure that impacts from implementation of the proposed project are *less than significant*.

c) *No Impact*. There are no schools within one-quarter mile of the proposed project area. Additionally, the proposed project would not emit hazardous materials as a part of the operation of the project. Nor would the project require the handling or use of any acutely hazardous materials. Therefore, the proposed project would result in *no impact*.

d) *No Impact*. The proposed project is not located on a site that was included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, the proposed project would not create a significant hazard to the public or the

environmental and *no impact* associated with known hazardous materials sites would result from implementation of the proposed project.

e) *Less Than Significant Impact*. According to the Mather Airport Comprehensive Land Use Plan (CLUP), the proposed project is located within the Safety Restriction Area, specifically within the Overflight Zone (Airport Land Use Commission, 1997, p. 37). Acceptable land uses within the Overflight Zone include single-family detached and two-family dwellings as well as office buildings for rent (Airport Land Use Commission, 1997, pp. 38-39). All land uses within the proposed project are allowed within the Overflight Zone, indicating that the ALUC has found that hazards to people on the ground from aircraft in the Mather Airport airspace is not significant. Construction of the proposed project would not require any extremely tall equipment that would cause a hazard to aircraft and thus to people on the ground. Therefore, the proposed project would result in a *less than significant* impact associated with hazards for people residing or working in the project area.

f) *No Impact*. The proposed project is not located within two miles of any private airstrip. The nearest private airport to the project area is Mosier Airport in Elk Grove, approximately nine miles away to the south. Additionally, per the Federal Aviation Administration's requirements, aircraft in the airspace directly over the project area would be under the control of Mather Airport's control tower, not the control tower of a private airport. Therefore, the proposed project would have *no impact* associated with hazards near private airstrips.

g) *Less Than Significant Impact*. Implementation of the proposed project would not conflict with the Sacramento County Multi-Hazard Disaster Plan, the Sacramento County Area Plan, or any other adopted emergency response or evacuation plan. The project area has been planned for industrial development for some time and development of this parcel was assumed in emergency planning processes. Additionally, the project area is surrounded by urban development of a similar type. The addition of five acres of additional residential and office development within this urbanized area would not affect regional agencies' ability to respond to disasters. Therefore, the proposed project would result in *less than significant* impacts associated with disaster plans.

h) *No Impact*. The proposed project is located in and entirely urbanized area. The project is surrounded by similar development and is not located in the vicinity of any wildlands. Therefore, the proposed project is not at risk from wildland fire and *no impact* would result from implementation of the project.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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 that would result in flooding on- or off-site?	☐	☐	☒	☐	☐
e) Create or contribute to the potential for discharge of storm water from material storage areas, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas?	☐	☐	☒	☐	☐
f) Create or contribute to the potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit?	☐	☐	☒	☐	☐
g) Create or contribute to the potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies?	☐	☐	☒	☐	☐
h) 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?	☐	☐	☒	☐	☐
i) Otherwise substantially degrade water quality?	☐	☐	☒	☐	☐
j) 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?	☐	☐	☒	☐	☐
k) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐	☐
l) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?	☐	☐	☒	☐	☐
m) Inundation by seiche, tsunami or mudflow?	☐	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. Activities associated with the proposed project have the potential to result in significant short-term surface water quality impacts during the construction period and long-term water quality impacts due to surface runoff associated with an increase in impermeable surfaces. Unless the runoff is controlled, it would generate new runoff pollutants such as oil, gasoline, and other chemicals with potentially adverse impacts on water quality. Compliance with a Stormwater Pollution Prevention Plan (SWPPP), best management practices (BMPs), and applicable local ordinances and State requirements, would ensure that the proposed project would have a *less than significant* impact on water quality.

b) *Less Than Significant Impact*. The proposed project would result in new impervious surfaces on a site that previously consisted of entirely undeveloped land, decreasing absorption rates and increasing run-off in the project area. However, the project site consists of a small, infill parcel (approximately five acres in size) and by itself the project would not contribute significantly to impacts to the groundwater recharge rate of the area. Land surrounding the project consists of urban development that has already impeded the greater recharge rate of the area. The project area is currently supplied by the California-American Water Company (Cal-Am). Cal-Am's projected capacity through the year 2025 far exceeds the project need for the area, including the need of the proposed project (EDAW, 2006). Therefore, the uses of the proposed project would not result in the need for additional groundwater sources and would not result in significant impacts to groundwater levels. Considering the above factors, implementation of the proposed project would result in a *less than significant* impact.

c) *Less Than Significant Impact*. The project site is characterized by flat terrain, generally draining to the south towards Old Placerville Road. The drainage for the project site would be modified by the addition of impervious surfaces and other common impacts to drainage from development of a site. However, no significant change will occur. Additionally, the proposed project will be required to be consistent with the City of Rancho Cordova Erosion Control Ordinance, further reducing any erosion impacts. Therefore, the proposed project would result in *less than significant* impacts related to erosion and drainage.

d) *Less Than Significant Impact*. See discussion under discussion c) above. The generally flat terrain of the project site as well as adjacent sites, as well as compliance with City Ordinances, would mitigate any potential flooding in the area. The project is located well outside the 100-year floodplain. No uses included in the proposed project could result in a significant chance of flooding, regardless of the site topography. Therefore, the proposed project would have a *less than significant* impact associated with flooding.

e) *Less Than Significant Impact*. See discussion a) above. In addition to compliance with a SWPPP, the use of the BMP's listed in **Table 4**, as requested by the City and identified by the California Stormwater Quality Association (CASQA, January 2003), would further mitigate any operational impacts. This list is representative of recommended BMP's but does not constitute the only practices to be employed. All requirements of the SWPPP shall be followed as well.

TABLE 4
APPROVED CASQA BEST MANAGEMENT PRACTICES

CASQA Identifier	BMP Name
NS-8	Vehicle and Equipment Cleaning
NS-9	Vehicle and Equipment Fueling
NS-10	Vehicle and Equipment Maintenance
WM-1	Material Delivery and Storage
WM-2	Material Use
WM-3	Stockpile Management
WM-4	Spill Prevention and Control
WM-5	Solid Waste Management
WM-6	Hazardous Waste Management

Source: CASQA, 2003
Notes: Information on the requirements and execution of these BMP's is found at http://www.cabmphandbooks.com/ and at the City of Rancho Cordova at 2729 Prospect Park Drive, 95670.

Use of these and other standard practice BMP's, as well as adherence to the SWPPP identified in discussion a) above would ensure that impacts from implementation of the proposed project would be *less than significant*.

f) *Less Than Significant Impact*. See discussions a), b), and d) above.

g) *Less Than Significant Impact*. See discussions a), b), and d) above.

h) *Less Than Significant Impact*. The proposed project is currently undeveloped and is therefore not directly contributing or connected to the storm drain system. However, development of this site has been anticipated and planned for since long before incorporation of the City. The addition of 35 dwelling units and four office buildings would not constitute a substantial new source of runoff. Consistency with a SWPPP would ensure that any runoff from the site was controlled and polluted runoff is prevented. Operational runoff from the project site would not be significant and would be handled by planned infrastructure already in place in the area. Therefore, the proposed project would result in *less than significant* impacts associated with storm water drainage systems.

i) *Less Than Significant Impact*. Water quality impacts from the construction phase have been addressed in the discussions above and found to be less than significant. Adherence to a SWPPP would reduce many of the anticipated impacts to water quality from the construction phase of the proposed project. The addition of housing and office space on the project site would not include any design features or land uses that could adversely and significantly impact water quality. Therefore, implementation of the proposed project would result in *less than significant* impacts related to water quality.

j) *Less Than Significant Impact*. The proposed project site is located more than one-half mile from the 100-year floodplain. Additionally, the project elevation of approximately 70 feet above mean sea level is high enough above the American River and any associated tributaries and creeks to preclude the potential for flooding during a 100-year storm event.

Therefore, implementation of the proposed project would result in a *less than significant* impact associated with housing in the 100-year floodplain.

k) *Less Than Significant Impact*. See discussion j) above.

l) *Less Than Significant Impact*. While the project is located within two miles of the Cordova Meadows Levee, the project is not located in the inundation zone for that levee. Neither is the project located in a location where failure of the Folsom Dam would result in inundation of the project area (SAFCA, 2006). No other significant source of flooding exists within the vicinity of the project area. Therefore, the proposed project would result in a *less than significant* impact associated with flooding.

m) *No Impact*. The proposed project is not located near a large body of water or ocean, precluding the possibility of a tsunami or seiche occurring that could impact the project site. As the topography of the area in which the project is located is flat, mudflows are not a possibility. Therefore, implementation of the proposed project would result in *no impact* from these types of events.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
IX. LAND USE AND PLANNING Would the project:					
a) Physically divide an existing 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?	☐	☐	☐	☒	☐

EXISTING SETTING

The proposed project is located within the Countryside/Lincoln Village Planning Area as identified in the City of Rancho Cordova Draft General Plan (2006, p. 41). Within that Planning Area, the project site is identified as a site for low-density residential (City of Rancho Cordova, 2006, p. 42). The project site is entirely surrounded by similar residential development and a retail development to the west.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. The proposed project is located within a completely urbanized portion of the City of Rancho Cordova. The project is located on one of the last vacant parcels in that portion of the City. Residential land uses adjoin the site to the north, east, and south and a retail development is located immediately to the west. Implementation of the project would not result in impacts to that roadway or to the general character of the vicinity. Therefore, the proposed project would result in a *less than significant* impact.

b) *Less Than Significant Impact*. The proposed project is currently zoned MP – Industrial/Office Park. However, the General Plan identifies the area as being planned for low-density residential. The proposed rezone of the project as well as the residential uses to be constructed by the project would bring the parcel into consistency with the City's Land Use Map and the General Plan. The office portion of the project will not be rezoned. However, conflicts between the general plan and the office portion of the site do not concern environmental effects and are therefore not significant for this discussion. Considering these factors, the proposed project would result in *less than significant* impacts related to conflicts with local plans.

c) *No Impact*. The City of Rancho Cordova and Sacramento County do not currently have an adopted Habitat Conservation Plan. The South Sacramento Habitat Conservation Plan (SSHCP) is being prepared by the County and will be adopted within the next few years. However, the SSHCP is still being formulated and no portion of the plan has been adopted. No Natural Community Conservation Plans are in effect in the project vicinity. Therefore,

the proposed project would have *no impact* on any adopted Habitat Conservation Plans or Natural Community Conservation Plans.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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?	☐	☐	☒	☐	☐

EXISTING SETTING

The proposed project is located within a Mineral Resource Zone 2 area, as defined by the California Geological Survey. MRZ-2 areas are described as areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. Typical mineral resources in the area of Rancho Cordova include gold (largely mined out in the early 20th century) and aggregate deposits that exist as a result of dredge mining in the area (Pacific Municipal Consultants, 2005).

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. The vicinity of the project area has been largely urbanized in the latter half of the 20th century. During that time, significant aggregate resources were removed prior to development, including in the immediate vicinity of the project area. The proposed project would not create any new significant impediment to the removal of mineral resources from the site than already exists. Additionally, aggregate resources are not particularly rare, nor is the site planned for mining by any of the local firms that are currently removing mineral resources to the south and east of the project area. Therefore, the proposed project would result in *less than significant* impacts associated with mineral resources.

b) *Less Than Significant Impact*. The City of Rancho Cordova General Plan does not identify the project location as being within a locally important mineral resource. The vast majority of mining in the City is located well to the south and east of the project area. Therefore, the proposed project will have a *less than significant* impact.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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 of applicable standards of other agencies?	☐	☒	☐	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐	☐
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a 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?	☐	☐	☐	☒	☐

EXISTING SETTING

A Noise Impact Study was performed by The Acoustics & Vibration Group for the proposed project in May, 2006 (see **Appendix D**). The report found that the majority of existing noise came from US-50 to the north, Old Placerville Road to the south, the loading docks and cooling towers of the retail property to the west, and overflying aircraft into and out of Mather Airport. Noise impacts from the proposed project on adjacent sensitive receptors to the north, east, and south are expected to be minor.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact With Mitigation Incorporation.* Three significant sources of noise exist immediately adjacent to the project area. Traffic noise from Old Placerville Road could result in exposure to significant noise levels, however the distance from the residential portion of the project to the roadway combined with standard building materials would ensure that noise from Old Placerville Road would be less than 50 decibels in the day and 45 decibels at night, the maximum allowed under the City's Noise Ordinance. Noise from overflying aircraft was measured during the Noise Impact Study but was not ultimately found to exceed maximum levels. Noise between 75 and 80 decibels was recorded emanating from the loading dock of the grocery store located in the retail center immediately adjacent to the project area to the west. This noise was short in duration and was associated with the engines of delivery trucks. As the exhaust stacks on these delivery trucks are located eight feet or more above the ground, the primary source of the noise was also centered eight feet

high. As the truck noise is louder than allowed under City standards, the following mitigation measure is included in order to reduce noise levels:

Mitigation Measures

MM 11.1 The project proponent shall construct a sound wall of at least 10 feet in height along the west property line beginning at the northwest corner of the project and terminating 5 feet south of the north face of the northwest office building. This sound wall shall be constructed of concrete masonry or other materials with a surface weight of 3.5 to 4.0 pounds per square foot. The sound wall shall be continuous along the entire length of the wall with no gaps, including along the ground, or other openings.

Timing/Implementation: *Wall shall be constructed prior to issuance of building permits.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 11.1 would ensure that impacts related to noise exposure would be *less than significant*.

b) *Less Than Significant Impact.* Construction of the proposed project will not include any practices likely to cause substantial amounts of groundborne vibration or groundborne noise levels (e.g., drilling, jack-and-bore, etc.). Any amounts of groundborne vibration or noise will likely be temporary in nature, ceasing when construction is finished. Therefore, this impact is expected to be *less than significant.*

c) *Less than Significant Impact*. The proposed project includes only residential and office uses, both land uses that typically do not generate significant levels of noise. Noise generated by the residential uses is expected to be less than significant. The office uses included in the proposed project are also expected to only generate minor noise. The Noise Impact Study (**Appendix D**) did not identify any significant sources of noise from the proposed project. Therefore, the proposed project is expected to result in *less than significant* noise impacts associated with the uses of the project.

d) *Less Than Significant Impact with Mitigation Incorporation.* Construction of the proposed project would involve the transport and use of heavy equipment. The use of heavy equipment and other construction activities would temporarily increase the ambient noise levels in the project's vicinity above existing levels. These increases would be periodic and temporary in nature. In order to reduce noise impacts associated with construction, the following mitigation measure is included:

Mitigation Measure

MM 11.2 The project applicant shall adhere to the following standard mechanisms for mitigation of construction-related nuisances:

- Construction activities shall be limited to between 7:00 AM and 6:00 PM on weekdays and 8:00 AM and 6:00 PM on weekends;

- Stationary sources of construction noise such as compressors and generators shall be placed as far as possible from existing residential uses to the north and east of the project site; and,

- Visible signage providing a name, address, and 24-hour phone number for information and/or complaints regarding the construction activities shall be posted on the site facing Old Placerville Road.

These requirements shall be included as a note on all construction plans and in the improvement plan submittal.

Timing/Implementation: *Prior to approval of grading and/or improvement plans and throughout construction activities.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 11.2 would reduce the project's potential temporary noise impacts to *less than significant.*

e) *Less Than Significant Impact*. The proposed project is located within the vicinity of Mather Airport. However, the noise contours for the airport are located south of the project area. No measurable noise contours overlay the project area. While aircraft noise was identified in the Noise Impact Study (see **Appendix D**), noise levels were below City-established thresholds. Therefore, the proposed project would have a *less than significant* impact associated with aircraft noise.

f) *No Impact*. The nearest private airport to the project area is Mosier Airport in Elk Grove, approximately nine miles away to the south. Pursuant to Federal Aviation Regulations, aircraft flying over the project area are under the control of Mather Airport. Therefore, the proposed project is not located within the vicinity of a private airport and *no impact* would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XII. POPULATION AND HOUSING Would the project:					
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., 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?	☐	☐	☐	☒	☐

EXISTING SETTING

The proposed project is located within a previously developed portion of the City of Rancho Cordova and is within an area planned for full development by both the City of Rancho Cordova General Plan, which currently hold jurisdiction over the project area, as well as the County of Sacramento General Plan and the Cordova Community Plan which held jurisdiction over the project area prior to the incorporation of the City of Rancho Cordova.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. The project area was planned for development by both the City of Rancho Cordova and the County of Sacramento. The project is located within an urbanized area, not an undeveloped area with little or no prior development. Therefore, the proposed project will not significantly induce growth in the vicinity. Impacts associated with growth inducement would be *less than significant*.

b) *No Impact*. The project site is currently undeveloped. Therefore, implementation of the proposed project would not result in any displacement of people or housing and there would be *no impact*.

c) See discussion b) above.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XIII. PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:					
a) Fire protection?	☐	☐	☒	☐	☐
b) Police protection?	☐	☐	☒	☐	☐
c) Schools?	☐	☐	☒	☐	☐
d) Parks?	☐	☐	☒	☐	☐
e) Other public facilities?	☐	☐	☒	☐	☐

EXISTING SETTING

The proposed project is located within the following public service districts:

- Fire Protection: Sacramento Metropolitan Fire District (SMFD)
- Police Protection – Rancho Cordova Police Department (RCPD)
- School District – Sacramento City Unified School District (SCUSD)
- Park District – Cordova Recreation and Park District (CRPD)
- Electrical Service – Sacramento Metropolitan Utilities District (SMUD)
- Natural Gas Service – Pacific Gas and Electric (PG&E)

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. The proposed project would be served by the SMFD. The nearest station to the project area is located less than 0.2 miles away on Bradshaw Road. The addition of the project to the existing service area for SMFD and for the Bradshaw Road Station would not impact SMFD service levels in the project area and no additional stations, equipment, or personnel would be required to serve the project. Therefore, implementation of the proposed project would result in *less than significant* impacts related to fire protection.

b) *Less Than Significant Impact*. The proposed project would be served by the RCPD, which is based out of the police station on Rockingham Drive approximately 1.8 miles to the northwest of the project site. The addition of 35 dwelling units and four office units would not constitute a significant increase in service requirements for the Police Department. Therefore, no additional stations, equipment, or personnel would be required to serve the project and *less than significant* impacts are expected.

c) *Less Than Significant Impact*. The proposed project would generate some new students that would be served by the SCUSD. According to current SCUSD generation rates, the proposed project would result in 15 new elementary school students (K-6) and 11 middle/high school students (7-12). Existing schools can adequately serve these additional 26 students. No new school facilities will be required as a result of the proposed project. Therefore, the proposed project would result in *less than significant* impacts to schools.

d) *Less Than Significant Impact*. The proposed project includes the addition of 35 dwelling units which would require dedication of additional parkland under the current City of Rancho Cordova parkland dedication standard of 5.85 acres per 1000 residents. The proposed project does not include the creation or dedication of any parkland to the CRPD. However, both the City of Rancho Cordova and the CRPD allow for the payment of in-lieu fees to CRPD. As no new parkland is included in or proposed by the proposed project, *less than significant* impacts related to the construction of additional park facilities are expected upon payment of in-lieu fees.

e) *Less than Significant Impact*. All other public utilities such as wastewater conveyance, water supply, electrical supply, natural gas supply, cable television, and telephone are already located immediately adjacent to the project site. Therefore, construction of additional facilities will be limited to infrastructure to be installed on-site and thus the environmental impacts of that installation are covered in the various sections of this MND. Therefore, the proposed project would have *less than significant* impacts related to other public services.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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?	☐	☐	☒	☐	☐

EXISTING SETTING

Three recreational facilities are within one mile of the project area: Lincoln-Village Community Park, Rosemont North Park, and Rosemont Community Park. All three facilities are maintained and managed by the CRPD.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. The proposed project could potentially increase use of these parks through the addition of 35 dwelling units. However, the increase would be insubstantial compared to the general urban nature of the surrounding area and the high number of existing housing in the vicinity of the project. Therefore, the proposed project would have a *less than significant* impact on parks in the vicinity.

b) *Less Than Significant Impact*. The proposed project includes a small public use space located on-site between the office uses and the residential uses. This public use space will include a landscaped area and picnic benches. As this recreational facility is to be constructed on-site, the environmental effects of the construction are included in the analysis of this MND. Therefore, the impact will be *less than significant*.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XV. TRANSPORTATION/TRAFFIC Would the project:					
a) Cause an increase in traffic that 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)?	☐	☐	☒	☐	☐
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)?	☐	☐	☒	☐	☐

EXISTING SETTING

A trip generation comparison was conducted by KD Anderson Transportation Engineers for the proposed project in April 2006. This comparison found that the proposed project would result in 549 daily trips, 79 AM Peak Hour trips, and 88 PM Peak Hour trips. The City's current standard of significance for trip generation is 100 or more AM or PM Peak Hour trips or 1000 or more daily trips.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. The proposed project would result in fewer trips than the City's current threshold of significance for traffic impacts. Above the standard of 100 or more AM/PM Peak Hour trips or 1000 daily trips, the City assumes that potentially significant impacts to traffic would occur and requires a traffic impact analysis in order to determine mitigation for the project. However, as the proposed project would not result in enough trips to require a traffic impact study, no significant impacts are expected. Therefore, the proposed project would have *less than significant* impacts related to traffic generation.

b) *Less Than Significant Impact*. See discussion a) above. The project is not expected to generate significant traffic. Therefore, no significant impact to level-of-service on area roads is expected and the proposed project would have a *less than significant* impact.

c) *Less Than Significant Impact*. The proposed project is located under the Horizontal Surface of Mather Airport, as identified in the Mather Airport CLUP, which lies 150 feet above the

ground at the project location (Airport Land Use Commission, 1997). The Horizontal Surface is an Imaginary Surface (established by Federal Aviation Regulation Part 77), above which it is assumed a structure or activity would pose a hazard to air navigation and therefore potentially require a change in air traffic patterns. However, the proposed project does not include any uses taller than two stories. Therefore, at no time would a structure included in the proposed project pierce the horizontal surface. Additionally, while a crane will likely be required for the construction phase of the proposed project, this crane would not approach 150 feet above the ground in height. Therefore, the proposed project would have a *less than significant* impact associated with air traffic patterns.

d) *Less Than Significant Impact*. The proposed project only includes one small loop road on the project site. This roadway will be analyzed by both the police department and the fire district prior to project approval as part of the City's approval process in order to ensure public safety. There are no intersections included in the project and all sharp corners are within the residential portion where speeds will be limited. Therefore, the proposed project would result in *less than significant* impacts associated with design feature safety.

e) *Less Than Significant Impact with Mitigation Incorporation*. Steve Trout, Supervising Inspector for the SMFD, was consulted with during the project review phase and he indicated to City Staff that he did not anticipate any issues with access for the fire department and emergency response. Prior to final approval of the proposed project, the SMFD will be re-analyzing the project layout to ensure that access will not be an issue. However, as a full analysis is forthcoming, the following mitigation measure is included in order to ensure that any future issues are addressed:

Mitigation Measure

MM 15.1 If the Sacramento Metropolitan Fire Department identifies that the design of the proposed project would result in an obstruction or reduction in emergency access to the project site, changes to the project design shall be made by the project proponent, to the satisfaction of the SMFD and the City in order to alleviate the problem. Such changes may include, but are not limited to:

- Increase the turn radius of internal roadways;
- Widen internal roadways and parking lots to accommodate fire equipment travel;
- Provide a secondary access to the project site on the western side to the adjacent retail development; and/or,
- Provide a secondary access point onto Old Placerville Road in the southern edge of the project area.

The environmental impacts of the above changes are identical to those identified in the MND. However, should other off-site changes in the project be required by the SMFD, the City will make a determination prior to project approval as to the environmental effect of those changes and whether additional CEQA review of the project is required. If additional CEQA review is warranted, the City shall conduct that review prior to project approval.

Timing/Implementation: *Prior to approval of grading permit and/or improvement plans.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 15.1 would ensure that the proposed project would have a *less than significant* impact related to emergency access.

f) *Less Than Significant Impact*. Each dwelling on the project site provides at least 2 parking spaces, including inside garages and outside on driveways. Additionally, four visitor parking spaces are included in the northwest and north east corners of the site. Current City standards for parking require two parking spaces per dwelling unit for detached and attached single-family dwellings (City of Rancho Cordova Zoning Code, Title III, Section 330-61). Therefore, the proposed project complies with City parking standards and would provide adequate parking and the project would have a *less than significant* impact.

g) *Less Than Significant Impact*. The proposed project is not required by City Code to provide parking for bicycles. Additionally, while bus service is available within the vicinity, the proposed project is not located immediately adjacent to a bus route and there are no transit stops on Old Placerville Road at the project location. Therefore, the proposed project would have a *less than significant* impact on transit and alternative transportation.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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 that 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?	☐	☐	☒	☐	☐

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact.* The project is surrounded by residential and commercial developments that are adequately serviced by CSD-1. According to the CSD-1 Sewerage Facilities Master Plan (2002), each new Equivalent Single-family Dwelling Unit (ESD) is projected to generate 310 gallons per day (gpd) of additional wastewater. The general assumption used for wastewater generation is 6 ESD's per acre of low-density residential (CSD-1, p. 3-3, 2002). The proposed project includes approximately three acres of residential and would therefore produce approximately 18 ESD's of wastewater or 2.03 million gallons per year. This amount is well within the capacity of CSD-1 systems, as identified in the CSD-1 Sewerage Facilities Master Plan. Therefore, the project would have a *less than significant* impact.

b) *Less Than Significant Impact.* The proposed project site is within an urban area adequately serviced by water facilities and wastewater treatment facilities. According to a Water Supply Evaluation performed by EDAW for the City of Rancho Cordova General Plan, the water supplier for the project area has sufficient capacity to serve the proposed project (EDAW, 2006). Wastewater service to the project area was planned for in the CSD-1 Sewerage Facilities Master Plan (CSD-1, 2002). Further, the proposed development will have access to current facilities, and as such will not require new or expanded facilities. Therefore, the project would have a *less than significant* impact.

c) *Less Than Significant Impact.* The proposed project is located on a parcel that has been planned for development. Existing stormwater collection and handling infrastructure was planned such that the addition of 35 dwelling units and four office units on the property would not result in a lack of capacity in the stormwater system. Therefore, the proposed project would result in *less than significant* impacts.

d) *Less Than Significant Impact.* Cal-Am currently provides water service to the area in which the proposed project will be located. According to a Water Supply Evaluation performed by EDAW for the City of Rancho Cordova General Plan Draft Environmental Impact Report, Cal-Am's water supply is expected to be capable of handling the additional requirements of buildout of the City's Planning Area, which includes the proposed project (EDAW, 2006). Therefore, the project would have a *less than significant* impact.

e) *Less Than Significant Impact.* See discussions a) and b) above.

f) *Less Than Significant Impact.* The proposed project will be served by Browning-Ferris Industries (BFI), which collects residential and commercial solid waste and transports any non-recyclable material to the Forward Landfill in Manteca, CA or the Lockwood Regional Landfill in Nevada. Both facilities have adequate capacity to handle the additional generation of waste by the operation of the proposed project. Construction debris will most likely be collected by the contractor and transported to the Kiefer Landfill, south of the City of Rancho Cordova. The Kiefer Landfill also has adequate capacity to accept waste from the proposed project. The addition of 35 residential units and four office units would be an insignificant change in daily waste. Therefore, the project would have a *less than significant* impact.

g) *Less Than Significant Impact.* See discussion f) above.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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, substantially reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐	☐
b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☒	☐	☐
c) 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.	☐	☐	☒	☐	☐
d) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	☐

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact.* As demonstrated in checklists I through XVI above, the proposed project is not expected to result in any significant impacts related to biological or cultural resources. Further, the implementation of the mitigation measures identified in this MND would ensure than the project's impacts are *less than significant.*

b) *Less Than Significant Impact.* Incorporation of the mitigation measures for the project would reduce any environmental impacts to less than significant in both the short-term and long-term. The area is designated by the General Plan for Medium Density Residential, with which the proposed project is consistent. The proposed project would be required to adhere to all Rancho Cordova General Plan policies, ensuring that the long-term environmental goals of the City are adhered to. Therefore, the project would have a *less than significant* impact.

c) *Less Than Significant Impact*. Section 4.0 of this MND addresses the proposed project's contribution to cumulative impacts in the cumulative setting. No impacts were found to be cumulatively considerable. Therefore, the proposed project would result in *less than significant* impacts related to cumulatively considerable impacts.

d) Less Than Significant Impact. See discussion a) above.

4.0 CUMULATIVE IMPACTS

4.1 INTRODUCTION

This section addresses the proposed project's potential to contribute to cumulative impacts in the region. California Environmental Quality Act (CEQA) Guidelines Section 15355 defines cumulative impacts as "two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts." A project's incremental effects are considered significant if they are "cumulatively considerable" (CEQA Guidelines Sections 15065[a][3] and 15130[a]). "Cumulatively considerable" means the incremental effects of the project are considerable when viewed in connection with the effects of past, current, and future projects (see also CEQA Guidelines Appendix G, Section XVII).

4.2 CUMULATIVE SETTING

Extensive development of the project vicinity has been ongoing since the mid twentieth century. Recent large-scale development of the City has taken place south of U.S. 50 and east of Sunrise Boulevard. However, the impacts of development of this area are not included in this cumulative analysis as the environmental conditions of that region are not easily correlated with the proposed project area. The Rancho Cordova General Plan has identified land uses and general redevelopment of the area, primarily centered on planning areas such as the Countryside - Lincoln Village Planning Area (in which the proposed project is located). The City's General Plan encompasses the majority of development in the region. Therefore, the following cumulative analysis includes the cumulative impacts of the proposed project and the City's General Plan.

4.3 CUMULATIVE IMPACT ANALYSIS

AESTHETICS

The General Plan Draft Environmental Impact Report (DEIR) identified that the potential introduction of high-rise structures in the downtown area of the City could cause significant and unavoidable cumulative visual impacts within the City. The proposed project is not located within the downtown area, nor does the proposed project include the construction of high-rise buildings. The proposed project is generally similar to existing development in the vicinity. Therefore, the proposed project would have *no impact* on cumulative aesthetic impacts.

AGRICULTURAL RESOURCES

Implementation of the General Plan Land Use Map designations was identified in the Rancho Cordova General Plan DEIR as contributing to the cumulatively considerable loss of agricultural resources or farmlands. The proposed project does include a defunct orchard. However, agricultural use of the property has not occurred in the recent past and the small site would not support agriculture in the future. Therefore, the proposed project would not contribute to a cumulative loss of agricultural land and *no impact* would occur.

AIR QUALITY

The Rancho Cordova General Plan DEIR identified that past, present, and future development in the area will have significant and unavoidable cumulative impacts to air quality in the area. Mitigation measures within this document have reduced any impact to air quality from the project to a less than significant level. The proposed project will not emit any pollutants at a level higher than allowed by local air district standards. Therefore, the proposed project's

incremental contribution to the cumulative impact would be insignificant and is therefore considered *less than cumulatively considerable*.

BIOLOGICAL RESOURCES

The Rancho Cordova General Plan DEIR identified that past, present, and future development in the area will have significant and unavoidable cumulative impacts to biological resources in the area. Mitigation measures within this document have reduced any impact to biological resources from the project to a less than significant level. Therefore, the proposed project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

CULTURAL RESOURCES

The Rancho Cordova General Plan DEIR identified that past, present, and future development in the area could have significant and unavoidable impacts to cultural resources in the area. No cultural resources were identified in the project area. Mitigation measures included in this document would protect any unknown cultural resources from impacts. Therefore, the proposed project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

GEOLOGY AND SOILS

The Rancho Cordova General Plan DEIR concluded that impacts to geology and soils from implementation of the respective projects would be less than cumulatively considerable. The proposed project is consistent with this analysis. Soils underlying the project site are adequate for the proposed project uses and hazards from soil and geological conditions are not significant. Therefore, the project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

HAZARDS AND HAZARDOUS MATERIALS

The Rancho Cordova General Plan DEIR concluded that impacts to hazards and hazardous materials would be less than cumulatively considerable. The proposed project is consistent with the types of projects identified in the General Plan DEIR and would have the same impacts. Therefore, the project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

HYDROLOGY AND WATER QUALITY

The Rancho Cordova General Plan DEIR identified significant and unavoidable impacts to water supply as a result of new development in areas of the City that are currently undeveloped. The proposed project is located within a developed portion of the City. Furthermore, water supply is adequate to serve the whole of the developed portion of the City through the year 2030 (City of Rancho Cordova General Plan DEIR, 2006; EDAW, 2006). Therefore, the proposed project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

LAND USE AND PLANNING

The Rancho Cordova General Plan DEIR identified the introduction of dense urban development in previously undeveloped areas as a potential cause of significant and unavoidable environmental impacts within the City. The proposed project is an infill project in a

currently developed portion of the City. Surrounding development consists of buildings of roughly similar height and density. Therefore, the project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

MINERAL RESOURCES

The Rancho Cordova General Plan DEIR identified significant and unavoidable impacts to mineral resources as a result of development of areas in MRZ-2 zones, areas in which it is judged that a high likelihood of mineral deposits may exist. The proposed project is located within an MRZ-2 zone. However, as the sight is small and surrounded by urban development, removal of aggregate on-site is not feasible, with or without the project. Therefore, the proposed project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

NOISE

The Rancho Cordova General Plan DEIR identified traffic noise as a significant and unavoidable cumulative impact within the City. Noise impacts from the proposed project would be periodic, temporary in nature, and subject to the City of Rancho Cordova Noise Ordinance regarding construction activities. The proposed project does not include additional major roadways and would therefore not contribute significantly to the cumulative noise impact. Therefore, the proposed project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

POPULATION AND HOUSING

The Rancho Cordova General Plan DEIR identified increases in population and housing as a significant and unavoidable cumulative impact within the City. The addition of 27 dwelling units is insignificant when compared to the large increase in housing planned in the City by the General Plan outside the cumulative setting. Therefore, the proposed project's incremental contribution to the impact would be *less than cumulatively considerable*.

PUBLIC SERVICES

The Rancho Cordova General Plan DEIR concluded that impacts to public services from implementation of the respective projects would be less than cumulatively considerable. The proposed project is located within a developed area of the city with established utilities and services. As such, additional infrastructure would not be required to serve the project. Compliance with City Policies, as identified in the General Plan, would reduce the proposed project's incremental contribution to a *less than cumulatively considerable* level.

RECREATION

The Rancho Cordova General Plan DEIR concluded that impacts to recreation from implementation of the respective projects would be less than cumulatively considerable. The proposed project would be required to pay an in-lieu fee to provide for additional park and recreation services. Similar fees combined with parkland dedication in the area would reduce cumulative impacts to recreation. Payment of the in-lieu fee would ensure that the project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

TRANSPORTATION/TRAFFIC

The Rancho Cordova General Plan DEIR concluded that impacts to transportation and traffic would be significant and unavoidable. The project proposes 35 single-family residential units and four office units, which would not generate significant traffic that would require modification of the existing circulation system in the area. Therefore, the project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

UTILITIES AND SERVICE SYSTEMS

The Rancho Cordova General Plan DEIR identified significant and unavoidable impacts to water supply and wastewater infrastructure as a result of increased development of the area. This increased development identified in the General Plan EIR would occur far south and east of the proposed project site. The proposed project is located within a significantly developed portion of the City, in an area that is already served by all key utilities and service systems. Therefore, the project's incremental contribution to the cumulative impact would be *less than cumulatively considerable*.

5.0 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

■ I find that, although the proposed project could have a significant effect on the environment, a **MITIGATED NEGATIVE DECLARATION** is appropriate because any potentially significant environmental effects associated with the proposed project have been reduced to a less than significant level by revisions to the proposed project. Therefore, a **MITIGATED NEGATIVE DELCARATION** will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment that cannot be reduced in effect by changed to the proposed project, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed Project **MAY** have a significant effect(s) on the environment, but one or more of such significant effects: 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.

☐ I find that although the proposed project could have a significant effect on the environment, all potentially significant effects: (a) have been analyzed and adequately addressed in an earlier EIR pursuant to applicable standards, or (b) have been avoided or mitigated pursuant to that earlier EIR, previous Mitigated Negative Declaration, or this Subsequent Mitigated Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project.

Signature: _____ Date: 6/21/06

Printed Name: Ben Ritchie For: City of Rancho Cordova

Per CEQA Section 15070(b)(1), the project proponent for the proposed project has reviewed and agreed to the mitigation measures contained in this Mitigated Negative Declaration.

Signature: _____ Date: 6/23/06

Printed Name: Ted Kopecko For: Tower Development Corp.

6.0 REPORT PREPARATION AND CONSULTATIONS

6.1 REPORT PREPARATION

Paul Junker	Planning Director
Bill Campbell	Principal Planner
Ben Ritchie	Environmental Coordinator
Kevin Freibott	Environmental Planner
Cori Resha	Assistant Environmental Planner
Cyrus Abhar	City Engineer

6.2 PERSONS AND AGENCIES CONSULTED

Steve Trout	Sacramento Metropolitan Fire District
Gary Hyden	Cordova Recreation and Park District

7.0 REFERENCES

7.0 REFERENCES

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APPENDIX A CULTURAL RESOURCES STUDY

CULTURAL RESOURCES STUDY OF ASSESSOR'S PARCEL NO. 68:03:44 NEAR LINCOLN VILLAGE, SACRAMENTO COUNTY, CALIFORNIA

MAY 2005

Prepared For:

Carlton Engineering, Inc.

3883 Ponderosa Road

Shingle Springs, CA 95682

Prepared By:

Historic Resource Associates

2001 Sheffield Drive

El Dorado Hills, CA 95762-5905

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CULTURAL RESOURCES STUDY

ATTACHMENTS

Project Location Map

Assessors Parcel Map

North Central Information Center Record Search

I. SUMMARY OF FINDINGS

Historic Resource Associates conducted a cultural resources study in order to identify and make recommendations, in accordance with the California Environmental Quality Act (CEQA) regulations pursuant to the California Register of Historical Resources, regarding the proposed commercial development within Sacramento County Assessors Parcel No. (APN.) 68:03:44, located on the north side of Old Placerville Road, just east of its intersection with Bradshaw Road (refer to Project Location Map). The subject parcel is characterized as level land, encompassing approximately 5 acres. Several large valley oak trees lie at the far northern end of the parcel, otherwise, the only other vegetation are the remnants of an old almond orchard, tall grass, and young valley oak trees.

After an intensive field investigation of the parcel, no significant prehistoric or historic archaeological sites were found, nor were any historic buildings, structures, or objects discovered. Therefore, there will no effect to historic resources in accordance with Section 15064.5(a)(2)-(3) of CEQA guidelines, using the criteria described in Section 5024.1 of the California Public Resources Code.

II. INTRODUCTION AND PROJECT DESCRIPTION

Historic Resource Associates was contracted to conduct a field investigation, identify, and make recommendations, in accordance with the provisions of the California Environmental Quality Act (CEQA), regarding the proposed commercial project located near the intersection of Bradshaw and Old Placerville Roads, near Lincoln Village in Sacramento County, California. The project is located on a level parcel, which appears to have been extensively graded in recent years.

II. CULTURAL SETTING

A. Environment

The project area is located in Midtown Sacramento, within the American River Basin of the Sacramento Valley. Around 350 million years ago, in the Paleozoic era, a large inland sea occupied the Sacramento Valley to the present Sierra Nevada Mountains. A land mass west of the present coastline and the continental land mass provided mud, sand, silt, and marl for deposition during the 200 million year life span of the sea. Deformation and uplift with volcanic eruptions caused a great body of sediments and volcanic rocks to accumulate. During the Mesozoic time there was a long interval (Triassic Period) during which time no sediments were deposited in the inland sea, except in the present Sacramento Valley.

Deposition of sediments was renewed during the late Jurassic Period and the topography was markedly changed in a comparatively short interval of geologic time. The inland sea basin was uplifted for the last time and so deformed that the character of the sedimentary and volcanic rocks was completely changed. The sand, mud, silt, and marl metamorphosed to hard quartzite, slate, schist and marble, while volcanic rocks were metamorphosed to form greenstone (amphibolite, amphibolite schists) (Ritter, ed. 1970:16).

B. Climate and Hydrology

The climate in the area is characterized as humid mesothermal, meaning that it is Mediterranean or dry summer subtropical. The valley and foothill region has been termed the "thermal belt" because of its mild winter climate (Storie and Trussell 1927:30). However, marked differences occur within short distances, because the temperature is dependent upon elevation and air drainage. In the depressions and small valleys the temperature is lower, particularly during nights when the cool air moves downward. The temperature is warmer on the slopes and tops of the ridges. High and low temperature varied dramatically, ranging from winter lows of 12 degrees Fahrenheit to summer highs well over 100 degrees Fahrenheit.

Both prehistoric and historic sites have been identified throughout these life zones. Questions of diversity related to ecosystems and population size have not been fully explored in this region of the Sierra. Prehistoric sites generally lie along the higher ridges and sheltered valleys, particularly where food resources ripen early. Climatic shifts, however, influenced changes in flora and fauna and resulted in modifications in subsistence, transhumance, and population.

C. Archaeology

The prehistory of the area in the American River Basin and outlying areas has undergone a variety of archaeological studies. In addition, much of the analysis of prehistoric sites in the vicinity also relies upon inferences drawn from data collected in the Sierra Nevada, the Central Valley, and the Great Basin. Archaeologists have relied upon scientific data gathered from several major prehistoric sites near Lake Tahoe, where a reasonably complete chronology has been established, which dates back 8000 years. Occupation of the high Sierra is thought to date to at least 6000 B.C.

This early period is represented by Parman type projectile points (Layton 1979) found along the Tahoe Reach of the Truckee River (Elston et al 1977). Numerous surface finds of similar point types have been recovered on the Eldorado, Tahoe, and Lassen National Forests. This period is known as the Tahoe Reach Phase (Elston et al 1977; Ritter 1968). Following the Tahoe Reach phase, Elston (1977) documents a second phase in the high Sierra, known as the Spooner phase. It dates from 2000 to 5000 B.C. and is characterized by Pinto (Amsden 1935) and Humboldt (Heizer and Clewlow 1968) type points (Elston et al 1977:171).

Heizer and Elsasser (1953) define the next phase in the high Sierra chronology, which dates from 2000 B.C. to 500 A.D, as the Martis phase, named after the Martis Valley. This period is characterized by the wide-spread use of basalt for stone tools, large, roughly shaped projectile points of the Martis type (Heizer and Elsasser 1953), atlatl weights, manos, millingstones, bowl mortars, cylindrical pestles, and many flake scrapers (Moratto 1984:295). Martis is considered a series of phases, which may be of Great Basin origin, but which is distributed from the western Great Basin to the Central Valley. Its distribution roughly coincides with the ethnographic territories of the Maidu and the Washo peoples (Ibid:302-303). Although probably not ancestral to the Washo (Ibid:303), Martis may represent Maidu prehistory, including Nisenan (Ibid).

Following Martis is the Kings Beach phase, also described by Heizer and Elsasser (1953). It is characterized by the use of obsidian and silicate stone tools, small projectile points, indicating a shift from the atlatl, or throwing stick, to the use of the bow and arrow, scrapers, and bedrock mortars (Moratto 1984:294-295). The phase dates from 500 A.D. to 1200 A.D., and is considered ancestral to the ethnographic Washo.

Comparing data from the high Sierra, Eric Ritter (1970) conducted the first excavation of a stratified site in the Georgetown region. Located west of Foresthill, the Spring Garden Ravine site (PLA-101), dates to 1400 B.C. Three strata were identified at the site. The oldest, Horizon C, contained large slate and basalt projectile points of the Martis type, atlatl weights, bowl mortars, millingstones, and many core tools (Moratto 1984:301). The stratum was radiocarbon dated to 1000+110 B.C. (GaK-2246). Horizon A, containing arrow points and numerous silicate retouched flakes, hopper mortars, bedrock mortars, few core tools, and millingstones, is thought to be ancestral to the ethnographic Nisenan (Ibid). Horizon B, both stratigraphically and culturally intermediate, was radiocarbon dated at 1039+89 A.D. (GaK-2244) and 976+90 A.D. (GaK-2245) (Ibid).

Also from this excavation came evidence that, prehistorically, the environment of the region may not have been as wooded as it appears today. Analyzing pollen from site PLA-101, Robert Matson (1970, 1972a, 1972b) found evidence of a 3000 year old, savanna type of environment, consisting of oak grassland with occasional patches of chaparral. This was replaced 500 years ago by an environment of dense pine-oak woodland. Matson (1970, 1972a, 1972b) postulated that this change may be due to the cessation of seasonal burning by native peoples, which was used to promote desirable plant species for food, tools, and as fodder for deer.

Generalizing over the entire west slope of the Northern Sierra Nevada, Moratto (1984) has postulated that by 1000 B.C., the area was settled by groups of people of unknown origins who possessed both Martis and Central Valley traits. During this period, the bow and arrow were introduced, at approximately 600 A.D. - 800 A.D., and the mortar and pestle were more intensively used after 1400 A.D. (Moratto 1984:303). By 1 A.D., permanent villages were established. The greater sedentism, coupled with population growth, encouraged the development of a settlement pattern of secondary villages and seasonal camps (Ibid). The primary villages became the political, social, and ceremonial centers for communities by 1500 A.D. (Ibid). This pattern closely resembles the settlement system of the Nisenan, the ethnographic group whom inhabited the study area.

Archaeological sites have contained house pits, midden, bedrock mortars, grinding slicks, cobble pestles, metates, manos, Olivella Haliotis, clamshell, steatite and glass trade beads, quartz crystals, projectile points made from a variety of materials both local and traded, and lithic debitage of quartz, quartzite, basalt, rhyolite, slate, chert, and obsidian. Projectile points commonly found include Rose Spring contracting stem, Desert side-notched, cottonwood triangular, and several types of Elko series.

D. Ethnography

The project area lies along the eastern territory occupied in aboriginal and historic times by the Maidu or Valley Nisenan. Their territory extended to the Bear River and south of the South or Middle Fork of the Cosumnes River (Kroeber 1925:37; Beals 1933:336; Wilson and Towne 1978:388). Nisenan, a Penutian language, can be divided into three main dialects, Northern Hill Nisenan, Southern Hill Nisenan, and Valley Nisenan (Kroeber 1925:393). Shipley (1978:83) has identified seven dialects. In Hugh W. Littlejohn's unpublished manuscript of Nisenan Geography, he notes that the Nisenan had names for every mountain, hill, flat, valley, canyon, spring, creek, and river. Villages normally derived their name from prominent features of the immediate landscape, from important local vegetation, and sometimes from a mythical or local celebrity. When the inhabitants of a village moved to another location, the new settlement assumed a different name from that of the old settlement (Littlejohn 1928:37).

The chief political unit for the Nisenan was the tribelet, which consisted of a principal, permanent village surrounded by several secondary villages and seasonal camps. The population of the tribelet varied from 15-25 people to more than 500 (Kroeber 1925:831). Its headman served as advisor to the people of the tribelet. The position was usually hereditary. Permanent villages were found from upland areas along the valley floor to the lower Yellow Pine Belt, at an elevation of 1000 to 4000 feet. Winter village locations are typically found on knolls or in valleys with good southern exposure and adjacent to springs or other permanent sources of water. Typical village sites were along streams, knolls or ridges with a southern exposure. At the principal village, typical structures included family dwellings, acorn granaries, bedrock mortars, a sweat house, and a dance house.

In the area of the western slope of the Sierra, the territory of the foothill Nisenan crosses many plant communities, making available to them a wide variety of plant resources. The main food source for the Nisenan was acorns, although a wide variety of other resources were also used. Tan Bark Oak (Lithocarpus densiflora) and black oak (Quercus kelloggii) were preferred, with golden oak (Quercus chrysolepis), interior live oak (Quercus wislizenii) and scrub oak (Quercus dumosa) considered secondary food sources (Baumhoff 1978:16). Extended families or entire

villages would gather acorns. Trespass into an owned gathering area was discouraged. Acorns were cracked, shelled, and ground into flour in a mortar. They were then leached in sand and cooked in baskets using heated stones (Wilson and Towne 1978:389).

Nuts of the sugar pine (Pinus lambertiana) were also gathered. Buckeye (Aesculus californica) was eaten only in times of starvation (Baumhoff 1978:17). Roots, dug with a digging stick, might be eaten raw, or dried and pounded in mortars and pressed into cakes (Wilson and Towne 1978:390). Grasses, herbs, rushes, berries, and grapes (Vitis californica) provided both food and materials for basketry, clothing, and other tools (Ibid). Manzanita berries were used to make a cider-like drink (Ibid).

Animals hunted included deer, rabbits, and other small game. Mule deer (Odocoileus hemionus) were hunted in drives, with the use of fire, decoys, snares or deadfalls (Ibid). Rabbits (Lepus) were killed with sticks or blunted arrows, trapped, snared, or rounded up with the use of nets or fire. Grasshoppers, ants, lizards, and frogs were also eaten (Ibid), and salt was obtained from springs located near Cool (Heizer and Treganza 1972:340).

Rivers played an important role for the Nisenan, not only as territorial boundaries, but also as areas to procure food, such as Chinook salmon (Oncorhynchus tshawytscha). The Nisenan called the North Fork of the American River "Yo dok im se o", the Middle Fork of the American River "Ko a ba", where the Middle and North Fork of the American River meet "Chul ku im se o", and the Bear River "Ku mim se o" (Littlejohn 1928: 54). Fish were poisoned with soaproot (Chlorogalum pomeridianum) and turkey mullein or caught by hand in shallow water (Wilson and Towne 1978:389). Weirs, nets, harpoons, traps and gorgehooks were also used to catch fish.

Tools, including arrow and spear points, knives, and scrapers, were made of basalt, chalcedony, jasper, or obsidian. A wide variety of mineral resources, including quartz, quartzite, quartz crystals, chert, slate, and soapstone were available within the project area. Preferred basketry materials were willow (Salix) and redbud (Cercis occidentalis), but the roots of yellow pine (Pinus ponderosa) and bracken fern (Pteridophyta aquilinum) were also used (Ibid:392). Clothing and adornment was not elaborate. Steatite and whole olivella shell bead necklaces were among the items traded from the Patwin and Maidu (Ibid:391). Males often wore a breechcloth, and women a skirt of wire grass (Ibid).

It is estimated that the Valley Nisenan were reduced by three-fourths of their number by an epidemic of malaria in 1833 (Cook 1955:321-322). But, shortly after the discovery of gold in January 1848, the heart of foothill Nisenan territory was overrun with white miners. By 1860, their native lifeways were nearly obliterated (Moratto 1984:392). By the late 1930s, it has been reported that no living Nisenan could recall the lifeways before White contact (Wilson and Towne 1978:396).

III. HISTORIC CONTEXT

The Spanish, having settled the San Francisco Bay region in the late 1700s, sent Gabriel Moraga on some forty-six expeditions after 1806 to explore the Central Valley to beyond the Feather River. Moraga named the Sacramento Valley and noted the Maidu tribes who occupied the land. Sacramento emerged from the wilderness in August 1839 when John Augustus Sutter occupied his Mexican land grant of Nueva Helvetia (New Switzerland) and began construction of Sutter's Fort. The discovery of gold at Sutter's sawmill at Coloma on January 24, 1848 dramatically accelerated the growth of Sacramento, as the embarcadero area near J Street became an international commercial center. The founding of the City of Sacramento was undertaken by John A. Sutter, Jr. in December 1848 (Neasham, Henley & Woodruff 1969:7-11).

During the latter half of the nineteenth century, Sacramento achieved prominence as the State Capital, the gateway to the northern mines, and a hub of transportation and communication with the initiation of the Pony Express, the construction of the first transcontinental railroad, and the transmission of hydroelectric power. Boosting a population of over 25,000 by 1890, Sacramento had developed into a thriving center of agriculture, manufacture and commercial enterprise.

The subject property is located in an area of Sacramento County that consisted of large ranch properties through the early 1900s. As the land was subdivided, smaller parcels were sold and ranchettes with small orchards were established. The old emigrant road between Sacramento and Placerville lies to the north of the subject parcel, near the alignment of present day Folsom Boulevard. Later, this route would be used for a short time by the Overland Pony Express. During the 1950s through the 1970s, the intersection of Bradshaw Road and Old Placerville Road was developed with commercial properties, including a large strip mall.

IV. RESEARCH RESULTS

A record search for the project area was conducted at the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) on May 5, 2005 (refer to NCIC Record Search, May 5, 2005). After reviewing the State of California Office of Historic Preservation records, base maps, historic maps, and literature for Sacramento County, it was concluded that the proposed project area contains no recorded Native American or historic-period archaeological resources listed with the Historical Resources Information System.

There have been no cultural resource studies conducted within the project area, although a record search was performed of the project area in July 1982. Within a 1/2 mile radius of the project area, there have been 8 cultural resource studies conducted: Keefer (2002, 2001); Jones & Stokes (2001); PAR Environmental Services, Inc. (2001); EarthTouch (2001); Cultural Resources Unlimited (1998); Peak & Associates, Inc. (1997); and Orlins (1982).

Several properties along Bradshaw Road are listed in the Office of Historic Preservation (OHP), Historic Properties Directory (HPD), including the Brighton School/Edward Kelly School, located at 3312 Bradshaw Road, built in 1869, and listed as a 1S. Research was also conducted at the California State Library, Sacramento; the Internet, and within the reference library of Historic Resource Associates.

V. METHODS AND FIELD INVENTORY

A cultural resources survey was conducted within the project APE, which was identified as Sacramento County APN. 68-03-44. Survey transects of 5 meters were followed throughout the entire parcel. Surface evidence suggests the entire parcel was extensively graded in the recent past. Evidence of an old (circa 1960s) almond orchard is still present.

VI. REPORT OF FINDINGS

No prehistoric or historical archaeological sites were found, nor were any historic buildings, structures, or objects discovered.

VII. DISCUSSION AND INTERPRETATION

None.

VIII. RECOMMENDATIONS

No further cultural resources work is recommended for this project.

IX. PROFESSIONAL QUALIFICATIONS

Dana E. Supernowicz, principal of Historic Resource Associates, earned his Bachelor of Arts at the University of California, Irvine with a concentration in history and anthropology. He earned his Master of Arts in History at California State University, Sacramento in 1983, with an emphasis on California and Western United States history. Supernowicz has over 25 years of experience working in the field of cultural resources management for federal and state agencies, as well as 20 years in private consulting. He has extensive experience in both designed and vernacular architecture throughout California, and has worked for the State of California, Office of Historic Preservation as a staff reviewer. Supernowicz has also served as president of the El Dorado County Historical Society, and is a member of the Society for California Archaeology, Oregon-California Trails Association, and National Trust for Historic Preservation.

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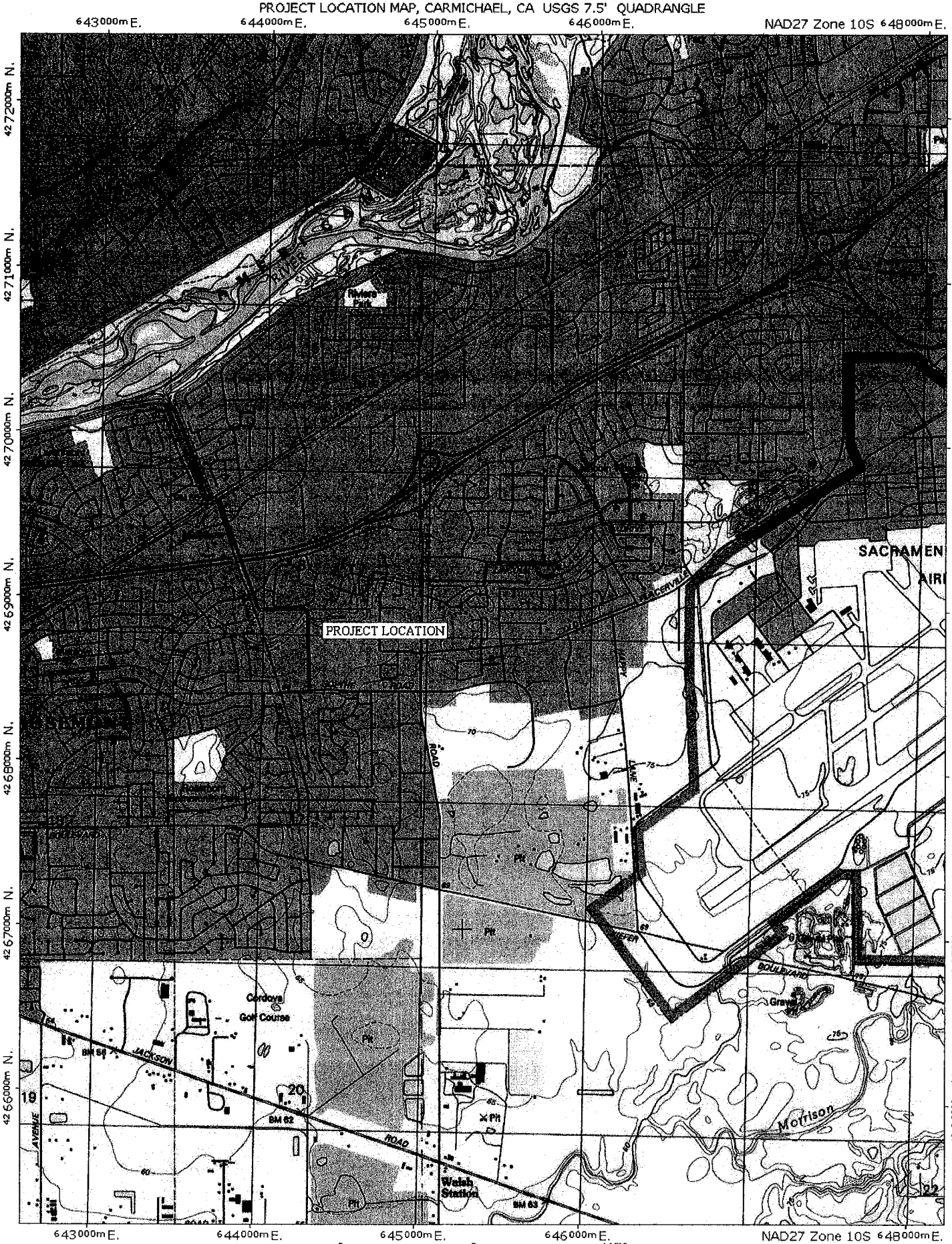
MAPS

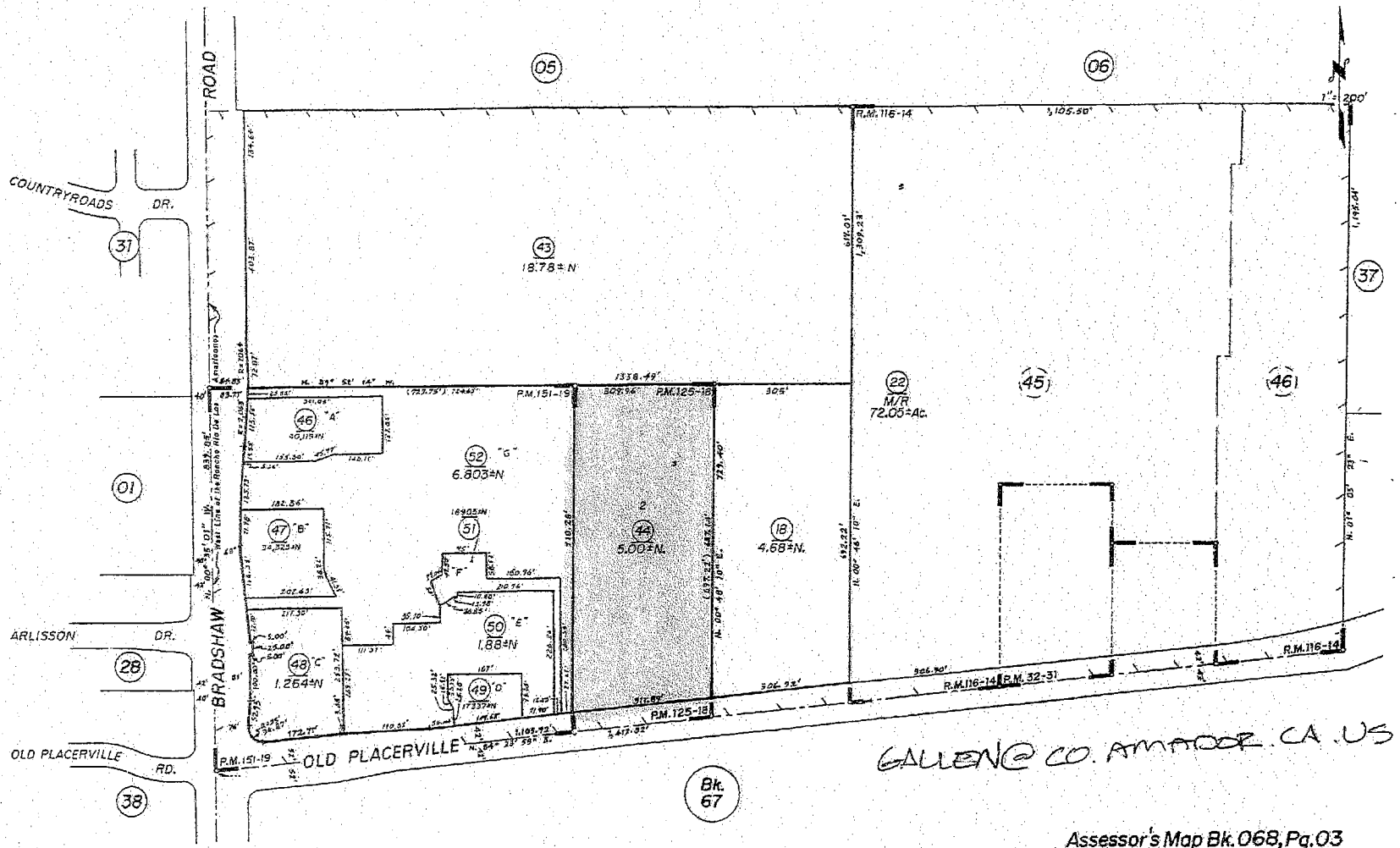
USGS 7.5' Carmichael, CA Quadrangle

PROJECT LOCATION MAP, CARMICHAEL, CA USGS 7.5' QUADRANGLE



POR, SE 1/4 SEC. 8, & SW 1/4 SEC. 9, T.8N, R.6E, M.D.B.&M.
(AS PROJECTED INTO THE RANCHO RIO DE LOS AMERICANOS)

68-03



GALLENG CO. AMADOR. CA. US

Assessor's Map Bk.068, Pg.03
County of Sacramento, Calif.

Z1-40 & Z1-51

NORTH CENTRAL INFORMATION CENTER Record Search Number: **SAC-05-86**
CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM County: **SACRAMENTO**
In Cooperation with:

State of California - The Resources Agency
Department of Parks and Recreation
Office of Historic Preservation

AGREEMENT TO CONFIDENTIALITY AND RECORD SEARCH STATEMENT

I, the undersigned, have been granted access to the Archeological Site Record data at the North Central Information Center at California State University, Sacramento, 6000 'J' Street, Sacramento, CA 95819 for the purpose of:

! scientific research ☒ project planning ! other: _____

I fully understand the confidential nature of the information contained in these records, and I agree to respect that confidentiality.

I will attempt to ensure that specific site location is not distributed in public documents or made available to unauthorized individuals within my institution or agency. I also understand that prior written consent of the Information Center Coordinator or State Historic Preservation Officer is required for any exceptions to the above stipulations.

Furthermore, I agree to forward to the appropriate Information Center, no later than 30 days after completion of field reconnaissance and investigation, any preliminary reports and complete site records for any sites that are identified or dealt with. I also agree to forward to the appropriate information Center or Centers all subsequent reports on these sites, which are pertinent to archeological resource management.

I understand that failure to comply with any of the above agreement is grounds for denial of subsequent access to the archeological site data.

This agreement is based on State access policy. Barbara Supernowicz 5-4-2005
Signature of Researcher Date

Printed Name of Researcher Barbara Supernowicz Phone 916-941-1864
Firm Historic Resources Associates
Address 2001 Sheffield Drive City/State El Dorado Hills, CA Zip 95762
Method of contact: Phone X In person Letter Fax Date: 5-3-2005
Title of Project or Research "Old Placerville Road"
Contact person/agency for which work conducted Carlton Engineering
Address 3883 Ponderosa Road, Shingle Springs, CA Phone
USGS Quad(s) consulted Carmichael 7.5'
Site Record(s) consulted All pertinent Sources
Site Record(s) copied See attached sheet
Reports/manuscripts consulted All pertinent sources
Reports/manuscripts copied See attached sheet
Staff Researcher David McCullough, Jr. Date: 5-5-2005

No. of Hours - Record Search 3/4hrs. Use Fee Charged $ 60.00
No. of Hours - Copy Work 0 Hourly Copy Fee .00
No. of Copies @ .15¢ each 15 Copy Charge 2.25
No. of Fax Pages 0 Fax Fee charged .00
Total Fee charged: $ 62.25

BILLING STATEMENT:
(Payment Instructions)
Make check payable to: C.S.U.S. FOUNDATION
Forward to: North Central Info Center CSU - Sacramento
6000 J Street, Adams Bldg., #103, Sacramento, CA 95819-6100

5009 Negative

CALIFORNIA ARCHAEOLOGICAL CONSULTANTS, INC.

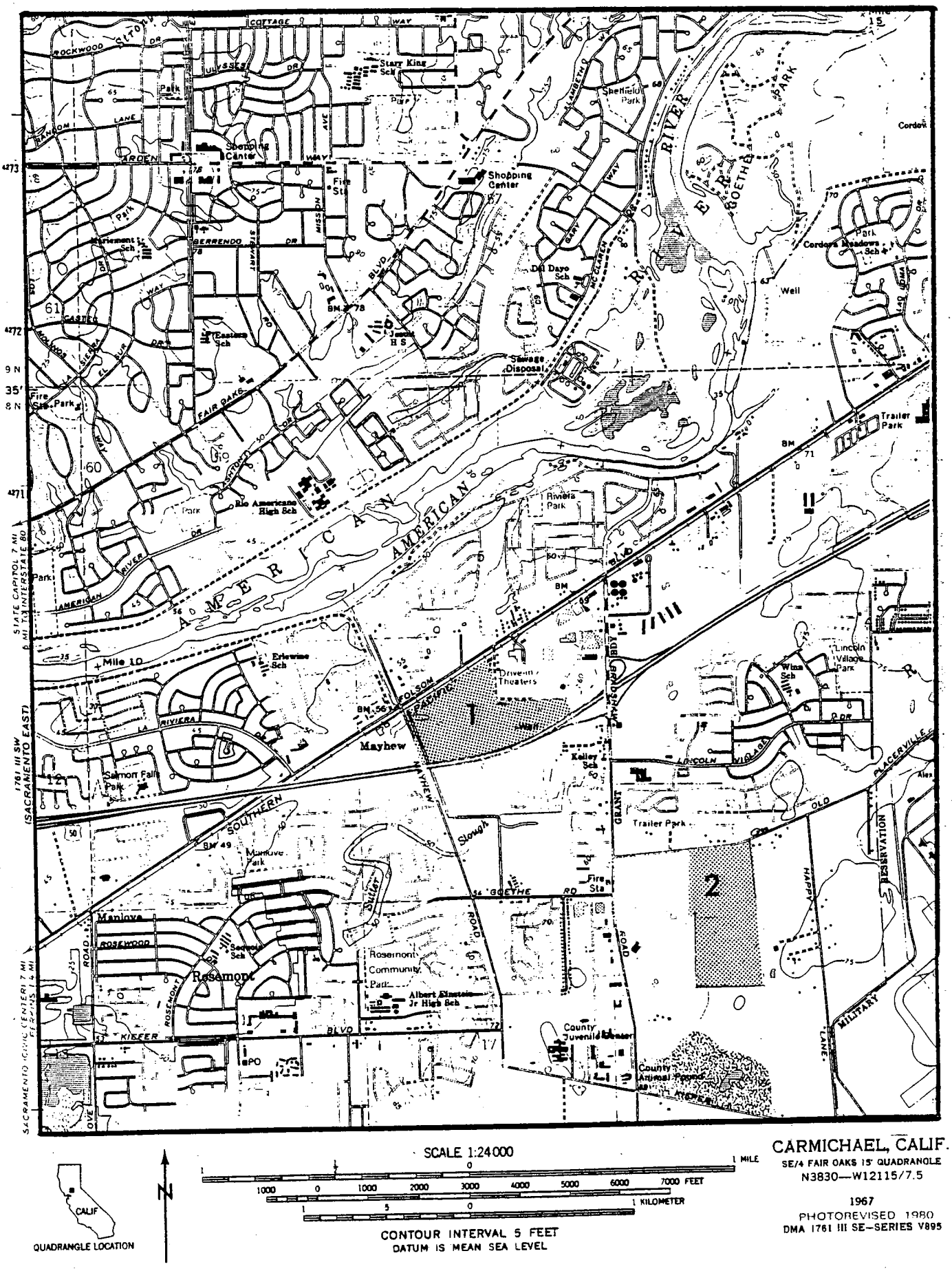
☐ PETER BANKS • 5916 DOVER ST. • OAKLAND, CA 94609 • (415) 658-6550
☐ ROBERT ORLINS • 39 FIRST ST. • WOODLAND, CA 95695 • (916) 662-0979

A CULTURAL RESOURCE SURVEY OF FIVE PARCELS FOR STATE FRANCHISE TAX BOARD FACILITIES, SACRAMENTO COUNTY, CALIFORNIA

BY
ROBERT I. ORLINS

1982

AGREEMENT NO. SA6225
STATE OF CALIFORNIA
DEPARTMENT OF GENERAL SERVICES
OFFICE OF FACILITIES PLANNING AND DEVELOPMENT
SACRAMENTO



Map 1. Proposed Franchise Tax Board Sites 1 and 2.

CULTURAL RESOURCE ASSESSMENT

OF THE FRANCHISE TAX BOARD PROJECT,

SACRAMENTO COUNTY, CALIFORNIA

Prepared by

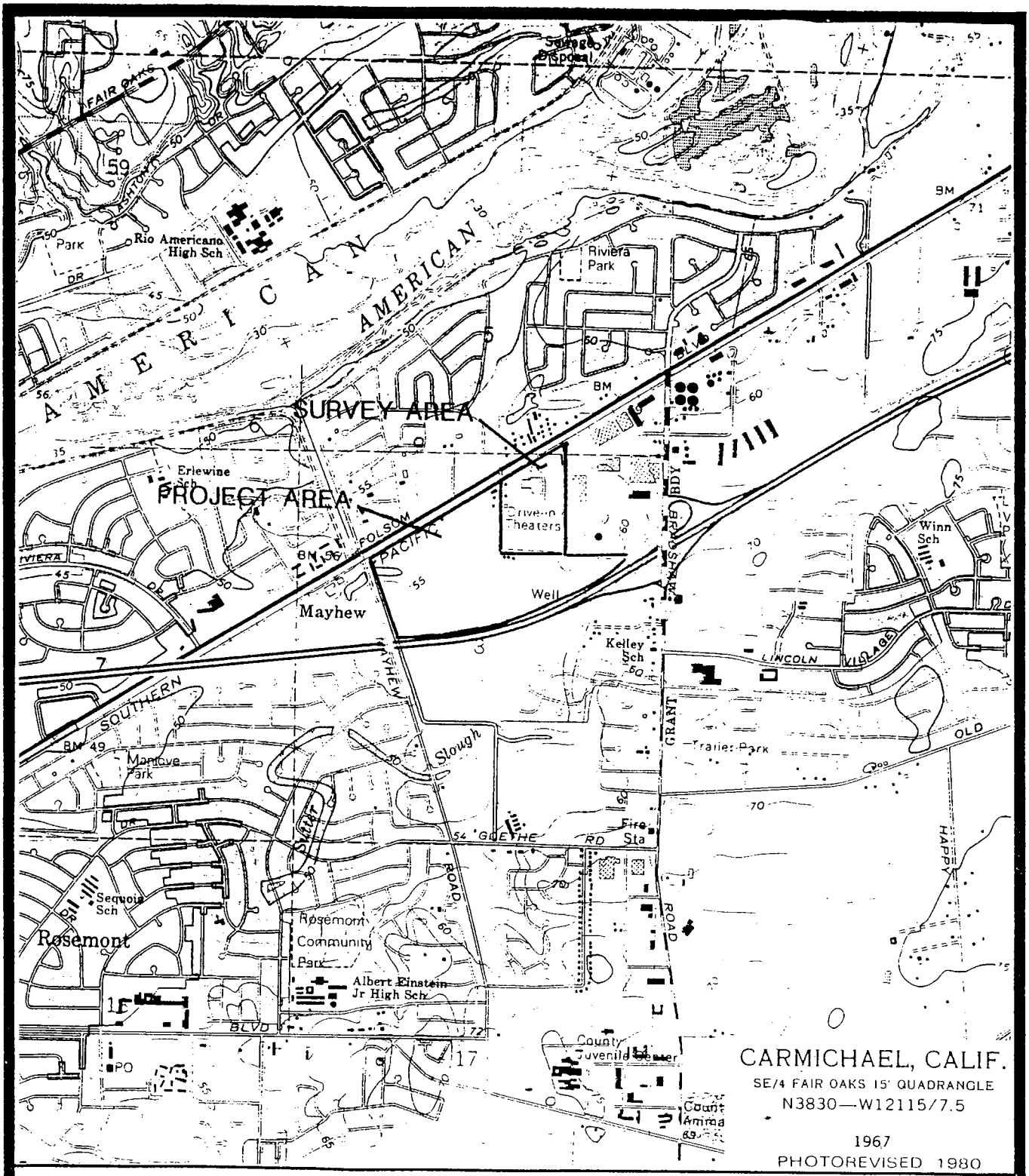
Peak & Associates, Inc.
8167A Belvedere Avenue
Sacramento, CA 95826
(916) 452-4435

Prepared for

EIP Associates
1200 Second Street, Suite 200
Sacramento, CA 95814

October 27, 1997
(Job #97-062)

Map: Carmichael 7.5'
Acreage: ±29
Results: Negative
Key Words: Cultural Resources, Survey



CARMICHAEL, CALIF.

SE/4 FAIR OAKS 15' QUADRANGLE

N3830—W12115/7.5

1967

PHOTOREVISED 1980

SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 5 FEET

QUADRANGLE LOCATION

BASE MAP IS MAPPED EDITED AND PUBLISHED BY THE U. S GEOLOGICAL SURVEY

17°

TRUE NORTH

MAG NORTH

MAP 1

CARMICHAEL-SAC
SAC-98-14

CULTURAL RESOURCES UNLIMITED
2614 Aramon Drive
Rancho Cordova, CA 95670
(916) 363-8774
Fax: (916) 363-5413

March 19, 1998

QUAD
One Sierragate Plaza, Suite 270 C
Roseville, California 95678
ATTN: Eugene E. Smith

RE: PACIFIC BELL MOBILE SERVICES: 3333 BRADSHAW ROAD, SACRAMENTO, SACRAMENTO COUNTY: SITE # SA-031-P1

Dear Mr. Smith:

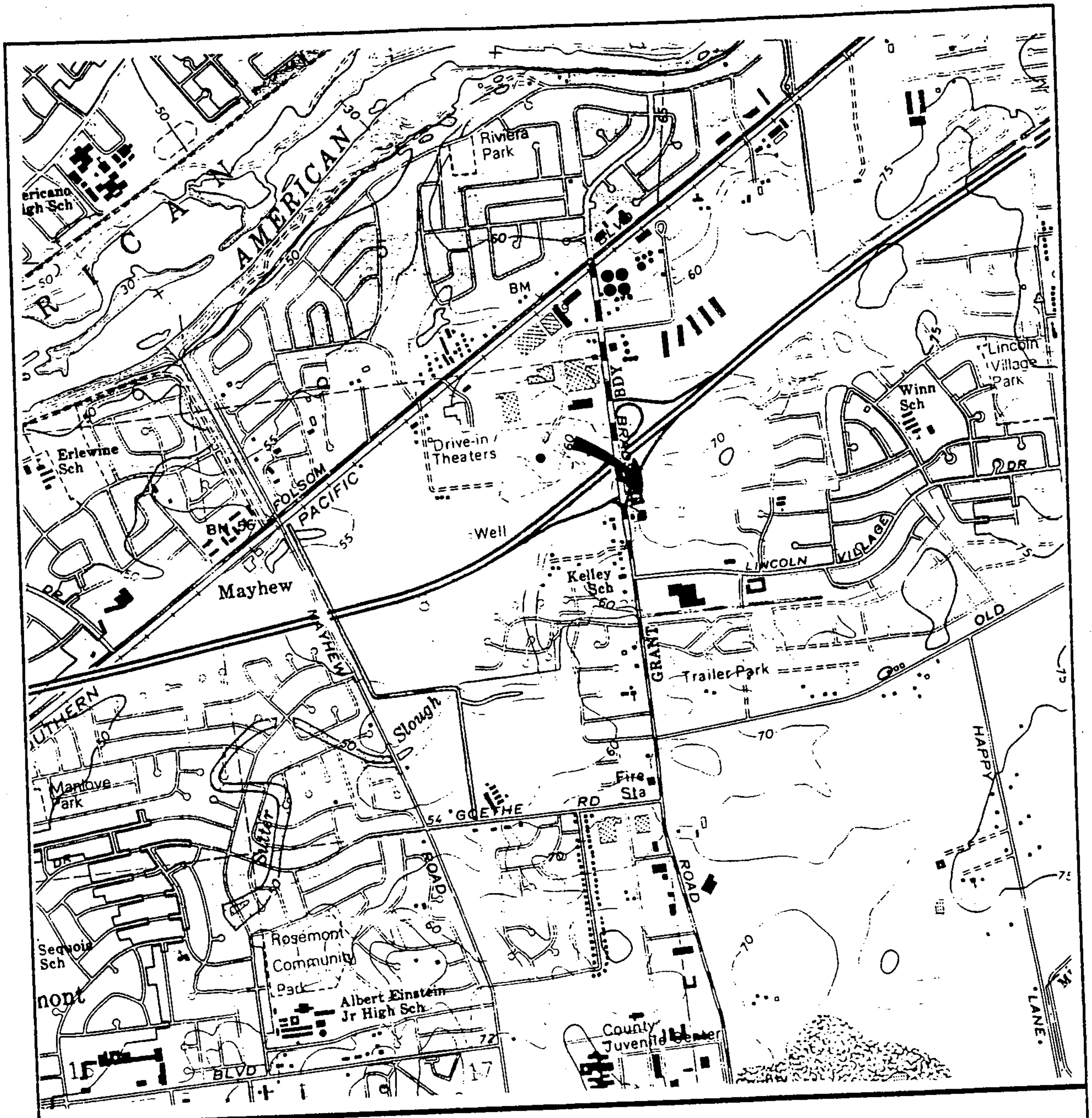
Per your request of January 13, 1998 Cultural Resources Unlimited performed a cultural resources study for the above-referenced project, a monopole antennae site located alongside the Pacific Bell facility on Bradshaw Road immediately north of Interstate 50 at the eastbound on-ramp of the Bradshaw interchange, in Rancho Cordova, Sacramento County. Included in this study was a Records Search performed at the North Central Information Center, CSU, Sacramento for previously-known prehistoric and/or historic sites on or adjacent to the project property. Archival research was also performed to determine if anything pertaining to significant cultural use can be derived concerning the previous uses of the project land. To this end, were used historic maps and recorded histories of the general area, and searches of Historic Properties listings, as well as previous environmental conditions at the project area which may suggest the likelihood of prehistoric use. Such resources included the National Register of Historic Places and the 1989 Survey of Surveys. Historic maps included the General Land Office Survey Map of 1865.

Archival Findings

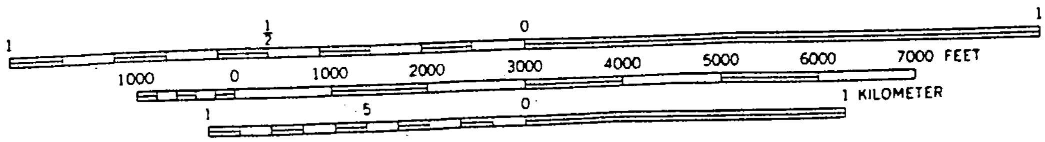
This area was within the home territory of the ethnographic Nisenan Maidu Native Americans. The closest known ethnographic sites were the villages of Yamankudu and *Ekwo* along the north bank of the American River (Wilson & Towne 1978: 388-397; Fig. 1).

This land was part of the 'Rio de Los Americanos" grant (#98), covering 35,521.36 acres, which was awarded to William Leidesdorf in 1844. He died in 1848, leaving the land to his widow and children who subsequently sold the holdings to U.S. Army Captain Joseph Folsom, who had the town of Folsom laid out in 1855 (Beck & Haase, 1974:28; Hoover, Rensch & Rensch 1966:300). This grant was confirmed to Joseph Folsom in 1857 (U.S. Government, General Land Office 1862).

This land was primarily agricultural for many years, growing wheat, grapes and with grazing for animals. The 1911 'Mills' topographic map for this area shows Bradshaw Road in place as a major street, with several houses scattered along it, from the bank of the river, by Folsom Boulevard and the Southern Pacific rail line, and on towards the south, especially in the area of the Placerville Road and Kiefer Boulevard, to the south. Brighton School, now known as Edward Kelly School and listed on the National Register of Historic Places, is shown south of the project, on the west side of Bradshaw.



LOCATION MAP
Scale 1:24000
Contour Interval: 5 feet



U.S.G.S. Carmichael 7.5 Topographic Quad Map

SITE # SA-031-P1

Sacramento County; Township 8 N, Range 6 E, Unsectioned

1967/'80 Edition

FCC CARMICHAEL-SAC
NL

RECEIVED
FEB 27 2001
OHP

earth touch llc
www.earthtouch-llc.com

February 16, 2001

State of California - Office of Historic Preservation
Department of Parks and Recreation
Attn: Dr. Knox Mellon
State Historic Preservation Officer
P.O. Box 942896
Sacramento, California 94296-0001

RE: Nextel Communications Wireless Telecommunications Service Facility - Sacramento, Placer, and El Dorado Counties, California.

Dear Dr. Mellon:

Earthtouch, LLC is under contract with Nextel Communications to evaluate potential environmental issues associated with siting wireless telecommunications service facilities in Northern California. In accordance with Federal Communications Commission (FCC) rules implementing the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act, we have taken the following steps to identify historic properties or cultural resources that might be affected by a proposed wireless telecommunications service facilities identified below:

- Conducted an on-site evaluation of the site and immediate site vicinity to assess the potential impact to cultural resources and historic structures nearby; and
- Conducted a records search through the California Historical Resource Information System (CHRIS) to identify historic properties and cultural resources within a 1-block (urban) or 1/4-mile (rural) radius of the proposed facility.

A description of the wireless telecommunications service facilities, a location map, and site photographs for each site are attached for review and reference. Table 1 provides address information for each site.

TABLE 1

	Site Number/Name	*Site Address*	*City or County*	*Attachment*
H	*El Dorado Hills (CA-1923D)*	*1270 Joerger Cutoff Road*	*El Dorado County*	*1*
I	*Capitol City (CA-1538A)*	*1650 El Camino Avenue*	*Sacramento*	*2*
J	*Strawberry Creek (CA-1562D)*	*Timberlake Way*	*Sacramento County*	*3*
K	*Baseline (CA-1918A)*	*8000 Crowder Lane*	*Placer County*	*4*
L	*Downtown Auburn (CA-1832A)*	*275 Orange Street*	*Auburn*	*5*
M	*Gerber Road (CA-1563A)*	*7713 Vineyard Road*	*Sacramento County*	*6*
N	*Mayhew (CA-0352A)*	*9470 Micron Avenue*	*Sacramento County*	*7*
O	*Sacramento Army Depot (CA-1560B)*	*8560 Unsworth Avenue*	*Sacramento*	*8*
P	*Florin Creek (CA-1561A)*	*7011 Power Inn Road*	*Sacramento County*	*9*
Q	*Richardson (CA-1534A)*	*2849 Rio Linda Boulevard*	*Sacramento*	*10*
R	*Gold River (CA-1818A)*	*2410 Mercantile Drive*	*Rancho Cordova*	*11*

SITE DESCRIPTION:

Nextel Communications proposes to install a wireless telecommunications facility in the parking area of the Capital Christian Center campus. The proposed facility will consist of installing an approximately 77-foot steel monopole and attaching up to twelve panel antennas to the top of the new monopole. Electronics equipment will be installed near the base of the monopole in a pre-fabricated shelter. Electrical and telecommunications will be connected using existing utility sources on the subject property. The utility lines will run via underground trench that is anticipated to be approximately 75 feet long. Access to the site will be from Micron Avenue, an existing two-lane paved road. According to information on file with the NCIC and data gathered during our Class I literature search;

- No buildings, structures, or objects on the site or within a one-quarter mile radius were identified in the Directory of Properties in the Historic Property Directory Data File for Sacramento County (HPD) as listed or potentially eligible for listing on the National Register.
- No structures on or near the subject property or proposed lease area were more than 45 years old.

A site inspection revealed the following:

- No buildings, structures, or features on or near the lease area appear to meet the California OHP definition for recordation.
- The proposed lease area had been previously developed and disturbed during the construction of the Christian Center and parking and access areas. Facility development will incorporate existing structures and infrastructure.
- The entire subject property area had been leveled, graded and paved and/or landscaped during the construction of the Christian Center Campus. As such, there was no visible evidence of any cultural or archaeological artifacts on the property.

earth touch
www.earthtouch-llc.com

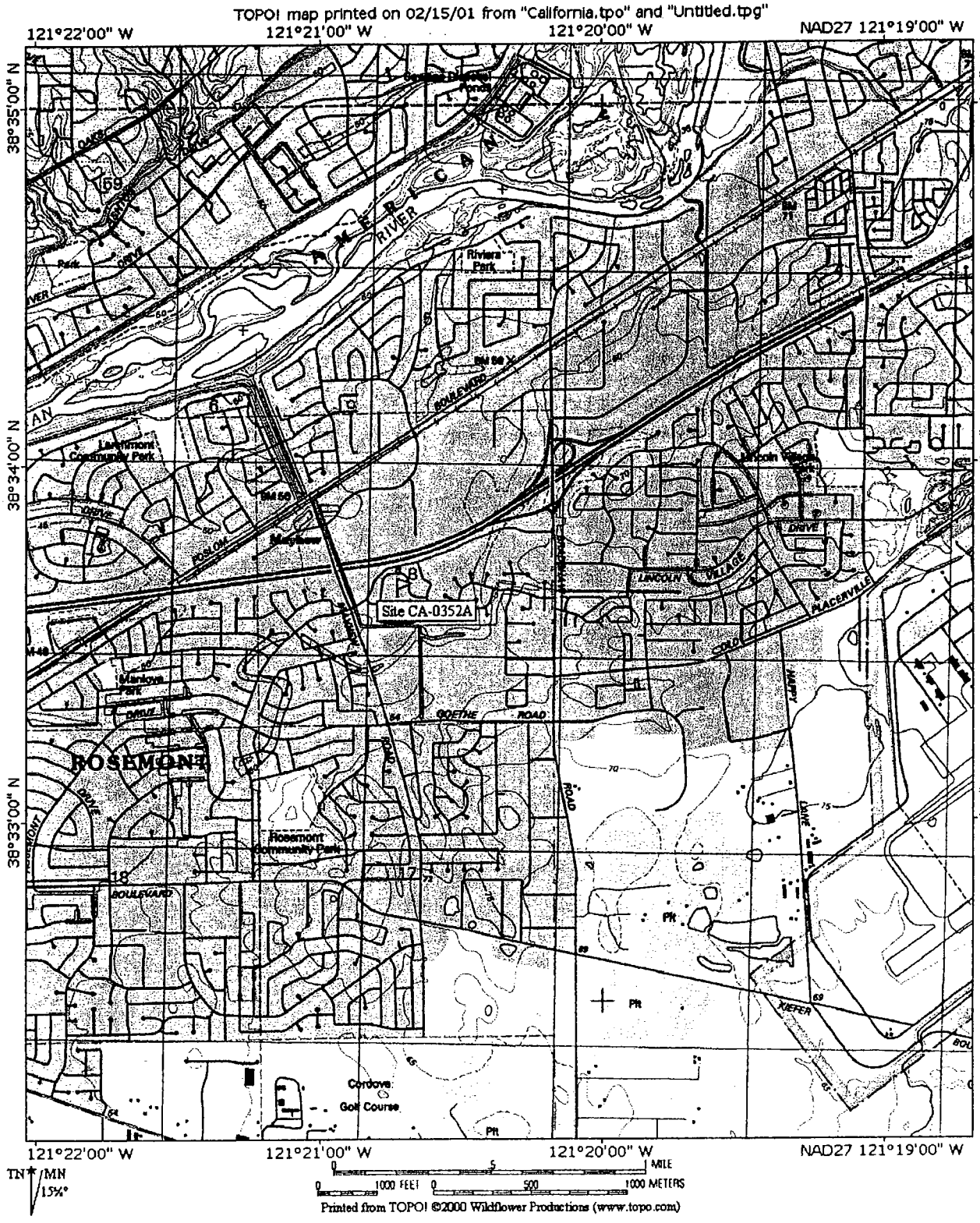
EarthTouch, LLC
2269 Canyon View Drive
Layton, Utah 84040
Tel: 801.771.2800

ATTACHMENT

Site Photograph and Description of a
Nextel Wireless Telecommunications Facility

Mayhew
8470 Micron Avenue
Sacramento, California

Attachment No.:	7
Appended to:	SHPO.let.
Project Number:	CA-0352A
Project Manager:	L. Tanner
Site Inspection:	14 February 2001
Date Prepared:	15 February 2001



earth touch
www.earthtouch-llc.com

EarthTouch, LLC
2269 Canyon View Drive
Layton, Utah 84040

Tel: 801.771.2800
Fax: 801.771.2838

Figure 1: Location of Nextel Site – Mayhew (CA-0352A)

Site Location: 9470 Micron Avenue
Sacramento, California 95827

Map Source: USGS 7.5' Quadrangle – Carmichael

#2674

CULTURAL RESOURCE EVALUATION OF THE WORLDCOM FRANCHISE TAX BOARD BUTTERFIELD WAY PROJECT, SACRAMENTO, CALIFORNIA

Prepared for:

The IT Group
4005 Port Chicago Highway
Concord, California 94520

Prepared by:

PAR ENVIRONMENTAL SERVICES, INC.
P.O. Box 160756
1906 21st Street
Sacramento, California, 95816-0756

March 2001

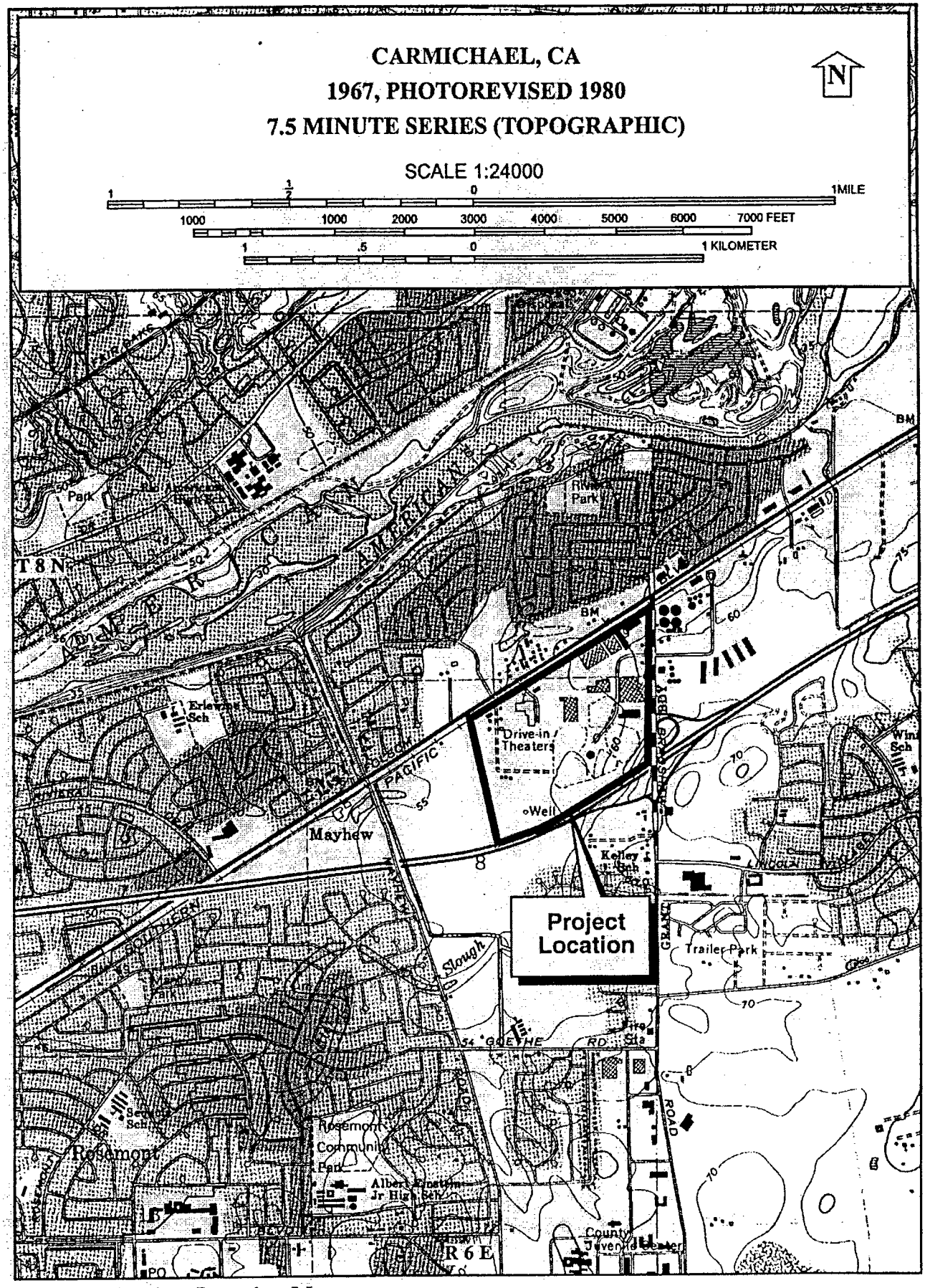


Figure 2. Project Location Map

Field Work

The project area is an open, partly paved and partly overgrown field. There appears to have been several roads running north-south and one road leading east into the center of the area. Asphalt, gravel, and river cobbles mixed with soil have been spread over some areas.

At the southern end there are three linear berms that appear to be bulldozer pushes. Just north of these are four rows of trees aligned east to west. There is a large asphalt pad in the center of the field. The portion of the field that is not paved, is irregular terrain, probably a result of ground clearing activities. At the northeast corner are two rows of large walnut tree stumps aligned north south, remnants of the orchard noted by Orlins (1982).

Three concrete pads were noted, all flush with ground surface. One pad contained an imbedded pipe containing plastic insulated, wire bundles. Another had a square metal grate, and another contained a round metal grate. At the northwest corner of the project area, there are some ornamental plants. There is a palm tree, a large conifer tree next to Butterfield Way, and a nearby bush. There was no evidence of historic foundations or refuse found in this area.

In the mid-southwest are two modern loci along the east side of an asphalt track or road. The southern locus consists of 4 metal posts, four inches in diameter set in a square, and standing approximately three feet high. A concrete utility feature nearby measures approximately two feet long and one foot wide with a deep indentation at one end and another four-inch diameter post at the other end. This fifth post is embossed on the front and back under a small rectangular glass window with "541/ UL/ FM (within a diamond)/ 1981/ THE/ KENNEDY (vertically)/ VALVE/ MFG/ CO". The northern locus appears to have been partially destroyed.

The only other items noted were: a fragment of milk glass in the road in the middle of the field, and a cast iron probable stove grate with "Chrisly" impressed within an oval.

DISCUSSION AND CONCLUSION

The project area has undergone extensive alteration during the last 40 years changing from a rural environment, succeeded by industrial and finally commercial and residential use at the present time. The survey identified no resources of potentially historic age within the project area. Industrial and agricultural activities and development have altered most of the project area.

Negative

GARMICHAEL - SAC
NO RECORD SEARCH

#2623

CULTURAL RESOURCES SURVEY REPORT
PROJECT NAME: DOWNTOWN AND BRADSHAW MASTER PLAN
CONTROL NUMBER: 98-PWE-0217

Prepared by:
Margaret Keefer
Sacramento County,
Department of Environmental Review and Assessment

March 16, 2001

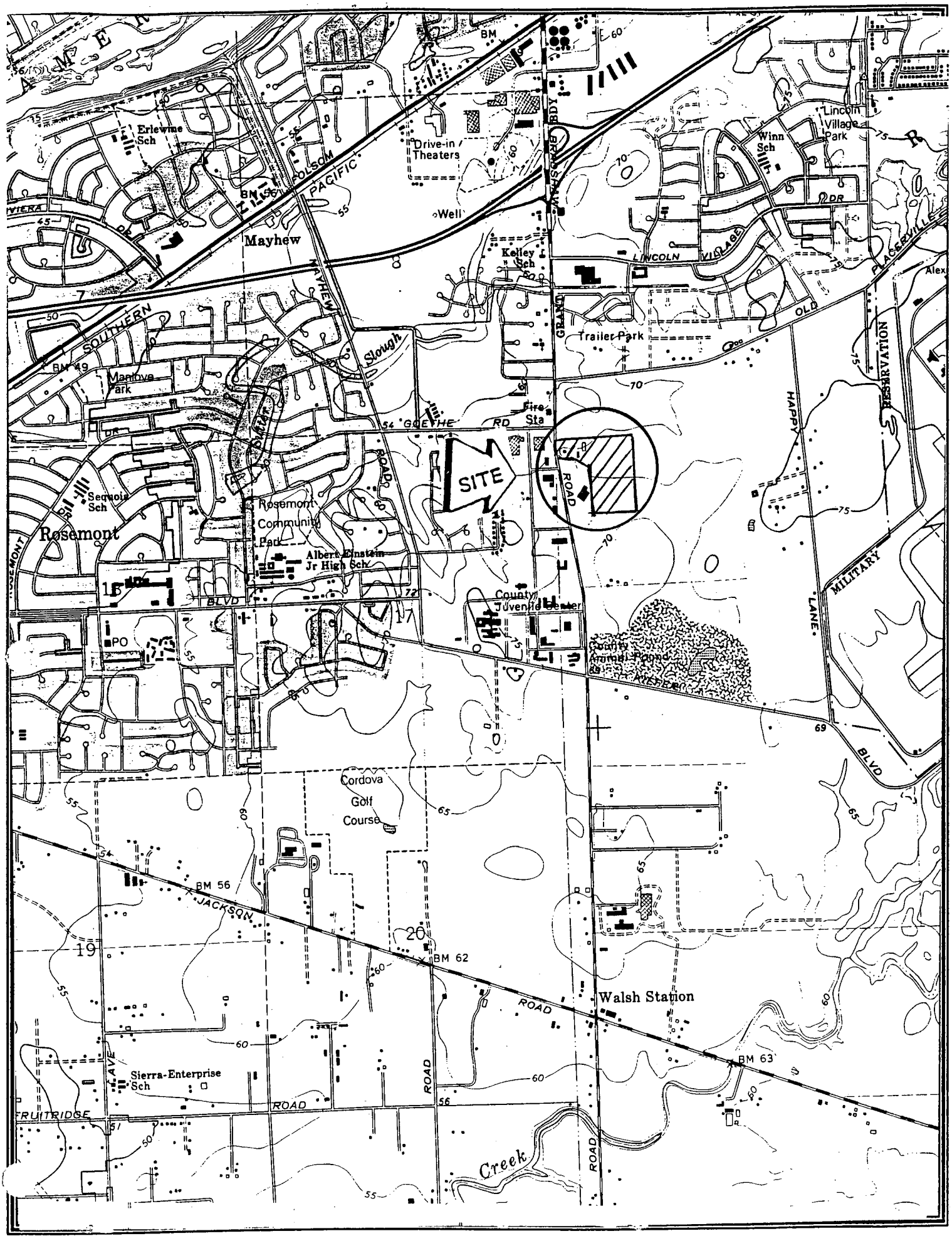


PLATE CR-1

CONTROL NUMBER: 98-PWE-0217 **USGS 7.5' TOPOGRAPHIC MAP, CARMICHAEL**

SACRAMENTO EAST SAC
SACRAMENTO WEST SAC
CARMICHAEL SAC
FOLSOM SAC

#2786

SAC-01-01

Cultural Resources Inventory and Monitoring Report for XO California, Inc's Sacramento Area Fiber-Optic Builds, Sacramento and Yolo Counties, California

Prepared for:

XO California, Inc.
1390 Lead Hill Boulevard
Roseville, CA 95661
Contact: Dan Shuman
916/257-6268

Prepared by:

Jones & Stokes
2600 V Street
Sacramento, CA 95818-1914
Contact: Gabriel Roark/Gwyn Alcock
916/737-3000

June 2001

West Side of Bradshaw Road, South of Lincoln Village Drive, Sacramento County

Project Location and Description

The project is located south of Lincoln Village Drive on Bradshaw Road, and consists of 5 feet of trenching in the sidewalk for the placement of conduit and a splice box.

Methods and Results

An archaeological records search at the North Central Information Center of the California Historic Resources Inventory System indicated that there were no recorded sites immediately adjacent to the project alignment, and no sites recorded within a quarter mile of the project area. The Kelley School, located opposite the proposed project on the west side of Bradshaw Road, is listed in the NRHP (Jones 1980). The likelihood of cultural deposit associated with that resource being found in the project alignment is believed to be low, and the underground nature of the XO build will not have a negative effect on what little setting and feeling the school retains.

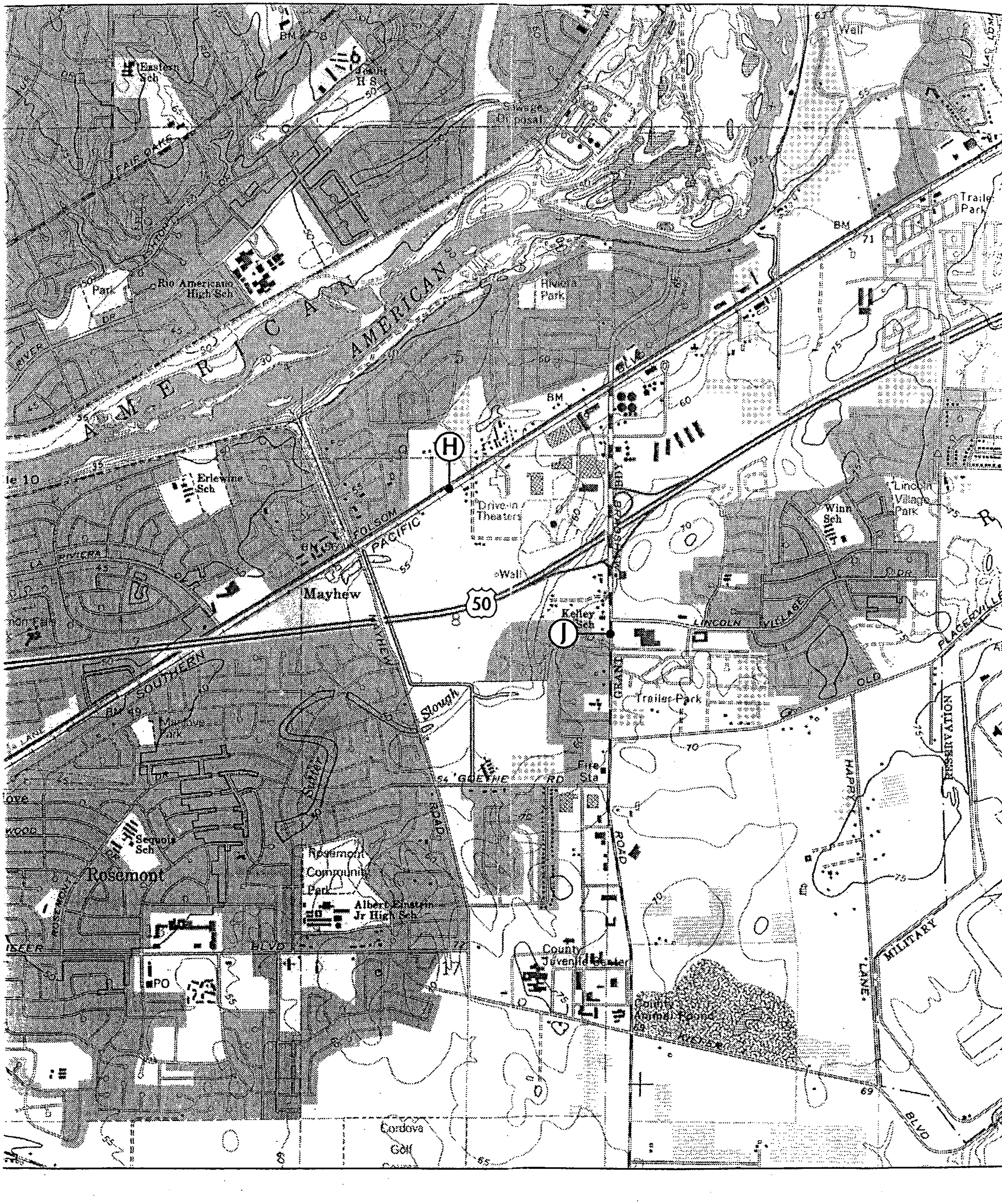
A Jones & Stokes archaeologist visited the project alignment but it had been completely developed, and an examination of the original ground surface was not possible. Although other studies have been completed in the vicinity of the project alignment (Derr 1998b; Syda et al. 1995; True 1981), they have not reported any archaeological deposits. The area is constructed on historic dredge tailings that have destroyed any intact prehistoric deposits, and the potential for significant historic deposits along the alignment is considered to be low. Therefore, Jones & Stokes did not recommend archaeological monitoring for the proposed project.

South Side of International Drive, Across from Data Drive, Sacramento County

The proposed project is located immediately south of the intersection of International Drive and Data Drive, in a Rancho Cordova business park. The proposed project would consist of 10 feet of open trenching for the installation of fiber optic cable conduit.

Methods and Results

An archaeological records search at the North Central Information Center of the California Historic Resources Inventory System indicated that two cultural resource investigations have been conducted adjacent to the proposed XO project (Peak & Associates 1994). In addition, the records search indicated that the project vicinity is located in historic dredge tailings (CA-Sac-308H). No prehistoric sites are known to have survived the mechanized



AMERICAN
AMERICAN
Eastern Sch
H S
Sewage Disposal
FAIR OAKS
Park
Rio Americano High Sch
Riviera Park
Erlewine Sch
H
Drive-in Theaters
FOLSOM
PACIFIC
Mayhew
50
Wall
Kelley Sch
J
LINCOLN
VILLAGE
Lincoln Village Park
Winn Sch
PLACERVILLE
OLD
Trailer Park
Trailer Park
SOUTHERN
Slough
Sutter
GOETHE
RD
Fire Sta
ROAD
Rosemont
Sequoia Sch
Rosemont Community Park
Albert Einstein Jr High Sch
BLVD
PO
County Juvenile Center
County Animal Pound
KIEFER
HAPPY
LANE
MILITARY
BLVD
RESERVATION
Cordova
Golf
Wall

GARMICHAEL - SAC
SCNR # 366 (6-02-1)

NEGATIVE CULTURAL RESOURCE SURVEY REPORT
Margaret Keefer, County of Sacramento, Department of Environmental Review And Assessment

June 7, 2002

Project Description

Project Name: Premier Passage Tentative Subdivision Map
Control Number: 01-SDP-0669
Assessor's Parcel Number: 068-0011-0000

The property is located on the north side of Goethe Road, in the Rancho Cordova community (Plate CR-1, Site Location). The project is a request for a Tentative Subdivision Map to divide 38.75± acres into 193 residential lots and 3 landscape lots on property zoned RD-5 (Residential, density five dwelling units per acre).

Research and Methods

A cultural resource investigation was conducted for the proposed project site. This investigation included a record search at the North Central Information Center of the California Historical Resources Information system, prefield archival research, and a field reconnaissance.

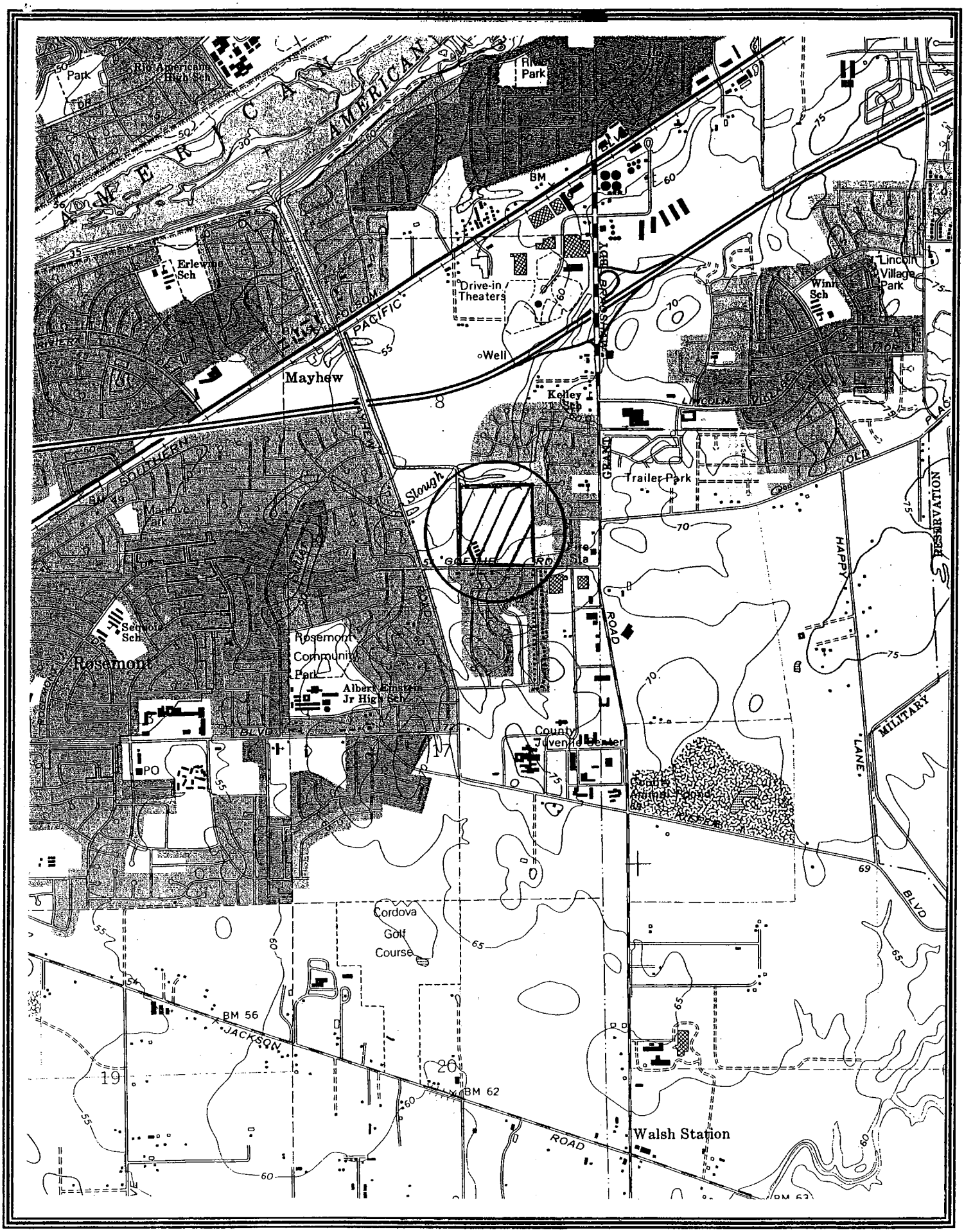
I. Study Findings

The record search showed that two surveys have been conducted within a half mile of the project (Keefer 2001; Jones & Stokes 2001). No archaeological sites are known to exist within half a mile of the project; however, the Kelley School is located within a half mile and is a National Register listed one room school house established in 1869 (Jones 1980). Sutter Slough borders the site on the north, making the site potentially sensitive for archaeological resources.

The project is located in the historic Rancho del Paso land grant. The 1866 GLO plat shows Placerville Road crossing the site from the southwest corner to the northeast (Plate CR-2, 1866 Government Land Office Plat). The site is moderately sensitive for archaeological resources and a field survey is recommended.

A field survey of the entire parcel was conducted on June 6, 2002. The field investigation revealed neither surface evidence of cultural resources nor any standing structures of potential historic value. The following sections summarize the research conducted for the project.

II. Research Design



CONTROL NUMBER: 01-SDP-0669 **PLATE CR-1, SITE LOCATION**

MAP: USGS 7.5' QUAD, Carmichael, 1967, photorevised 1980

ROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
094088		167 ARDEN WY	SCHRADER HOUSE	SACRAMENTO	U	1926	HIST.RES.	DOE-34-94-0019-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
094089		175 ARDEN WY	CHAUSEE.KENT HOUSE	SACRAMENTO		1935	HIST.RES.	DOE-34-94-0020-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
094090		183 ARDEN WY	N.J. JENSEN HOUSE	SACRAMENTO	U	1922	HIST.RES.	DOE-34-94-0021-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
094095		263 ARDEN WY	REASE PROPERTY	SACRAMENTO		1935	HIST.RES.	DOE-34-94-0025-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
094096		269 ARDEN WY	EDSON O. REASE PROPERTY	SACRAMENTO		1922	HIST.RES.	DOE-34-94-0026-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
065220		273 ARDEN WY	R.A. SWEET PROPERTY	SACRAMENTO	U	1913	HIST.RES.	DOE-34-94-0028-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
							PROJ.REVW.	HUD870612M	06/24/87	6Y	
094098		279 ARDEN WY	A.W. SWEET PROPERTY	SACRAMENTO		1913	HIST.RES.	DOE-34-94-0029-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
094099		283 ARDEN WY	CHAPMAN PROPERTY	SACRAMENTO		1935	HIST.RES.	DOE-34-94-0030-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
094100		285 ARDEN WY	ANDREW CARLOS PROPERTY	SACRAMENTO		1923	HIST.RES.	DOE-34-94-0031-0000	12/21/94	6Y2	
							PROJ.REVW.	FHWA941013A	12/21/94	6Y2	
048808		ATTU ST	BUILDING 423, ELECTRONIC MAINTENAN	SACRAMENTO	F	1971	HIST.SURV.	5813-0989-0005		4S	
066981		3109 BELDEN ST	SHRA REHAB	SACRAMENTO	U		PROJ.REVW.	HUD891122A	12/05/89	6Y	
076834		809 BELL AVE		SACRAMENTO	U	1927	PROJ.REVW.	HUD920407M	05/06/92	6Y2	
096157		1311 BELL AVE	SACRAMENTO COUNTY-FIRE STATION EME	SACRAMENTO	D		HIST.RES.	DSA-34-SPS-3145	05/24/95	6Z3	
130665		2691 BELL ST		SACRAMENTO	P	1946	HIST.RES.	DOE-34-01-0004-0000	10/11/01	6Y2	
							PROJ.REVW.	HUD010927S	10/11/01	6Y2	
048870		101 BERCUT DR	SACRAMENTO RIVER WATER TREATMENT P	SACRAMENTO	M	1921	HIST.SURV.	5813-1173-0000		3S	C
							HIST.SURV.	5813-1000-0000		3S	
133109		15 BICENTENNIAL CR		SACRAMENTO	P	1984	HIST.RES.	DOE-34-00-0026-0000	08/21/00	6Y2	
							PROJ.REVW.	FHWA000731A	08/21/00	6Y2	
100343		2138 BIDWELL WY		SACRAMENTO	P	1940	HIST.RES.	DOE-34-96-0098-0000	01/28/96	6Y2	
							PROJ.REVW.	FTA930422A	01/28/96	6Y2	
048703		3312 BRADSHAW RD	BRIGHTON SCHOOL, EDWARD KELLY SCHO	SACRAMENTO	D	1869	HIST.SURV.	5813-0964-0000	01/01/81	1S	
							HIST.SURV.	5813-0991-0000		1S	
116484		5746 BRADSHAW RD		SACRAMENTO	P	1920	HIST.RES.	DOE-34-97-0011-0000	04/09/97	6Y2	
							PROJ.REVW.	COE970311A	04/09/97	6Y2	
116485		5841 BRADSHAW RD		SACRAMENTO	P	1948	HIST.RES.	DOE-34-97-0012-0000	04/09/97	6Y2	
							PROJ.REVW.	COE970311A	04/09/97	6Y2	
048871		3640 BRET HARTE CT	FARRAR HOME, SARAGLOW HOME	SACRAMENTO	P	1908	HIST.SURV.	5813-1001-0000		5S	
048872		3654 BRET HARTE CT	MAISCH RESIDENCE AND CLINIC, SARAG	SACRAMENTO	P	1912	HIST.SURV.	5813-1002-0000		5S	
123347		7530 BRIGHTON AVE		SACRAMENTO	P	1928	HIST.RES.	DOE-34-99-0035-0000	07/26/99	6Y2	
							PROJ.REVW.	FTA970129A	07/26/99	6Y2	
048643		900 BROADWAY	SACRAMENTO CITY CEMETERY	SACRAMENTO	S	1850	HIST.SURV.	5813-0944-0000		3S	
							HIST.RES.	SHL-0566-0000	02/25/57	7L	
048644		1517 BROADWAY	Y STREET SERVICE STATION, MAURICE'	SACRAMENTO	P	1927	HIST.SURV.	5813-0945-0000		5S	
048645		1518 BROADWAY	TOWER THEATER	SACRAMENTO	P	1940	HIST.SURV.	5813-0946-0000		4D	
048647		1730 BROADWAY	UNKNOWN, CASA GRANDE PRODUCTS	SACRAMENTO	P	1925	HIST.SURV.	5813-0948-0000		5S	
100184		1942 BROADWAY		SACRAMENTO	P	1935	HIST.RES.	DOE-34-96-0014-0000	01/28/96	6Y2	
							PROJ.REVW.	FTA930422A	01/28/96	6Y2	
135549		2022 BROADWAY		SACRAMENTO	P	1927	HIST.SURV.	5813-1232-0000	02/06/02	5S	C
048648		2201 BROADWAY	HARROLD ELLSWORTH-AUTOS, GOOD CHEV	SACRAMENTO	P	1931	HIST.SURV.	5813-0949-0000		5S	
135550		2300 BROADWAY	RIVETT CARPET & FLOORING/ RIVETT'S	SACRAMENTO	P	1930	HIST.SURV.	5813-1233-0000	02/06/02	5S	C
048649		2417 BROADWAY	STERLING CLEANERS	SACRAMENTO	P	1928	HIST.SURV.	5813-0950-0000		5S	
048873		3308 BROADWAY	PAINES DRUGSTORE, TRIANGLE LIQUOR	SACRAMENTO	P	1910	HIST.SURV.	5813-1003-0000		5S	
048874		3402 BROADWAY	ARATA BROTHERS/BOSTON SHOE REPAIR,	SACRAMENTO	P	1915	HIST.SURV.	5813-1004-0000		5S	
049037		3418 BROADWAY	CITIZENS BANK, CHRISTIAN FELLOWSHI	SACRAMENTO	P	1914	HIST.SURV.	5813-1164-0000	01/01/82	1S	

APPENDIX B URBEMIS RESULTS

URBEMIS 2002 For Windows 8.7.0

File Name: H:\Old Placerville Road\Old Placerville Air Emissions.urb
Project Name: Old Placerville Road
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	9.13	64.93	72.11	0.00	52.80	2.90	49.90

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.92	32.49	39.93	0.00	1.33	1.30	0.03

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	91.66	52.35	70.18	0.00	1.92	1.86	0.06

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	3.54	0.57	2.39	0.02	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	5.30	6.05	62.46	0.05	4.94

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	8.83	6.63	64.85	0.07	4.95

URBEMIS 2002 For Windows 8.7.0

File Name: H:\Old Placerville Road\Old Placerville Air Emissions.urb
Project Name: Old Placerville Road
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	9.13	64.93	72.11	0.00	52.80	2.90	49.90

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.92	32.49	39.93	0.00	1.33	1.30	0.03

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	91.66	52.35	70.18	0.00	1.92	1.86	0.06

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	23.08	1.25	36.63	0.09	5.42

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	5.72	9.17	70.43	0.05	4.94

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	28.80	10.42	107.06	0.14	10.36

URBEMIS 2002 For Windows 8.7.0

File Name: H:\Old Placerville Road\Old Placerville Air Emissions.urb
Project Name: Old Placerville Road
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Tons/Year)

CONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (tpy, unmitigated)	0.45	3.11	3.53	0.00	1.56	0.13	1.43

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (tpy, unmitigated)	0.65	4.28	5.24	0.00	0.17	0.17	0.00

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (tpy, unmitigated)	2.28	2.33	3.06	0.00	0.09	0.09	0.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	1.36	0.13	1.73	0.00	0.22

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.99	1.29	11.88	0.01	0.90

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	2.35	1.42	13.61	0.01	1.12

URBEMIS 2002 For Windows 8.7.0

File Name: H:\Old Placerville Road\Old Placerville Air Emissions.urb
Project Name: Old Placerville Road
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: July, 2006
Construction Duration: 24
Total Land Use Area to be Developed: 5.29 acres
Maximum Acreage Disturbed Per Day: 4.99 acres
Single Family Units: 35 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 18711

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	49.90	-	49.90
Off-Road Diesel	9.06	64.85	70.64	-	2.90	2.90	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.07	0.08	1.47	0.00	0.00	0.00	0.00
Maximum lbs/day	9.13	64.93	72.11	0.00	52.80	2.90	49.90
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	4.72	33.58	36.65	-	1.44	1.44	0.00
Bldg Const Worker Trips	0.22	0.13	2.75	0.00	0.03	0.00	0.03
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	4.93	33.71	39.40	0.00	1.47	1.44	0.03
Max lbs/day all phases	9.13	64.93	72.11	0.00	52.80	2.90	49.90
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	4.72	32.36	37.35	-	1.30	1.30	0.00
Bldg Const Worker Trips	0.20	0.12	2.58	0.00	0.03	0.00	0.03
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	4.92	32.49	39.93	0.00	1.33	1.30	0.03
Max lbs/day all phases	4.92	32.49	39.93	0.00	1.33	1.30	0.03

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	4.72	31.16	38.02	-	1.17	1.17	0.00
Bldg Const Worker Trips	0.18	0.11	2.41	0.00	0.03	0.00	0.03
Arch Coatings Off-Gas	83.10	-	-	-	-	-	-
Arch Coatings Worker Trips	0.18	0.11	2.41	0.00	0.03	0.00	0.03
Asphalt Off-Gas	0.16	-	-	-	-	-	-
Asphalt Off-Road Diesel	3.27	20.50	26.96	-	0.68	0.68	0.00
Asphalt On-Road Diesel	0.02	0.46	0.09	0.00	0.01	0.01	0.00
Asphalt Worker Trips	0.02	0.01	0.29	0.00	0.00	0.00	0.00
Maximum lbs/day	91.66	52.35	70.18	0.00	1.92	1.86	0.06
Max lbs/day all phases	91.66	52.35	70.18	0.00	1.92	1.86	0.06

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '06
Phase 2 Duration: 2.6 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Sep '06
Phase 3 Duration: 21.4 months
Start Month/Year for SubPhase Building: Sep '06
SubPhase Building Duration: 21.4 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Cranes	190	0.430	8.0
1	Off Highway Tractors	255	0.410	8.0
1	Rough Terrain Forklifts	94	0.475	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '08
SubPhase Architectural Coatings Duration: 2.1 months
Start Month/Year for SubPhase Asphalt: May '08
SubPhase Asphalt Duration: 1.1 months
Acres to be Paved: 1.5
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.04	0.56	0.29	0	0.00
Hearth	19.87	0.69	36.34	0.09	5.42
Landscaping - No winter emissions					
Consumer Prdcts	1.71	-	-	-	-
Architectural Coatings	1.45	-	-	-	-
TOTALS(lbs/day,unmitigated)	23.08	1.25	36.63	0.09	5.42

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	3.48	5.52	42.80	0.03	2.97
Office park	2.24	3.65	27.63	0.02	1.98
TOTAL EMISSIONS (lbs/day)	5.72	9.17	70.43	0.05	4.94

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	11.67	9.57 trips/dwelling unit	35.00	334.95
Office park		11.42 trips/1000 sq. ft.	18.71	213.68
		Sum of Total Trips		548.63
		Total Vehicle Miles Traveled		3,250.34

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
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	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Office park				48.0	24.0	28.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Changes made to the default values for Area

Changes made to the default values for Operations

URBEMIS 2002 For Windows 8.7.0

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DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: July, 2006
Construction Duration: 24
Total Land Use Area to be Developed: 5.29 acres
Maximum Acreage Disturbed Per Day: 4.99 acres
Single Family Units: 35 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 18711

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	49.90	-	49.90
Off-Road Diesel	9.06	64.85	70.64	-	2.90	2.90	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.07	0.08	1.47	0.00	0.00	0.00	0.00
Maximum lbs/day	9.13	64.93	72.11	0.00	52.80	2.90	49.90
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	4.72	33.58	36.65	-	1.44	1.44	0.00
Bldg Const Worker Trips	0.22	0.13	2.75	0.00	0.03	0.00	0.03
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	4.93	33.71	39.40	0.00	1.47	1.44	0.03
Max lbs/day all phases	9.13	64.93	72.11	0.00	52.80	2.90	49.90
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	4.72	32.36	37.35	-	1.30	1.30	0.00
Bldg Const Worker Trips	0.20	0.12	2.58	0.00	0.03	0.00	0.03
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	4.92	32.49	39.93	0.00	1.33	1.30	0.03
Max lbs/day all phases	4.92	32.49	39.93	0.00	1.33	1.30	0.03

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	4.72	31.16	38.02	-	1.17	1.17	0.00
Bldg Const Worker Trips	0.18	0.11	2.41	0.00	0.03	0.00	0.03
Arch Coatings Off-Gas	83.10	-	-	-	-	-	-
Arch Coatings Worker Trips	0.18	0.11	2.41	0.00	0.03	0.00	0.03
Asphalt Off-Gas	0.16	-	-	-	-	-	-
Asphalt Off-Road Diesel	3.27	20.50	26.96	-	0.68	0.68	0.00
Asphalt On-Road Diesel	0.02	0.46	0.09	0.00	0.01	0.01	0.00
Asphalt Worker Trips	0.02	0.01	0.29	0.00	0.00	0.00	0.00
Maximum lbs/day	91.66	52.35	70.18	0.00	1.92	1.86	0.06
Max lbs/day all phases	91.66	52.35	70.18	0.00	1.92	1.86	0.06

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '06
Phase 2 Duration: 2.6 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Sep '06
Phase 3 Duration: 21.4 months
Start Month/Year for SubPhase Building: Sep '06
SubPhase Building Duration: 21.4 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Cranes	190	0.430	8.0
1	Off Highway Tractors	255	0.410	8.0
1	Rough Terrain Forklifts	94	0.475	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '08
SubPhase Architectural Coatings Duration: 2.1 months
Start Month/Year for SubPhase Asphalt: May '08
SubPhase Asphalt Duration: 1.1 months
Acres to be Paved: 1.5
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.04	0.56	0.29	0	0.00
Hearth - No summer emissions					
Landscaping	0.33	0.01	2.10	0.02	0.01
Consumer Prdcts	1.71	-	-	-	-
Architectural Coatings	1.45	-	-	-	-
TOTALS(lbs/day,unmitigated)	3.54	0.57	2.39	0.02	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	3.25	3.65	37.75	0.03	2.97
Office park	2.04	2.41	24.71	0.02	1.98
TOTAL EMISSIONS (lbs/day)	5.30	6.05	62.46	0.05	4.94

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	11.67	9.57 trips/dwelling unit	35.00	334.95
Office park		11.42 trips/1000 sq. ft.	18.71	213.68
		Sum of Total Trips		548.63
		Total Vehicle Miles Traveled		3,250.34

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
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	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Office park				48.0	24.0	28.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Changes made to the default values for Area

Changes made to the default values for Operations

URBEMIS 2002 For Windows 8.7.0

File Name: H:\Old Placerville Road\Old Placerville Air Emissions.urb
Project Name: Old Placerville Road
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

Construction Start Month and Year: July, 2006
Construction Duration: 24
Total Land Use Area to be Developed: 5.29 acres
Maximum Acreage Disturbed Per Day: 4.99 acres
Single Family Units: 35 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 18711

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (tons/year)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	1.43	-	1.43
Off-Road Diesel	0.26	1.85	2.02	-	0.08	0.08	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00
Total tons/year	0.26	1.85	2.06	0.00	1.51	0.08	1.43
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.18	1.26	1.37	-	0.05	0.05	0.00
Bldg Const Worker Trips	0.01	0.00	0.10	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.19	1.26	1.47	0.00	0.05	0.05	0.00
Total all phases tons/yr	0.45	3.11	3.53	0.00	1.56	0.13	1.43
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.62	4.27	4.93	-	0.17	0.17	0.00
Bldg Const Worker Trips	0.03	0.01	0.31	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.65	4.28	5.24	0.00	0.17	0.17	0.00
Total all phases tons/yr	0.65	4.28	5.24	0.00	0.17	0.17	0.00

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.31	2.06	2.51	-	0.08	0.08	0.00
Bldg Const Worker Trips	0.01	0.01	0.16	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	1.92	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.04	0.25	0.33	-	0.01	0.01	0.00
Asphalt On-Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	2.28	2.33	3.06	0.00	0.09	0.09	0.00
Total all phases tons/yr	2.28	2.33	3.06	0.00	0.09	0.09	0.00

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '06
Phase 2 Duration: 2.6 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Sep '06
Phase 3 Duration: 21.4 months
Start Month/Year for SubPhase Building: Sep '06
SubPhase Building Duration: 21.4 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Cranes	190	0.430	8.0
1	Off Highway Tractors	255	0.410	8.0
1	Rough Terrain Forklifts	94	0.475	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '08
SubPhase Architectural Coatings Duration: 2.1 months
Start Month/Year for SubPhase Asphalt: May '08
SubPhase Asphalt Duration: 1.1 months
Acres to be Paved: 1.5
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.01	0.10	0.05	0.00	0.00
Hearth	0.81	0.02	1.49	0.00	0.22
Landscaping	0.03	0.00	0.19	0.00	0.00
Consumer Prdcts	0.31	-	-	-	-
Architectural Coatings	0.19	-	-	-	-
TOTALS (tpy, unmitigated)	1.36	0.13	1.73	0.00	0.22

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	0.61	0.78	7.20	0.01	0.54
Office park	0.38	0.52	4.69	0.00	0.36
TOTAL EMISSIONS (tons/yr)	0.99	1.29	11.88	0.01	0.90

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	11.67	9.57 trips/dwelling unit	35.00	334.95
Office park		11.42 trips/1000 sq. ft.	18.71	213.68
		Sum of Total Trips		548.63
		Total Vehicle Miles Traveled		3,250.34

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
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	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Office park				48.0	24.0	28.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Changes made to the default values for Area

Changes made to the default values for Operations

APPENDIX C NATURAL RESOURCES DUE DILIGENCE REPORT

SYCAMORE ENVIRONMENTAL CONSULTANTS, INC.
6355 Riverside Blvd., Suite C., Sacramento, CA 95831
916/ 427-0703 FAX 916/ 427-2175
Biology@SycamoreEnv.com

9 May 2005

Mr. Jim Willson P.E., LS
Senior Project Land Surveyor
Carlton Engineering, Inc.
3883 Ponderosa Road
Shingle Springs, CA 95682

SUBJECT: Natural Resource Due Diligence Report for APN 068-03-44 on Old Placerville Rd, Rancho Cordova, CA.

Dear Mr. Willson:

Sycamore Environmental Consultants, Inc. conducted a natural resource due diligence survey of APN 068-03-44 on Old Placerville Rd in the City of Rancho Cordova, CA. The survey was conducted to assist with completion of the Vegetation and Wildlife section of the City of Rancho Cordova's Environmental Impact Assessment Questionnaire. The ± 5.0 ac project study area (PSA) is located on the north side of Old Placerville Rd approximately 200 yards east of the intersection with Bradshaw Road. This letter report documents the results of the survey.

METHODS:

Literature search: Sycamore Environmental obtained an on-line letter from the U.S. Fish and Wildlife Service (USFWS), Sacramento Field Office, which lists federal special-status species that could potentially occur in, or near the PSA. The California Natural Diversity Database (CNDDB/ RareFind, 8 April 2005 version) was queried for the Carmichael quad. The USFWS letter and a summary of the CNDDB/ RareFind records for the Carmichael quad are in Attachment B.

Information on the biology, distribution, taxonomy, legal status, and other aspects of the special-status species was obtained from documents on file in the library of Sycamore Environmental. Standard references used for the biology and taxonomy of plants included Abrams (1923-1960); California Native Plant Society (2001); California Department of Fish and Game (2003, 2004b, 2005b); Hickman, ed. (1993); Mason (1957); Munz (1959); and Sawyer and Keeler-Wolf (1995). Standard references used for the biology and taxonomy of wildlife included Behler and King (1979); California Department of Fish and Game (2004a, 2005a), Ehrlich et al. (1988); Jameson and Peeters (1988); Jennings and Hayes (1994); Mayer and Laudenslayer, eds. (1988); McGinnis (1984); Peterson (1990); Sibley (2000); Stebbins (2003); Udvardy (1977); Verner and Boss (1980); Whitaker (1980); and Zeiner et al. (1988; 1990a, b). Attachment D is a list of literature cited.

Survey Dates and Personnel: Stephen Stringer, a biologist with Sycamore Environmental, conducted the field survey on 26 April 2005.

RESULTS:

Environmental Setting: The PSA is located on the Carmichael USGS topographic quad. The PSA is an undeveloped parcel surrounded by urban development in the City of Rancho Cordova. Portions of the PSA have been disked for fire protection. Spoil piles were also observed. The PSA is bound on the north, east, and south sides by residential development and on the west side by industrial. The PSA is mostly flat. The elevation of the PSA is ± 70 ft above sea level. Attachment A is a 0.25 m per pixel aerial photograph downloaded from the TerraServer® USA website.

Biological Conditions in the PSA: The primary biological community in the PSA is nonnative annual grassland. The dominant plant species observed in the PSA include ripgut grass, (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), perennial ryegrass (*Lolium perenne*), wild barley (*Hordeum* sp.), wild oat (*Avena fatua*), filaree (*Erodium botrys*), vetch (*Vicia* sp.), and field bindweed (*Convolvulus arvensis*). Attachment C is a list of plant and wildlife species observed in the PSA. Other common plant and animal species are expected to occur in the PSA at different times of the day and during different seasons.

Native and horticultural trees occur along the fence line on the north and east PSA boundaries, and scattered throughout the nonnative annual grassland community. A large valley oak (*Quercus lobata*) with a diameter-at-breast-height (dbh) of 40+ inches is present in the southwest quadrant of the PSA. Two other large oaks (one Valley oak and one interior live oak *Quercus wislizenii* var. *wislizenii*) with a multi-stemmed dbh of 30+ inches are present near the northern PSA boundary. Tree species along the eastern and northern fence line include Valley oak, interior live oak, pear (*Pyrus* sp.), *Eucalyptus* sp., and almond (*Prunus dulcis*). The smaller trees visible on the aerial photo scattered through the interior of the PSA are mostly almond, interior live oak, and Valley oak. Approximately 24 native and nonnative trees with a dbh greater than 4 inches were observed. Attachment C is a list of plant and wildlife species observed in the PSA. Attachment C is a list of the dominant plant species that were identifiable on 26 April 2005. No elderberry (*Sambucus* spp.) shrubs were observed in the PSA.

There are no wetlands or waters of the U.S. potentially subject to jurisdiction under Section 404 or 401 of the Clean Water Act including seasonal wetlands, vernal pools, channels, or drainage ditches in the PSA. The aerial photo (Attachment A) shows a mosaic of dark and light patches in the PSA. The herbaceous ruderal species growing in the nonnative annual grassland community were between two and four feet in height in much of the PSA on 26 April 2005. The mosaic of dark and light patches reflects shifts in vegetation height and/ or species composition. The vegetation shifts are not indicative of wetland conditions but appear to be due to soil disturbance. The vegetation is lower growing and more sparse in areas where the soil has been disced and otherwise disturbed. It appears that areas where the soil has been disced support more nonnative grasses and non-disced or less disturbed areas were dominated by vetch (*Vicia* spp.)

Special-status Species Evaluation: CNDDB/ RareFind records and USFWS file data were used to determine the special-status species that could potentially occur in the PSA. The site survey was conducted to determine if suitable habitat and/or individuals of these species were present.

There are no CNDDB/ RareFind records for special-status plant or animal species or sensitive natural communities in the PSA. No special-status plant or wildlife species or their habitats were observed in the PSA during the survey. There is no suitable habitat in the PSA for any of the special-status plant or animal species that occur on the Carmichael quad. There is no seasonal wetland or vernal pool habitat. There is no habitat for seasonal wetland or vernal pool endemics.

There is no habitat for the following special-status wildlife species in the PSA:

- Swainson's hawk (*Buteo swainsoni*),
- White-tailed kite (*Elanus leucurus*),
- Burrowing owl (*Athene cunicularia*),
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), or
- Listed vernal pool branchiopods (fairy shrimp) or plants.

No bird nests were observed in the PSA. Although several large trees occur in the PSA, the habitat suitability for nesting raptors is low. No rodents were observed in the PSA. The PSA provides poor foraging habitat for raptors because of its small size, high level of disturbance, lack of prey base, and urban location. It is unlikely that raptors or other migratory birds would nest in the PSA.

SUMMARY:

No special-status species were observed in the PSA. There are no sensitive natural communities or habitat for special-status plant or animal species in the PSA. There are no wetlands or waters of the U.S. potentially subject to jurisdiction under Section 404 or 401 of the Clean Water Act in the PSA. Approximately 24 native and nonnative trees with a dbh greater than 4 inches occur in the PSA.

Please call if you have any questions.

Yours truly,

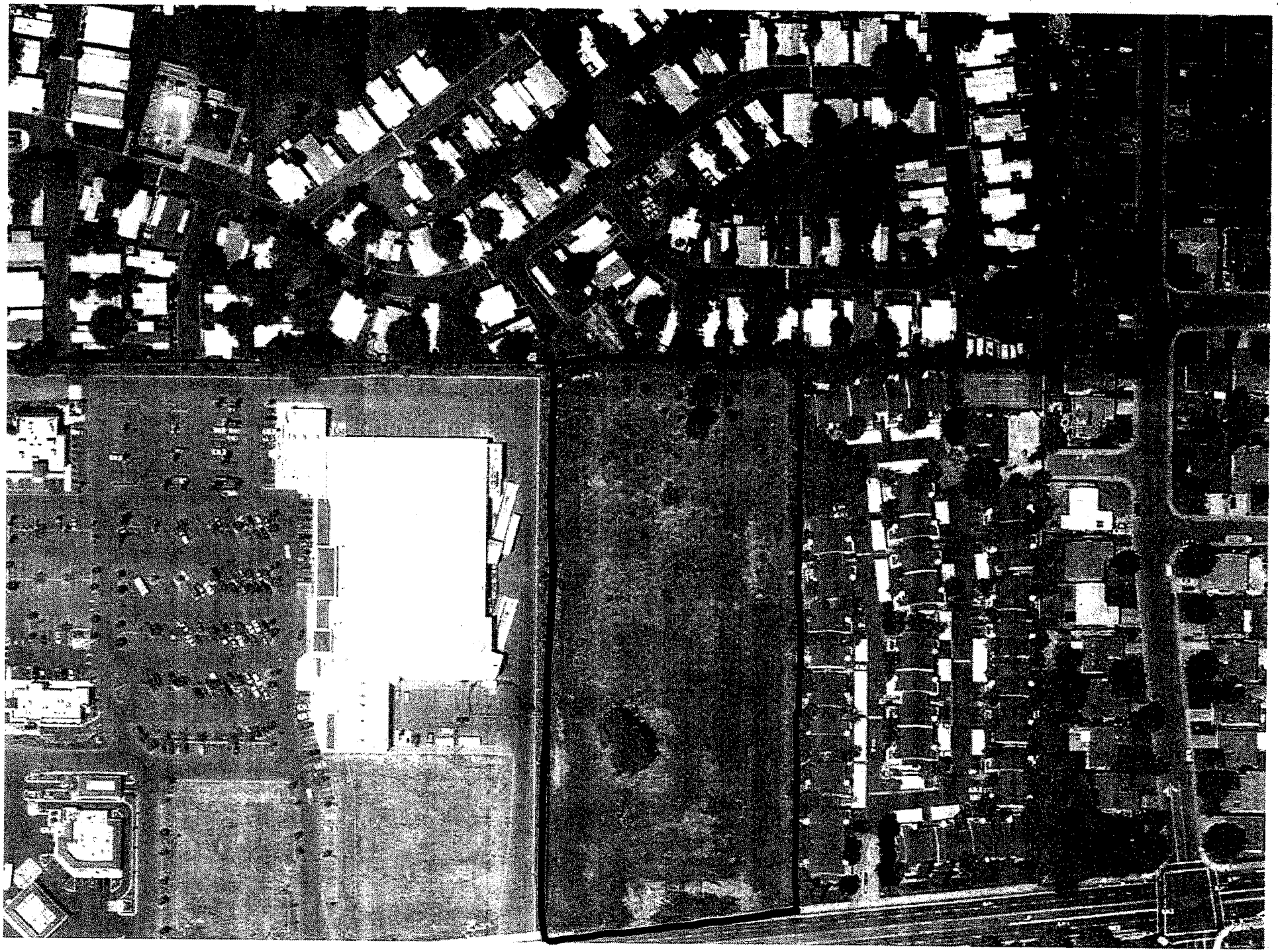
Jeffery Little
Vice President

Attachment A. Aerial Photograph
Attachment B. USFWS letter; CNDDB/ RareFind summary
Attachment C. Plant and Wildlife species observed in the PSA
Attachment D. Literature Cited

Attachment A

Aerial Photograph

APN 068-03-44
Rancho Cordova, CA



file://S:\Carlton Engineering\05061 Old Placerville Rd\Project\DOQ\OldPlacerville-05mUrban-9May02.bmp — = PSA 4/27/2005

Attachment B

USFWS Letter

CNDDB/ RareFind Summary

APN 068-03-44
Rancho Cordova, CA

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

May 9, 2005

Document Number: 050509031720

R. John Little, Ph.D.
Sycamore Environmental Consultants, Inc.
6355 Riverside Blvd., Suite C
S, CA 95831

Subject: Species List for Old Placerville Rd

Dear: Dr. Little

We are sending this official species list in response to your May 9, 2005 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested. You have stated that this list is not for consultation with the Fish & Wildlife Service.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area.* For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be August 07, 2005.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at sacramento.fws.gov/es/branches.htm.

Endangered Species Division

TAKE PRIDE IN AMERICA

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 050509031720

Database Last Updated: May 3, 2005

Quad Lists

CARMICHAEL (512D)

Listed Species

Invertebrates

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - Critical habitat, valley elderberry longhorn beetle (X)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander (T)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Proposed Species

Fish

Oncorhynchus tshawytscha - Critical Habitat, Central Valley spring-run chinook (Proposed) (PX)

Candidate Species

Fish

Acipenser medirostris - green sturgeon (C)

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Oncorhynchus tshawytscha - Critical habitat, Central Valley fall/late fall-run chinook (C)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)
Linderiella occidentalis - California linderiella fairy shrimp (SC)

Fish

Pogonichthys macrolepidotus - Sacramento splittail (SC)
Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Branta canadensis leucopareia - Aleutian Canada goose (D)
Buteo regalis - ferruginous hawk (SC)
Buteo Swainsoni - Swainson's hawk (CA)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Grus canadensis tabida - greater sandhill crane (CA)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Picoides nuttallii - Nuttall's woodpecker (SLC)
Plegadis chihi - white-faced ibis (SC)
Riparia riparia - bank swallow (CA)
Selasphorus rufus - rufous hummingbird (SC)

Mammals

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Gratiola heterosepala - Boggs Lake hedge-hyssop (CA)
Juncus leiospermus var. ahartii - Ahart's (dwarf) rush (SC)

Sagittaria sanfordii - valley sagittaria (=Sanford's arrowhead) (SC)

County Lists

Sacramento County

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - Critical habitat, valley elderberry longhorn beetle (X)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Elaphrus viridis - delta green ground beetle (T)
Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - Critical habitat, delta smelt (X)
Hypomesus transpacificus - delta smelt (T)
Oncorhynchus mykiss - Central Valley steelhead (T)
Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)
Oncorhynchus tshawytscha - Critical habitat, winter-run chinook salmon (X)
Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander (T)
Rana aurora draytonii - California red-legged frog (T)

Reptiles

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Plants

Oenothera deltoides ssp. howellii - Antioch Dunes evening-primrose (E)
Orcuttia tenuis - slender Orcutt grass (T)
Orcuttia viscida - Sacramento Orcutt grass (E)

Proposed Species

Fish

Oncorhynchus mykiss - Critical habitat, Central Valley steelhead (Proposed) (PX)
Oncorhynchus tshawytscha - Critical Habitat, Central Valley spring-run chinook (Proposed) (PX)

Amphibians

Ambystoma californiense - Critical habitat, CA tiger salamander (Proposed) (PX)

Candidate Species

Fish

Acipenser medirostris - green sturgeon (C)
Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)
Oncorhynchus tshawytscha - Critical habitat, Central Valley fall/late fall-run chinook (C)

Birds

Coccyzus americanus occidentalis - Western yellow-billed cuckoo (C)

Species of Concern

Invertebrates

Anthicus antiochensis - Antioch Dunes anthicid beetle (SC)
Anthicus sacramento - Sacramento anthicid beetle (SC)
Branchinecta mesovallensis - Midvalley fairy shrimp (SC)
Coelus gracilis - San Joaquin dune beetle (SC)
Hygrotus curvipes - curved-foot hygrotus diving beetle (SC)
Linderiella occidentalis - California linderiella fairy shrimp (SC)

Fish

Lampetra ayresi - river lamprey (SC)
Lampetra hubbsi - Kern brook lamprey (SC)
Lampetra tridentata - Pacific lamprey (SC)
Pogonichthys macrolepidotus - Sacramento splittail (SC)
Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Rana boylii - foothill yellow-legged frog (SC)
Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Anniella pulchra pulchra - silvery legless lizard (SC)
Clemmys marmorata marmorata - northwestern pond turtle (SC)
Clemmys marmorata pallida - southwestern pond turtle (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Botaurus lentiginosus - American bittern (SC)
Branta canadensis leucopareia - Aleutian Canada goose (D)
Buteo regalis - ferruginous hawk (SC)
Buteo Swainsoni - Swainson's hawk (CA)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Charadrius montanus - mountain plover (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Grus canadensis tabida - greater sandhill crane (CA)
Lanius ludovicianus - loggerhead shrike (SC)
Laterallus jamaicensis coturniculus - black rail (CA)
Limosa fedoa - marbled godwit (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Picoides nuttallii - Nuttall's woodpecker (SLC)
Plegadis chihi - white-faced ibis (SC)
Riparia riparia - bank swallow (CA)
Selasphorus rufus - rufous hummingbird (SC)
Sphyrapicus ruber - red-breasted sapsucker (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

Corynorhinus (=Plecotus) townsendii pallescens - pale Townsend's big-eared bat (SC)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Neotoma fuscipes annectens - San Francisco dusky-footed woodrat (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Aster lentus - Suisun Marsh aster (SC)
Atriplex joaquiniana - San Joaquin spearscale (=saltbush) (SC)
Eryngium pinnatisectum - Tuolumne coyote-thistle (=button-celery) (SC)
Fritillaria agrestis - stinkbells (SLC)
Gratiola heterosepala - Boggs Lake hedge-hyssop (CA)
Helianthemum suffrutescens - Amador (Bisbee Peak) rush-rose (SLC)
Juncus leiospermus var. ahartii - Ahart's (dwarf) rush (SC)
Juncus leiospermus var. leiospermus - Red Bluff (dwarf) rush (SC)
Lathyrus jepsonii var. jepsonii - delta tule-pea (SC)
Legenere limosa - legenere (SC)
Lilaeopsis masonii - Mason's lilaeopsis (SC)
Naverretia myersii spp. myersii - pincushion navarretia (SC)
Sagittaria sanfordii - valley sagittaria (=Sanford's arrowhead) (SC)

Key:

(E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
(P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.
(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.
Critical Habitat - Area essential to the conservation of a species.
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
(C) *Candidate* - Candidate to become a proposed species.
(CA) Listed by the State of California but not by the Fish & Wildlife Service.
(D) *Delisted* - Species will be monitored for 5 years.
(SC) *Species of Concern*/(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish & Wildlife Office.
(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the

list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regard-less of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. However you should contact the California Department of Fish and Game Wildlife and Habitat Data Analysis Branch for official information about these species.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected

by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compen-sates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our critical habitat page for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

Your list may contain a section called Species of Concern. This is an informal term that refers to those species that the Sacramento Fish and Wildlife Office believes might be in need of concentrated conservation actions. Such conservation actions vary depending on the health of the populations and degree and types of threats. At one extreme, there may only need to be periodic monitoring of populations and threats to the species and its habitat. At the other extreme, a species may need to be listed as a Federal threatened or endangered species. Species of concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be August 07, 2005.

Summary of RareFind Occurrences By CARMICHAEL

No.	Scientific Name	Common Name	Total Unique Occurrences	Fed/State/CNPS
1)	Spea (=Scaphiopus) hammondii	western spadefoot	1	--/SC/--
2)	Ardea herodias	great blue heron	1	--/--/--
3)	Ardea alba	great egret	1	--/--/--
4)	Elanus leucurus	white-tailed kite	5	--/--/--
5)	Accipiter cooperii	Cooper's hawk	1	--/SC/--
6)	Athene cunicularia	burrowing owl	6	--/SC/--
7)	Riparia riparia	bank swallow	1	--/T/--
8)	Agelaius tricolor	tricolored blackbird	11	--/SC/--
9)	Taxidea taxus	American badger	1	--/SC/--
10)	Emys (=Clemmys) marmorata marmorata	northwestern pond turtle	2	--/SC/--
11)	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	7	--/--/--
12)	Branchinecta lynchi	vernal pool fairy shrimp	11	T/--/--
13)	Branchinecta mesovallensis	midvalley fairy shrimp	6	--/--/--
14)	Linderiella occidentalis	California linderiella	19	--/--/--
15)	Lepidurus packardi	vernal pool tadpole shrimp	17	E/--/--
16)	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	1	T/--/--
17)	Hydrochara ricksecker	Ricksecker's water scavenger beetle	1	--/--/--
18)	Legenere limosa	legenere	4	--/--/1B
19)	Gratiola heterosepala	Boggs Lake hedge-hyssop	1	--/E/1B
20)	Sagittaria sanfordii	Sanford's arrowhead	5	--/--/1B
21)	Juncus leiospermus var. ahartii	Ahart's dwarf rush	1	--/--/1B

*Fed/State: E=Endangered, T=Threatened, P=Proposed, SC=Species of Concern, DE=Delisted, -- = None
CNPS:1B=Plants rare, threatened, or endangered in California and elsewhere

CNPS:2=Plants rare, threatened, or endangered in California, but more common elsewhere

103 Occurrences for
21 Unique Species/ Communities

Attachment C

Plant and Wildlife Species Observed
APN 068-03-44
Rancho Cordova, CA

Plant Species Observed in the PSA.

FAMILY	SCIENTIFIC NAME	COMMON NAME	N/I [1]
DICOTS			
Asteraceae	*Baccharis pilularis*	Coyote brush	N
	Carduus pycnocephalus	Italian thistle	I
	Lactuca serriola	Prickly lettuce	I
	Senecio vulgaris	Common groundsel	I
Boraginaceae	*Amsinckia menziesii* var. *intermedia*	Fiddleneck	N
Brassicaceae	*Brassica* sp.	Mustard	I
	Raphanus sp.	Radish	I
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	I
Fabaceae	*Lupinus* sp.		--
	Trifolium sp.		--
	Vicia sativa ssp. *sativa*	Common vetch	I
	Vicia villosa ssp. *villosa*	Hairy vetch	I
Fagaceae	*Quercus douglasii*	Blue oak	N
	Quercus lobata	Valley oak	N
	Quercus wislizenii var. *wislizenii*	Interior live oak	N
Geraniaceae	*Erodium botrys*	Filaree	I
	Geranium dissectum	Cranesbill	I
Myrtaceae	*Eucalyptus* sp.		I
Rosaceae	*Prunus dulcis*	Almond	I
	Pyrus sp.	Ornamental pear	I
Rubiaceae	*Galium aparine*	Goose grass	N
Plantaginaceae	*Plantago lanceolata*	English plantain	I
Polygonaceae	*Rumex crispus*	Curly dock	I
MONOCOTS			
Liliaceae	*Dichelostemma* sp.		N
	Triteleia hyacinthina	White brodiaea	N
	Triteleia laxa	Ithuriel's spear	N
Poaceae	*Avena fatua*	Wild oat	I
	Briza minor	Quaking grass	I
	Bromus diandrus	Ripgut grass	I
	Bromus hordeaceus	Soft brome	I
	Hordeum sp.	Wild barley	--
	Lolium perenne	Perennial ryegrass	I

[1] N = Native to CA; I = Introduced; -- = Cannot be determined without keying to species

Wildlife Species Observed in the PSA.

COMMON NAME	SCIENTIFIC NAME
BIRDS	
American crow	*Corvus brachyrhynchos*
Mourning dove	*Zenaida macroura*
Killdeer	*Charadrius vociferus*
REPTILES	
Western fence lizard	*Sceloporus occidentalis*

Attachment D
Literature Cited

APN 068-03-44
Rancho Cordova, CA

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APPENDIX D NOISE IMPACT STUDY

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NOISE IMPACT TO AND BY MULTI-USE DEVELOPMENT ON OLD PLACERVILLE ROAD AND RECOMMENDATIONS TO MEET CITY OF RANCHO CORDOVA NOISE LIMITS

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1.0 SUMMARY

This report documents the noise impact of road traffic, truck deliveries, mechanical equipment and aircraft flyovers on the proposed multi-use development east of Bradshaw Road on Old Placerville Road in Rancho Cordova. The impact of activity at the proposed project on existing residential developments was evaluated also. Traffic on US 50 is the dominant sound source with non-transportation sources at the retail center to the west a significant contributor at proposed single-family home section of the development. Aircraft flights from Mather are an important sound source with some contribution from traffic on Old Placerville Road. Other sources include landscape service activity, dogs barking and general human activity. Traffic on US 50, truck deliveries and mechanical equipment are expected to remain the dominant sound sources up to the design year of 2026. Traffic on Old Placerville Road and aircraft flights out of Mather are expected to remain important sources impacting the residential part of the project. Landscape services and other general human activity at surrounding properties are expected to remain secondary sound sources.

Mechanical equipment and general activity at the project site could potentially impact existing and future residential development in the area. Traffic generated by the project could have a noise impact on existing and future residential areas also. Non-transportation sound sources at the project site are very difficult to quantify because information is not available. The developer must be made aware that sound generated by mechanical equipment and parking lot activity must meet the City of Rancho Cordova's Noise Control Ordinance [1]*. Traffic generated by this project is expected increase day-night average, L_{dn}, sound levels by less than 0.5 dB in the surrounding area.

This multi-use development will house both residential property and office buildings at the project site. The north portion of the project site will hold 27 detached single-family homes and 8 attached single-family homes. The south portion of the project site comprises four office buildings and an access road for the residences. North and east of the project site is residential property. A multi-family development is south of the site across Old Placerville Road. A commercial/retail center lies west of the project site. A large supermarket at this center is the closest facility to the site. The supermarket has two loading docks and a cooling tower on the east side of the building. An 8-foot high wood fence separates the supermarket from the project site.

The City of Rancho Cordova is currently completing their draft General Plan [2], but it has not been adopted. Since the City does not have a Noise Element, the Sacramento County Noise Element [3] was used to evaluate noise impacts. The City of Rancho Cordova has adopted a Noise Ordinance [1] that is based on Sacramento County's Noise Control Ordinance [4]. The County's Noise Element is a planning device that sets goals for both transportation and non-transportation sound sources. The impacts to and by the project must be evaluated. The City's Noise Control Ordinance applies to non-transportation equipment and transportation equipment while on private property. A backyard or activity L_{dn}, sound level goal of 60 dB is set by the County's Noise Element. An L_{dn} sound level of 65 dB is allowed where reaching the 60 dB is not feasible. For non-transportation sound sources, the Noise Element permits the sound level exceeded 50 percent of any hour, L_{50}, sound level of 50 dB during the day and 45 dB at night. The maximum, L_{MAX}, sound level limit is 70 dB during the daytime and 65 dB at night. A 5 dB penalty is applied sound comprising speech, music, pure tones or impacts.

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* - *Number(s) in brackets refer to references listed at the end of this report.*

The City's Noise Control Ordinance has a range of limits based on the duration of the sound during any 1-hour period. The daytime limit for the L_{50} sound level is 55 dB while the nighttime limit is 50 dB. The daytime limit for the L_{MAX} sound level is 75 dB while the nighttime limit is 70 dB. The penalty requirements are the same as the County's Noise Element.

The existing L_{dn} sound levels in the residential area vary from 71 dB along Old Placerville Road to 63 dB near the supermarket at the northwest corner to 59 dB at the northeast corner. Future residential L_{dn} sound levels will not exceed 63 dB at the home at the southeast lot and 64 dB at the home closest to the supermarket loading dock and cooling towers. The predicted L_{dn} sound levels are all less than the upper limit given in the County's noise element. The L_{dn} sound level at the south face of the office buildings closed to Old Placerville Road is estimated to be 74 dB.

Existing sound levels due to non-transportation equipment and transportation sources while on private property vary significantly. These sources mainly influence lots proposed along the west side of the project site. High background sound levels made it difficult to measure the sound from the cooling towers at the supermarket. The sound level exceeded 50 percent of the time, L_{50} sound level, is estimated to be between 52 and 56 dB. Both values exceed the County's Performance Standard and the City's nighttime limit. The City's daytime limit for the L_{50} sound level is exceeded only by the upper range. Sound generated by dock activities varied significantly and was influenced by background sound levels. If background L_{50} sound levels fall below 50 dB, these activities will exceed the nighttime sound limits. An assumption was made that lower nighttime sound levels would be expected on hot summer days. As a result, the predicted sound levels exceed the City's Noise Control Ordinance. Sound levels from the cooling towers and loading dock operations are not expected to change for cumulative plus project conditions. Thus, existing sound levels will remain the same and nighttime sound limits would be exceeded when background sound levels are low. Building a 10-foot high sound wall along the west property line will reduce residential sound levels below the City's limits for all conditions. The impact will be insignificant with this mitigation measure.

An interior L_{dn} sound level limit of 45 dB is set by the County's Noise Element for both single and multi-family homes. The State of California [5] requires interior L_{dn} sound level to be 45 dB or less in habitable spaces of all multi-family homes. Attached single-family homes, e.g., duplexes, very high density housing with common walls or floor/ceiling assemblies or apartments and condominiums are classified as multi-family units by the State. Interior L_{dn} sound levels were predicted using information obtained from the site plan and architectural drawings [6]. A 43 dB(A) L_{dn} sound level design goal was used to furnish a safety factor of 2 dB. This accounts for errors in the models and the use of laboratory sound loss data that will not reflect field construction procedures and techniques. Interior L_{dn} sound level in all units will not exceed the design goal or the County or State's limits. Exterior wall construction must meet minimum construction requirements. Noise impacts will be less than significant when basic design requirements are met.

2.0 ACOUSTIC STANDARDS

This noise study was done following general requirements of the City of Rancho Cordova. Lacking an adopted General Plan, the Noise Element from the County of Sacramento [3] was employed to evaluate this project along with the City's Noise Control Ordinance. The understanding is that the City adopted the County's Noise Element requirements in the interim. The County's Noise Element addresses both transportation sound sources while the City's Noise Control Ordinance focuses

only on non-transportation sound sources or transportation sound sources while on private property. The sound descriptors used to set limits differ for these two types of sources. Interior limits are established for all residences in the County's Noise Element while the State sets interior limits for multi-family homes or attached single-family homes. The following sections describe these requirements.

2.1 County Exterior Limits, Transportation Sources

Transportation sound sources and some non-transportation sound sources that run continuously are evaluated based on the day-night average, L_{dn}, sound level. The day-night noise descriptor averages measured or predicted sound levels over 24-hours after applying a 10 dB penalty to nighttime sounds. Hourly average sound levels, L_{eq}, are measured or predicted for each hour of the day or for each hour during which a sound source is present. A 10 dB penalty is added to each hourly average sound level measured or predicted from 10:00 p.m. to 7:00 a.m. The penalty is applied because people trying to sleep during these hours are more sensitive to external sounds. Excluding or including only certain sources is possible. For example, the sounds of aircraft operating over a project site are included only during those hours when they occur. If there are no events during the nighttime, no penalty would be applied. When some sources are excluded from the analysis, the resulting sound level is called the Background L_{dn} sound level. An acoustical study is needed when the activity areas of noise-sensitive land uses will be subjected to day-night average sound levels, L_{dn}, greater than 60 dB. The goal is to achieve a backyard L_{dn} sound level of 60 dB in all single-family homes. An upper limit for the L_{dn} sound level of 65 is allowed when meeting the lower limit is not feasible. These goals would apply to the backyards of the residential land at the project site and the surrounding noise-sensitive sites.

2.2 County Interior Limits, Transportation Sources

The County's Noise Element sets limits for the maximum interior L_{dn} sound level in residential property. Interior limits are set for other spaces such as offices, but this project only evaluates interior levels at the residential property. Interior L_{dn} sound levels for dwellings are not to exceed 45 dB.

2.3 County Exterior Limit, Non-Transportation Sources

A second criterion in the County's Noise Element is given in the Performance Standards. The Performance Standard addresses the sound of new or existing non-transportation sources as they influence new or existing residential property. Limits are given based on the time of day, tonal content of the sound and type of sound. This section employs the sound level exceeded 50 percent of the time in any hour, the L_{50} sound level, and the maximum, L_{MAX}, sound level as the measures of the noise impact. Sounds that contain pure tones, speech, music or recurring impulsive sounds have an additional 5 dB penalty. A pure tone is what you hear when you blow across the mouth of a soda pop bottle half filled with a liquid. An example of impulsive sound is that generated when a car door suddenly closes. The Performance Standard provides no system to deal with conditions where background sound levels are greater than the limits. A noise study is required if predicted noise from a project or on a project will exceed the limits given in the Performance Standard. Performance Standard limits presented in Table I apply at the closest property line.

TABLE I. Performance Standard Noise Limits from the County of Sacramento Noise Element for Residential Property Affected by Non-Transportation Sources.

Statistical Noise Level Descriptor	Exterior Sound Level Limits, dB(A)	
	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
L_{50}	50	45
L_{MAX}	70	65
Penalty for tones, speech, music, impulses	-5	-5

- Add to limit when sound comprises these.

2.4 City's Noise Control Ordinance

The City of Rancho Cordova's Noise Control Ordinance [1] is very similar to the Performance Standard, though it is not as restrictive. This Ordinance is a City code and is enforceable with limited exceptions. It looks at the sound produced by sources not related to transportation equipment. The one exception is that sound produced by transportation equipment while on private property may be regulated by the Noise Control Ordinance. This Ordinance limits the amplitude and duration of sound produced over any given 1-hour period, including the maximum sound level. Sound limits are based on the type of source, the duration of the sound, the time of day of occurrence, background sound levels and the tonal content of sound. The Noise Ordinance applies a 5 dB penalty to the limits given in Table II when the sound is comprised mainly of speech or music or if it contains pure tones or impact sounds. When background sound levels equal the limits given in Table II for the individual categories, the limit of that category is raised in 5 dB increments to encompass the background sound level with one exception. The maximum background sound level is the exception to this rule. If the maximum background sound level exceeds the limit given in Table II, the measured values become the new limit. This process for handling background sound levels and changes in the noise limits creates conflicts. For example, if the measured background L_{50} sound level was 56 dB and the background L_{25} sound level was 58 dB, the revised limit for each would be 60 dB. However, the ordinance would then say that 60 dB could not be exceeded more than 15 minutes and for more than 30 minutes in an hour. Both requirements cannot be met simultaneously. Sources other than heating, ventilating and air-conditioning equipment are regulated by limits given in Table II. Mechanical equipment used for air-conditioning is allowed to make a maximum of 55 dB(A) over the full 24-hours. These limits would apply to activity at the nearby shopping center when measured at the proposed residential property.

TABLE II. Noise Ordinance Limits for the City of Rancho Cordova for Residential Property Affected by Non-Transportation Sources.

		Exterior Sound Level Limits, dB(A)			
		Without Penalty		With Penalty	
Category	Cumulative Number of Minutes in any 1-hour period	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
1	30 (L_{50})	55	50	50	45
2	15 (L_{25})	60	55	55	50
3	5 (L_{08})	65	60	60	55
4	1 (L_{02})	70	65	65	60
5	0 (L_{MAX})	75	70	70	65

- Penalty applies when sound is composed primarily of speech or music, contains pure tones or results from impacts or impulsive sources.

2.5 State of California

Title 24 of the State Building Code [5] establish standards governing acceptable interior noise exposures that apply to all new multi-family residential units or new single-family attached residnetial units in California. Buildings proposed in areas where the existing L_{dn} sound level exceeds 60 dB(A) must have an acoustical study performed before construction begins. This noise impact study must establish mitigation measures that will limit interior L_{dn} sound levels to 45 dB(A) in all habitable rooms.

3.0 PROJECT DESCRIPTION & SITE

A multi-use development is proposed for vacant lot east of Bradshaw Road and north of Old Placerville Road. This multi-use development will include four office buildings at the south end of the project and residential housing on the north portion of the project site. Twenty-seven detached single-family homes and eight single-family attached homes are proposed. All single-family detached homes will be two story designs with all the bedrooms on the second floor. The first floor will be living areas and a garage. The attached single-family homes will have bedrooms on both the first and second stories.

The project is bordered by Old Placerville Road on the south side and residential property on the north and east sides. Residential property is found south of the site across Old Placerville Road. A commercial and retail site is west of the project site and includes a supermarket. The supermarket faces west with two loading docks on the east side of the building and a cooling tower on the lower roof at the southeast corner of the buildings. The loading docks are less than 70 feet west of the west property line of the project. A dilapidated eight foot tall wood fence separates the project site from the neighboring commercial property. A six foot tall wood fence separates the project site from the residential property to the north and east. A temporary chainlink fence runs along the south property line. The project site is mostly flat and covered with trees and tall grass. Some undulations in the land are found that limit the visibility of Old Placerville Road from positions near the north end.

Construction of the residential portion of the project is expected to follow a common scheme. Typical exterior wall construction consists of 3-coat stucco finish or cementitious board over $^{7}/_{16}$" thick plywood, 2 x 4 wood studs with R-13 insulation in the stud cavities, and $^{1}/_{2}$" gypsum board attached to the inside face of the studs. The ceilings of all living units will be finished with gypsum board. The ceiling height was assumed to be 9 feet. Double glazed windows will be used throughout all the homes.

Office building construction has not been fully described. The basic design calls for a combination of glass and stone veneers with some stucco. All building will be one story. Mechanical units will be installed on the ground near each office building. Buildings 1 and 2 will be closest to the residences. The mechanical unit for Building 1 is proposed to be on the east side of the building about 80 feet south of the nearest residential property. The mechanical equipment will be on the north side of Building 2, in a jog in the building. These units will be about 70 feet south of the nearest residential property. Parking will surround the buildings.

4.0 TEST EQUIPMENT & PROCEDURES

Standard sound measuring equipment was used during the tests. Field sound measurements were made using a CEL 593 (s/n 3/0201692) Sound Analyzer, two CEL 480, (s/n 129858 and s/n 2/112179), Sound Level Meters and a Larson Davis LD700 (s/n 1455). All meters employ ½ inch random incidence condenser microphones. A CEL Type 284/2 calibrator was used to calibrate the meters and the microphones to 114 dB at 1,000 Hz before beginning measurements. These meters conform to the requirements of a Type I meter per American National Standards Institute, ANSI [7]. A windscreen covered each microphone during all sound measurements. All meters can measure statistical sound levels such as the L_{10}, L_{25}, L_{50} and L_{90}. These are, respectively, the sound levels exceeded 10 percent, 25 percent, 50 percent and 90 percent of the time. The sound level meters also capture the maximum sound level, L_{MAX} and the average sound level, L_{eq}. The CEL 593 meters were used to collect representative sound level tones in one-third octave bands.

Field sound measurements were made on April 18, 2006 between 6:05 a.m. and 9:00 a.m. at the proposed site for the multi-use development. Average sound levels, L_{eq}, were measured to use as a basis for building an accurate model of the sound generated by transportation sources. This field tested model predicts the day-night average sound levels for existing and future conditions. Other statistical descriptors of the sound, labeled L_x, and the maximum sound level, L_{MAX}, were also measured. Here, L_x represents values such as the L_{50} or L_{25}, the sound level exceeded 50 percent of the time or 25 percent of the time, respectively. These give additional information about how sound varied over the test period. That is, it can tell you whether it was a source that was near the site for only a short time or a source that continued over substantial time.

Long-term measurements were made at three positions with microphones mounted on tripods 5.5 to 6 feet above ground level. Sound levels were measured during consecutive five minute intervals to identify sources and variations in sound with time. Sound levels were also sampled every five seconds. A summary description of each position follows:

1. Position #1: 21 feet east of the west fence and 220 feet south of the north fence.
2. Position #2: 12 feet east of the west fence and 330 feet south of the north fence.

3. Position #3: 50 feet north of Old Placerville Road and 80 feet west of the east property line.

Short-interval measurements were made at nine other positions using the CEL 593. These measurements were made to learn additional information about the sound generated by loading dock activity and the cooling towers and the supermarket to the west of the project site. Measurements were made at four positions at the rear of the supermarket with an unobstructed view of the docks and cooling towers. Five additional test positions were on the project site at various distance and positions relative to the cooling towers and loading docks.

5.0 SOUND SOURCES

5.1 Existing

US 50 and Old Placerville Road traffic, activity at the supermarket, mechanical equipment at the supermarket and general aircraft overflights are the major sound sources at the project site. Traffic on US 50 is the dominant sound source in the residential areas with significant contributions from loading dock activity, vehicle movements and the cooling towers. Loading dock activity includes both heavy and medium trucks unloading products. Hand carts, roll carts and electric forklifts were used to move the products and pallets. Trucks entering and departing the dock area generate significant sound. At present, the dock does not open before 6:00 a.m. Occasionally, a truck may come in and wait until the docks open to permit unloading. Signs are posted to prevent drivers from idling the engines while waiting. Except when a driver left the cab to open the trailer doors, all trucks shut off their engines while unloading. A total of 10 heavy trucks could unload between 6:00 a.m. and 4:00 p.m. Most deliveries are made between 6:00 a.m. and 9:00 a.m. A few vehicles driving past the dock area were important sources also. Two cooling towers mounted on the lower roof of the supermarket are important sources and appear run continuously. The project site is within 10,000 feet of Mather Airport. Single and multi-engine propeller aircraft and jets were observed flying over the project site though the CLUP documents for the airport do not show this as a standard departure path. Other sound sources include dogs barking and general human activity on the surrounding property.

The south part of the project site, the area to be used for office buildings, is primarily impacted by traffic on Old Placerville Road with some contribution from US 50 traffic. Entering or departing trucks from the retail site to the west may have a small influence on the sound levels at the building near the west side.

Old Placerville Road is an important east-west street running along the south side of the project site. This road stretches from Bradshaw Road west of the project to Rockingham Drive northeast of the project. Old Placerville Road is two-lanes in each direction near the project site with a turning lane in the middle. Traffic counts were taken from the Traffic Volume Flow Map published by the County of Sacramento in 2005 [8]. Spot counts were not made during the field tests to assess traffic mixes. Traffic speeds were observed to be between 50 and 55 MPH. Heavy truck volumes are relatively low because Old Placerville Road is not a primary thoroughfare. US 50 is a major east-west freeway providing connections between Sacramento and the communities to the east. This road comprises three lanes in each direction near the site. Speeds vary from 60 to 80 MPH. Traffic volumes and mixes were taken from CalTrans' publications on the internet [9,10]. Table III summarizes the data used to calculate existing day-night average sound levels.

TABLE III. Roadway Traffic Volumes and Mixes Assumed to Calculate Existing Day-Night Average Sound Levels for Proposed Residential Property in Rancho Cordova.

Road Name	Distance to Near Lane, Ft	Average Daily Volume	Percent Heavy Trucks	Percent Medium Trucks	Percent Trucks at Night	Percent Autos at Night	Vehicle Speed MPH
Old Placerville Road	>270	20,500	2.0	2.5	8.0	12.0	55/50
US 50	2,500	185,700	2.5	2.1	10.0	13.0	65/60

-Automobile and truck speed respectively

5.2 Cumulative + Project

The dominant sound sources at the project site will remain the same for cumulative plus project conditions. Traffic on Old Placerville Road will be an important source at the proposed offices but less important at the residential property. Traffic on US 50 is expected to continue to be the principal background sound source at the project site. The cooling towers, loading dock activity, truck movements and vehicle passages at the east side of the retail store will continue to be an important sound source for the homes closest the west property line. Truck movements and dock activity were assumed to remain at current levels. Aircraft flight paths are expected to remain similar to existing conditions so this will remain a sound source. Sound associated with the proposed office buildings on the project site is not expected to impact the proposed residential property to the north. The office buildings will introduce HVAC equipment, additional traffic and human activity. Other sources remain secondary in importance. Quantifying the other sources is very difficult.

Projected future traffic volumes on Old Placerville Road were calculated using the values from Table III and a 2 percent rate of growth [8]. A similar growth rate was assumed of US 50. Traffic speeds and mixes were assumed to remain about the same for both roads. A summary follows in Table IV of road traffic volumes used to compute L_{dn} sound levels for cumulative plus project conditions.

TABLE IV. Roadway Traffic Volumes and Mixes Assumed to Calculate Cumulative Plus Project Day-Night Average Sound Levels for Proposed Residential Property in Rancho Cordova.

Road Name	Distance to Near Lane, Ft	Average Daily Volume	Percent Heavy Trucks	Percent Medium Trucks	Percent Trucks at Night	Percent Autos at Night	Vehicle Speed MPH
Old Placerville Road	>270	30,500	2.0	2.5	8.0	12.0	55/50
US 50	2,500	275,900	2.5	2.1	10.0	13.0	65/60

-Automobile and truck speed respectively

6.0 EXTERIOR ACOUSTIC ENVIRONMENT

6.1 Existing

Field sound measurements at the project site were used to evaluate the existing acoustic environment. Averages of the 5-minute test samples were computed for each hour or part of an hour. Averages of the short interval sound levels and other statistical descriptors are given in Table V along with the predicted L_{eq} sound levels. Calculations of predicted hourly noise levels were made using the Federal Highway Administration (FHWA) Highway Noise Prediction Model [11]. The FHWA model was modified to include the CalTrans noise emission levels [12]. This model assumes freely flowing traffic. The ground was assumed to be acoustically soft for all sources because of the influence of the grass at the measurement positions. Road visibility and ground conditions were considered in calculations of the hourly average sound levels at each test position. The influence of temperature was also considered. The predictions do not consider the influence of traffic on US 50. The distance between the site and US 50 limits the accuracy of the model.

TABLE V. Sound Levels Measured at Three Positions for a Proposed Multi-Use Development on Old Placerville Road in Rancho Cordova and Comparisons with Predicted Average Sound Levels Due to Traffic on Old Placerville Road.

		Measured Sound Level, dB(A)							Predicted
Position	Time, a.m.	L_{MAX}	$L_{1.7}$	$L_{8.3}$	L_{25}	L_{50}	L_{90}	L_{eq}	L_{eq}, dB(A)
#1	6:05-7:00	76	66	60	58	58	56	59	52
	7:00-8:00	70	60	57	56	55	53	56	52
	8:00-9:00	74	61	56	54	53	52	55	51
Total Time	*6:05-9:00*	*76*	*63*	*59*	*57*	*55*	*53*	*57*	—
#2	6:30-7:00	78	68	61	58	57	56	60	54
	7:00-8:00	69	60	57	56	55	53	56	54
	8:00-9:00	74	61	56	54	53	52	55	53
Total Time	*6:30-9:00*	*78*	*63*	*58*	*56*	*55*	*52*	*57*	—
#3	6:15-7:00	80	—	73	71	69	63	70	70
	7:00-8:00	78	—	73	71	69	63	70	70
	8:00-9:00	77	—	72	70	68	61	69	69
	9:00-9:35	80	—	71	68	64	56	67	—
Total Time	*6:15-9:35*	*80*	—	*73*	*71*	*68*	*60*	*69*	—

Average sound levels at Positions #1 and #2 decreased with time while the levels were fairly constant at Position #3 according to Table V. This table also shows that the measured and predicted L_{eq} sound levels do not agree well for Positions #1 and #2. Again, these predictions do not include the influence of traffic on US 50. Traffic volumes would be expected to be greater on both US 50 and Old Placerville Road from 7:00 a.m. to 8:00 a.m. than from 6:00 a.m. to 7:00 a.m. However, the L_{eq} sound

levels are decreasing. This could means that non-transportation sound sources at the retail site influenced the results or that some other factor affected the results. In this case, the change in the temperature appears to be the reason for the change. As the sun comes up and the ground warms, sound rays tend to bend toward the sky rather than propagating close to the ground. Because of the large distance, this has a large influence on noise from traffic on US 50. The cooling towers ran continuously, so this could not have been a factor in the changing sound at Positions #1 and #2. Two heavy trucks were operating at the docks during the time before 7:00 a.m. and after 7:00 a.m. Thus, this too does not appear to be the dominant source. This data shows that traffic on Old Placerville Road is not the dominant source. The predicted L_{eq} sound level due to traffic on US 50 from 6:00 a.m. to 7:00 a.m. with an inversion was 58 dB. With the influence of Old Placerville Road, the total L_{dn} sound level would be 59 dB. This agrees well with the measured value. Thus, sound at Positions #1 and #2 are a function of road traffic and an acceptable model can be made.

A comparison of the average, maximum and sound level exceeded 90 percent of the time at Positions #1 and #2 is presented in Figure 1. The results are nearly identical even though the Position #2 was 110 feet south of Position #1 and 9 feet closer to the west fence. Position #1 was far closer to the cooling towers and in a more central position relative to the loading docks. Figure 2 shows how all sound descriptors varied over time at Position #1. The general trend to lower sound levels is seen in this figure, even when traffic on US 50 should have been increasing. Similar results are displayed in Figure 3 for 5-minute measurements made at Position #2. The influence of truck and loading dock activities and of aircraft flights is shown in both figures.

Measured and predicted sound levels at Position #3 agree very well as seen in Table V. This means that traffic on Old Placerville Road was the main sound source at this position and that the influence can be estimated. The variation in the statistical sound descriptors measured at Position #3 is presented in Figure 4 for each five-minute interval. A much larger difference between the L_{90} sound level and the L_{08} sound level is shown in this figure compared with Figures 1 and 2. This implies that the traffic on this road was not continuous and there wee intervals with limited vehicles passing by the site. All sound descriptors were much more constant at this position that at other positions. The short distance between the traffic on Old Placerville Road and the test position was not influence by any inversion. Sound levels did begin to drop after 8:15 a.m., with a big drop after 9:00 a.m. This corresponds to a reduction in traffic.

The non-transportation sound sources at the supermarket must meet limits of the County's Performance Standard and the City's Noise Control Ordinance. Background sound levels are greater than the County's Performance Standard, so knowing whether the existing conditions meet this limit is not possible. Figure 2 shows maximum sound levels at Position #1 due to a medium delivery truck of 72 dB(A). The City's L_{MAX} limit is 75 dB(A) if a pure tone is not present and 70 dB(A) if a pure tone is present. The delivery van (medium truck) did produce a pure tone even when averaged over 15 seconds as seen in Figure 5. The pure tones at 100 and 125 Hz (cycles/second) were due to the vehicle while the pure tone at 16 Hz was due to a background source that was still present after the van left. Thus, sound from this vehicle exceeded the City's limit even when measured 21 feet east of the property line. The L_{MAX} sound level two feet east of the west property line would be predicted to be at least 5 dB(A) higher. This would exceed the limit even without the pure tone penalty if the tone were not present. The heavy delivery trucks also generate pure tones as presented in Figure 6. These measurements were made as the truck pulled out from the dock and then after it turned around to pass back by the dock to exit onto Old Placerville Road. The pure tones are related to engine firing and exhaust.

The two cooling towers on the roof of the supermarket are shielded to the north and northeast by a metal sound barrier. This barrier was installed because of complaints from the homes to the north. Because of high background sound levels during the tests, differentiating between traffic and cooling towers is difficult. Figure 7 displays the sound tones measured at four positions with the cooling tower and road traffic the only significant sources. The measurement at Positions #8 and #9 were made close to 7:00 a.m. when traffic noise was still high. This figure shows no change in sound amplitude below 630 Hz when the test position moved an additional 15 feet, 60 versus 75 feet from the face of building supporting the towers, and the wood fence intervened. This suggests that the unchanged sound was due to traffic while the wood fence reduced the upper frequencies. Under ideal conditions, the sound would have decreased 1.5 to 2.0 dB at all frequencies because of the increased distance. Additional measurements were made after 8:00 a.m. on the project site after traffic influences had decreased. Positions #10 and #11 were selected so the fence did not shield the microphone. Position #10 was 42 feet east of the fence while Position #11 was only 27 feet east of the fence. A 1 dB(A) difference would be expected, but the results are almost identical. The fence may have provided some shielding at Position #11. The cooling tower runs almost continuously and for long periods of time. The nighttime limit for the L_{50} sound level is 50 dB(A). The lowest level measured was 53 dB(A). Some of this sound was due to traffic because the exact contribution is unknown. The possibility exists that the sound from the cooling towers would exceed the City's limit when traffic noise from US 50 was very low. This would most likely occur on very hot evenings for existing conditions.

The FHWA traffic noise model [6] was used to predict existing day-night average sound levels at the three main test positions. Traffic on both US 50 and Old Placerville Road was included in the model, one road at time. The ground was assumed to be acoustically soft for all traffic sources including automobiles, medium trucks and heavy trucks for both roads. The influence of the tall grass was ignored. Road visibility was considered in the calculations and it was assumed that temperature gradients did not cause excess attenuation or focusing. Table VI gives the predicted day-night average sound levels at Positions #1, #2 and #3 based on traffic volumes given in Table III and the assumptions stated above. The influence of aircraft traffic out o Mather field was included in the "Other Sources". The project but is outside the 60 CNEL contour and was assumed to be an L_{dn}/CNEL value of 52. "Other Sources" also includes sound generated by activities at the retail center west of the site.

TABLE VI. Predicted Day-Night Sound Levels for Existing Conditions at Measurement Position #1 and #2 at Project Site along Bradshaw and Gerber Roads in Sacramento County.

Receiver Position	Predicted L_{dn} Sound Level, dB			Total L_{dn}, dB, All Sources
	US 50 Traffic	Old Placerville Road Traffic	Other Sources	
#1	57	54	61	63
#2	57	55	60	63
#3	56	71	52	71

Existing day-night average sound levels are classified as "Normally Acceptable" for residential at test Positions #1 and #2. Existing day-night average sound levels are classified as "Normally Unacceptable " for test Position #3. These classifications apply to property used for residential development. Backyard day-night average sound levels could be expected to be in the "Conditionally Accept-

able" range for positions closer to the south edge of the proposed residential property. Higher backyard day-night average sound levels could be expected in the area proposed for office buildings. This result does not include the influence of a sound wall or shielding from buildings that could be built along Old Placerville Road.

6.2 Cumulative + Project

Traffic on US 50 and Old Placerville Road will dominate the acoustic environment to the year 2026 at the project site. The office buildings will subjected to sound mainly from Old Placerville Road. The worse case hourly L_{eq} sound level is of interest at the face of the offices because the County's Noise Element sets interior limits for normal hours of operation. Non-transportation sound sources influencing the residential portion of the project include the cooling towers at the supermarket, dock and vehicle activity on the east face of the market, mechanical equipment at the new office building part of the project and vehicle movements around these offices. These sources are discussed in the following paragraphs.

Traffic volumes on US 50 and Old Placerville Road will increase over the next 20 years. Because of the distance over which the sound propagates from US 50, the acoustical characteristics of the ground will remain the same. However, the residential and office building development at the site will change the characteristics of the ground between Old Placerville and the offices and the residences. Sound levels were predicted at two residential lots that represent the two worse case conditions. Lot 8 is near the northwest corner of the project, directly east of the loading docks and cooling towers at the supermarket. The second prediction site is Lot 23 at the southeast corner of the residential development. This site has a view of Old Placerville Road, but substantial shielding to the southwest and the southeast because of the new office buildings and the existing apartment buildings. Table VII presents the predicted L_{dn} sound level at these two residential lots. Other sources at Lot 8 include the cooling towers and all dock activity.

TABLE VII. Predicted Day-Night Sound Levels for Cumulative Plus Project Conditions at The Nearest Proposed Backyard to Old Placerville Road in Rancho Cordova.

Receiver Position	Predicted L_{dn} Sound Level, dB			Total L_{dn}, dB, All Sources
	US 50 Traffic	Old Placerville Road Traffic	Other Sources	
Lot 8, NW	59	53	61	64
Lot 23, SE	58	60	53	63

The predicted L_{dn} sound level falls into the "Conditionally Acceptable" regions of land use compatibility at both sites. Traffic on US 50 is the major source at Lot 8 with a small contribution from other sources including Old Placerville Road traffic. Vehicles on Old Placerville Road are the major source of sound at Lot 23, but US 50 traffic has a significant influence also. Additional sound reduction is not feasible. The predicted backyard L_{dn} sound levels are less than the County's limit for the L_{dn} sound level of 65 dB.

The residential portion of the project is estimated to generate 350 car trips per day on Old Placerville Road while the cumulative traffic volume is expected to be 30,500. This will increase the L_{dn} sound level by less than 0.3 dB. The office portion of the project is estimated to generate 400 additional car trips per day. Without this project, the cumulative ADT is predicted to be 30,500. Again, this changes the L_{dn} sound level by less than 0.3 dB.

The non-transportation sound sources and transportation sources while on private property must meet the limits of the County's Performance Standard of the Noise Element and the Cities Noise Control Ordinance. Both sets of limits are based on the sound measured during any 1-hour period. An assumption was made that changes would not be made in the number of dock events or the number of vehicles passing by the east side of the supermarket that is next to the west property line of the project site. General dock activity, truck passage, other vehicle passage, waste compaction and operation of the cooling towers are considered the primary the major sources influencing the homes along the west property line. At present, an 8-foot tall wood fence runs along the west property line. This fence is down in some locations and has many spaces between boards. The gaps reduce the sound reduction capability of the wall to 3 to 5 dB(A). An assumption was made that this fence will be replaced with a minimum 8-foot masonry fence or equivalent. Each source is discussed below assuming this fence is in place.

Sound generated by the cooling towers on the roof of the supermarket is not expected to change from current levels. The existing tests were inconclusive regarding the exact sound levels produced by the two cooling towers. Background sound from US 50 masks the sound from the cooling towers. Whether the load on the cooling towers changed also is unknown. The cooling towers are approximately 25 feet above ground level on a lower roof section on the supermarket. An existing sound barrier along the north and part of the east side of the roof shields the cooling towers from the residences to the north and northeast. For the assumed tower height, a 5.5 foot tall person would have to be more than 9 feet behind the wall to see the top of the tower. The predicted sound level at this positions is between 52 and 56 dB(A). Both values exceed the City's L_{50} sound level limit of 50 dB(A) at night. The County's Performance Standard of 45 dB(A) for the L_{50} sound level also is exceeded. If background L_{50} sound levels were always as high as measured during the field tests, the City's limit would increase to 60 dB(A), and the sound would comply. Additional sound reduction could be achieved by extending the sound wall on the roof to the south edge of the roof and then possibly along the south edge of the roof or by increasing the height of the sound wall at least two feet. Because of the uncertainty as to actual sound generated by the cooling tower, additional sound reduction may not be warranted.

Heavy and medium trucks entering and leaving the dock area and the passage of other vehicles are significant sound sources at proposed residential areas. The number of events per hour or duration of each event is ill defined at best. An assumption was made that three heavy and two medium trucks would enter and leave the dock area between 6:00 a.m. and 7:00 a.m. That engines would be turned off while at the docks or waiting to get to the docks was assumed also. An assumption was made that trucks might leave their engines on while getting out of the truck to open the trailer doors before backing into the dock. Figure 6 presents the 15-second average sound level measured as a heavy truck pulled out of a dock and then while driving by the dock after turning around and departing south. The 30-second average sound level was 75 dB(A) when measured at approximately 8 feet. Previous measurements of a truck driving at a constant speed past a test position showed sound levels of 71 dB(A) when tested a distance of 18 feet from the centerline of the truck path. The distance from the

microphone is constantly changing as the vehicle moves. The measured sound level of the same truck departing was approximately 84 dB(A) at the same distance because of increased engine speed and load. These three results were used to estimate sound level at the nearest residences. The noise source for the heavy trucks is assumed to be the exhaust at height of 8 feet above ground level. For heavy trucks with mufflers under the frame and moving at constant speed, the engine may be the main source and this is only 5 feet above ground level.

The predicted $L_{1.7}$ sound level is greater than the 60 dB(A) nighttime limit with the assumptions made and assuming a pure tone is produced. A wall height of 10 feet is required to reduce the $L_{1.7}$ sound level under these conditions to less than the limit. These calculations assume that trucks are not left idling. Background sound levels were assumed to be below the existing nighttime limit when a pure tone is present.

Sound generated by other dock activities primarily involves impulsive sounds such as dropping pallets, banging metal doors and similar sources. Because these occur randomly, separating them from other data is very difficult. Based on the assumptions made, erecting the 10-foot sound wall along the perimeter will result in acceptable levels in the residential area.

Mechanical equipment and general activity in the office development portion of this project was evaluated also. Sound from these sources is not expected to exceed the limits of the City's Noise Control Ordinance. Sound from the mechanical equipment will be well below the City's noise limit. Only a rough estimate can be made of sound from other sources because they are not well defined.

7.0 INTERIOR ACOUSTIC ENVIRONMENT

The State of California assumes that a 15 dB reduction can be expected from the exterior to the interior of a home with the windows open. Thus, any L_{dn} sound level greater than 60 dB(A) will cause interior sound levels to be greater than the 45 dB(A) limit [5,3] if the windows or doors are allowed to be open. An interior day-night average sound level goal of 43 dB is used to evaluate designs. This is the limit when a 2 dB margin of safety is applied to the 45 dB limit. A margin of safety is used because Sound Transmission Class, STC, ratings of building components are based on laboratory tests. Laboratory construction techniques can seldom be duplicated in the field. The State assumes up to a 5 dB reduction in sound loss from the laboratory to the field. The STC rating of building products is used in the calculation of interior L_{dn} sound levels.

Interior L_{dn} sound levels were predicted using the wall design given in Section 3.0 of this report and the architectural drawings [?]. The exterior L_{dn} sound levels given in Table VII were used along with a traffic sound spectrum measured at the project site to calculate interior L_{dn} sound levels. An interior day-night average, L_{dn}, sound level goal of 43 dB was used to evaluate each design. This is the limit when a 2 dB margin of safety is applied to the City of Citrus Heights and State of California's limit of 45 dB. This margin of safety is used because the noise prediction model is only good to ±1.5 dB(A) and because Sound Transmission Class, STC, ratings of building components are based on laboratory tests and construction techniques with quality that can seldom be duplicated in the field. A 5 dB reduction in the sound transmission was assumed because of the source location outdoors with no reflecting surfaces nearby [13]. The sound transmission loss of materials used in exterior constructions was taken from publications by the National Institute of Tests and Standards [14] and the State of

California [15]. Some data was taken from literature published by manufacturers or was predicted from sound transmission loss models. Standard dual glazed windows were assumed for all units.

Exterior L_{dn} sound levels are predicted to be less than 65 dB(A) at any home. This represents the worst case for interior sound levels. This prediction included the effects of shielding from other buildings. With the exterior wall construction given in Section 3.0 and standard windows, the predicted interior L_{dn} is predicted to be less than 40 dB. Upgrades to the exterior wall construction or windows will not be needed. This prediction assumes the exterior wall construction meets the general requirements given in the mitigation section of this report. All units must meet a minimum construction requirement to achieve the L_{dn} sound level design goal and assumptions made in the analyses.

8.0 ACOUSTICAL IMPACTS

8.1 Exterior

The change in exterior L_{dn} sound levels from cumulative to cumulative plus project will have an insignificant impact for the backyards of homes associated with this project. The change from existing to cumulative plus project will also be insignificant. The impact relative to acceptable exterior L_{dn} sound levels in the backyards of homes on all lots will be insignificant. No mitigation will be necessary for the backyards of homes in this project.

Exterior sound levels relative to non-transportation sound limits will be significant in the backyard of homes on the west side of the project. These homes are near two types of non-transportation sound sources. These two sources are the cooling towers at the supermarket and activity associated with deliveries to the supermarket. Mitigation will be required to ensure that the impacts are less than significant.

8.2 Interior

Interior L_{dn} average sound level impacts are insignificant for cumulative plus project conditions for rooms in all proposed homes at the project site. Exterior walls must meet certain minimum acoustical requirements in all units for these conclusions to be correct.

9.0 MITIGATION MEASURES

Exterior sound reduction is required for the backyards of newly constructed homes on the west side of the project site. Exterior sound reduction is not required for the backyards of all other homes. Special sound attenuation is not required to meet the interior L_{dn} sound level goals for rooms in the proposed homes. The following sections discuss the requirements for each area and general requirements for all new homes.

9.1 Exterior

Exterior sound reduction is not required at the residential development to meet the County's Noise Element requirements for transportation sound sources or long duration stationary. This conclusion is based on the predicted L_{dn} sound level in the backyard of all homes. Sound attenuation is needed for non-transportation sources or transportation sources while on the private property at the retail

development west of the project site. For most of the sources at the retail development, erecting a sound wall along the property line will be sufficient to meet the City's Noise Control Ordinance. However, because the cooling tower on the supermarket is elevated, this might not be adequate. Extending the existing sound wall on the roof to fully enclose the towers would probably work better. Three problems exist with this option. First, enclosing the towers might not be allowed because of operating requirements for adequate air might not be met. The second problem exists because the project developer has no control over these units. Finally, because of high background sound levels, that the towers are exceeding the noise limits is not clear. Because of the request for a change in the zoning at the project, who has responsibility for reducing the noise of the towers if need is not clear. An agreement between the supermarket and project owner will likely be required to determine how mitigation will be implemented and how costs will be shared.

I. Exterior Sound Reduction Measures

A. Property Line Sound Wall

1. A 10 foot sound wall shall be constructed.
2. The wall shall extend along the west property line beginning at the northwest corner of the property and terminating 5 feet south of the north face of Office 1.
3. All sound barrier walls must have a minimum surface weight of 3.5 to 4.0 lbs./sq.ft. The sound wall can be constructed from concrete masonry units, other concrete products, wood or metal if the surface density meets the specified limits.
4. The structures must be continuous along their width and height with no gaps including at the ground.
5. All wall heights are referenced from building pad elevation.

B. *Optional Wall at Cooling towers*

1. After the property line sound wall is constructed, measure the sound in backyard area of homes to be built along the west side of the project.
2. Measurements shall be made when background sound levels are the lowest but during hours when the cooling tower is normally running under typical speed and load conditions.
3. The sound wall surrounding the north and northeast portion of the cooling towers at the supermarket shall be extended southward to the corner of the structure and then continue west for 6 feet.
4. The new wall shall be of equal or greater height than the existing wall.

9.2 Interior

General construction requirements for all homes are given below. These general requirements ensure certain minimum construction and acoustic standards are met so the interior L_{dn} sound level predictions will be true for all homes.

I. General Requirements

A. All joints in exterior walls shall be sealed airtight around windows and doors, at the wall perimeter and at major seams.
B. All above ground penetrations of exterior walls by electrical and plumbing components shall include a $^{1}/_{4}$ to ½ inch airspace around the perimeter. This space shall be filled loosely with fiberglass insulation. The space shall then be sealed airtight on both sides of the wall with a resilient, non-hardening caulking or mastic.
C. Basic exterior wall construction shall comprise the following material of equal surface weight and Sound Transmission Class, STC rating.

1. Minimum 2" x 4" wood studs at 16 or 24 inches on center.
2. Minimum R-13 insulation in the stud cavities,
3. ½" gypsum wallboard fastened to the interior face of the wood studs. The wall shall be fully taped and finished, and sealed around the perimeter with a combination of backer rod and resilient, non-hardening caulking,
4. The exterior surface shall be finished with the following or with another product with equal or greater surface weight.

a. Finished with a dense 3-coat, stucco over wire mesh and building paper,

OR

b. Cementitious board over minimum $^{7}/_{16}$" thick plywood,

OR

c. Combination of these two finishes may be used in different parts of the same home.

D. Ceilings shall be finished with a minimum ½" gypsum board with minimum R-19 insulation in the ceiling.
E. Windows shall have a minimum STC rating of 29 or better. Windows shall have an air infiltration rate of less than or equal to 0.20 CFM/lin. ft. when tested with a 25 mile an hour wind per ASTM standards.
F. There shall be no need to open windows, doors or other exterior openings to provide adequate ventilation.

10.0 REFERENCES

1. Anon., "Noise Control," SCC No. 254, adding Chapter 6.68, Revised April 15, 1987, Rancho Cordova.

2. P. Johns, General Plan Manager, ***Draft General Plan, City of Rancho Cordova***, released March 13, 2006 for public review.

3. Anon., "Noise Element of the County of Sacramento General Plan", from the County of Sacramento General Plan, December 15, 1993.

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6. Anon, "Old Placerville Road", architectural drawings and site plans of residential and office development, prepared for Tower Development by Loving & Campos Architects Inc., Walnut creek, Project No. 05013, March 20, 2006.

7. American National Standards Institute, ANSI, ***Standard Specification for Sound Level Meters, S1.4-1983 (Precision)***

8. Sacramento County, Transportation Division, http://www.sacdot.com/services/Traffic_Counts.asp, May 26, 2005.

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11. T.M. Barry & J.A. Readgan, ***FHWA Highway Traffic Noise Prediction Model***, FHWA-Rd-77-108, Federal Highway Administration, Office of Research, Office of Environmental Policy, December 1978.

12. R.W. Hendriks, ***California Vehicle Noise Emission Levels***, FHWA/CA/TL-87/03, Office of Transportation Laboratory, California, Department of Transportation, Sacramento, California, 95819, January 1987.

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14. Anon., ***Acoustical and Thermal Performance of Exterior Residential Walls, Doors and Windows***, NBS Building Science Series 77, National Bureau of Standards (National Institute of Tests and Standards), Department of Commerce, 1975.

15. R. DuPree, ***Catalog of STC and IIC Ratings For Wall and Floor/Ceiling Assemblies with TL and ISPL Data Plots***, Office of Noise Control, California Department of Health Services, Berkeley, California, 1981.

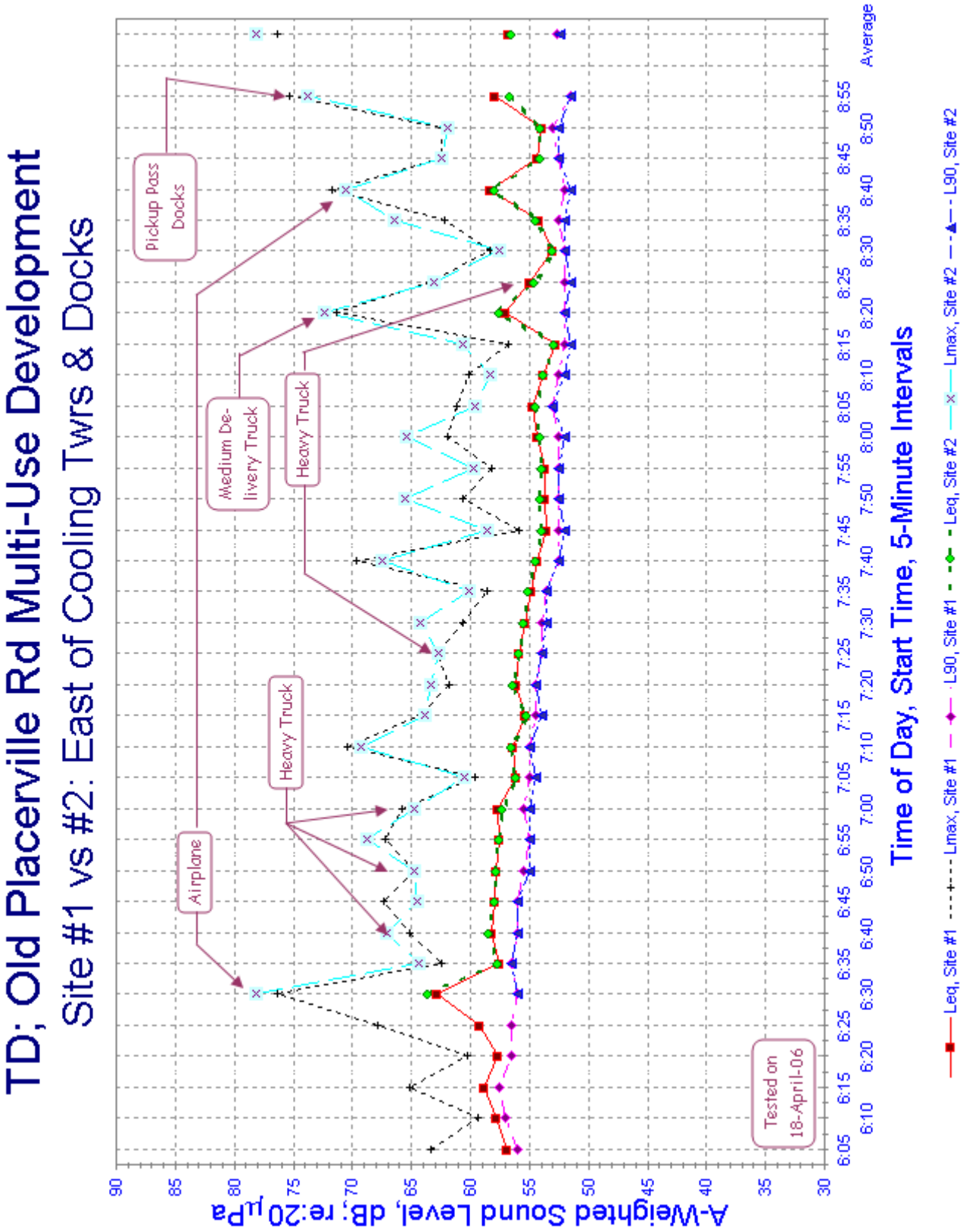

Figure 1. Comparison of L_{eq}, L_{MAX} and L_{90} Sound Level at Positions #1 and #2 During Each 5-Minute Interval.

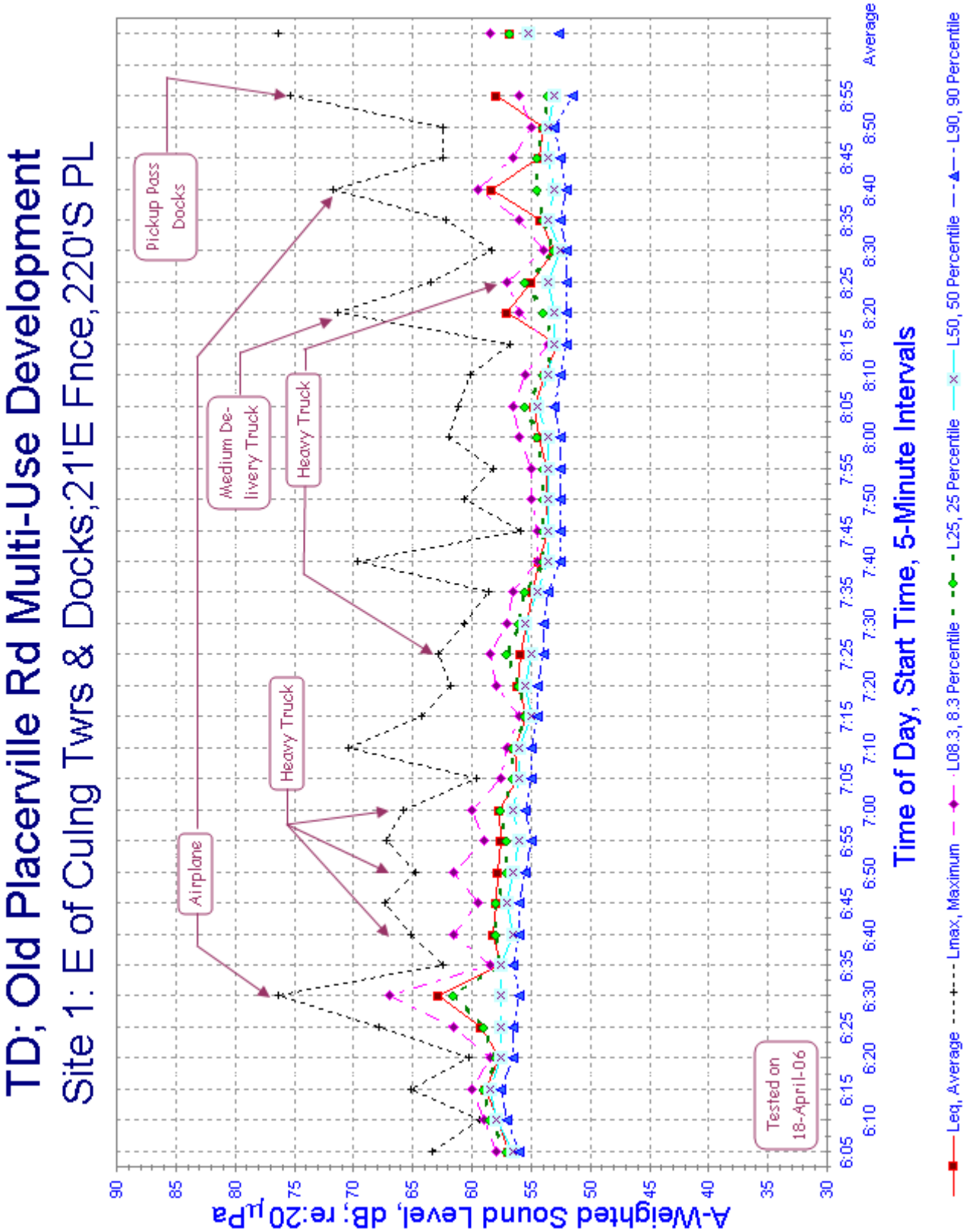

Figure 2. Variation in Sound Measured in 5-minute Intervals at Position #1, East of the Loading Docks of Retail Store.

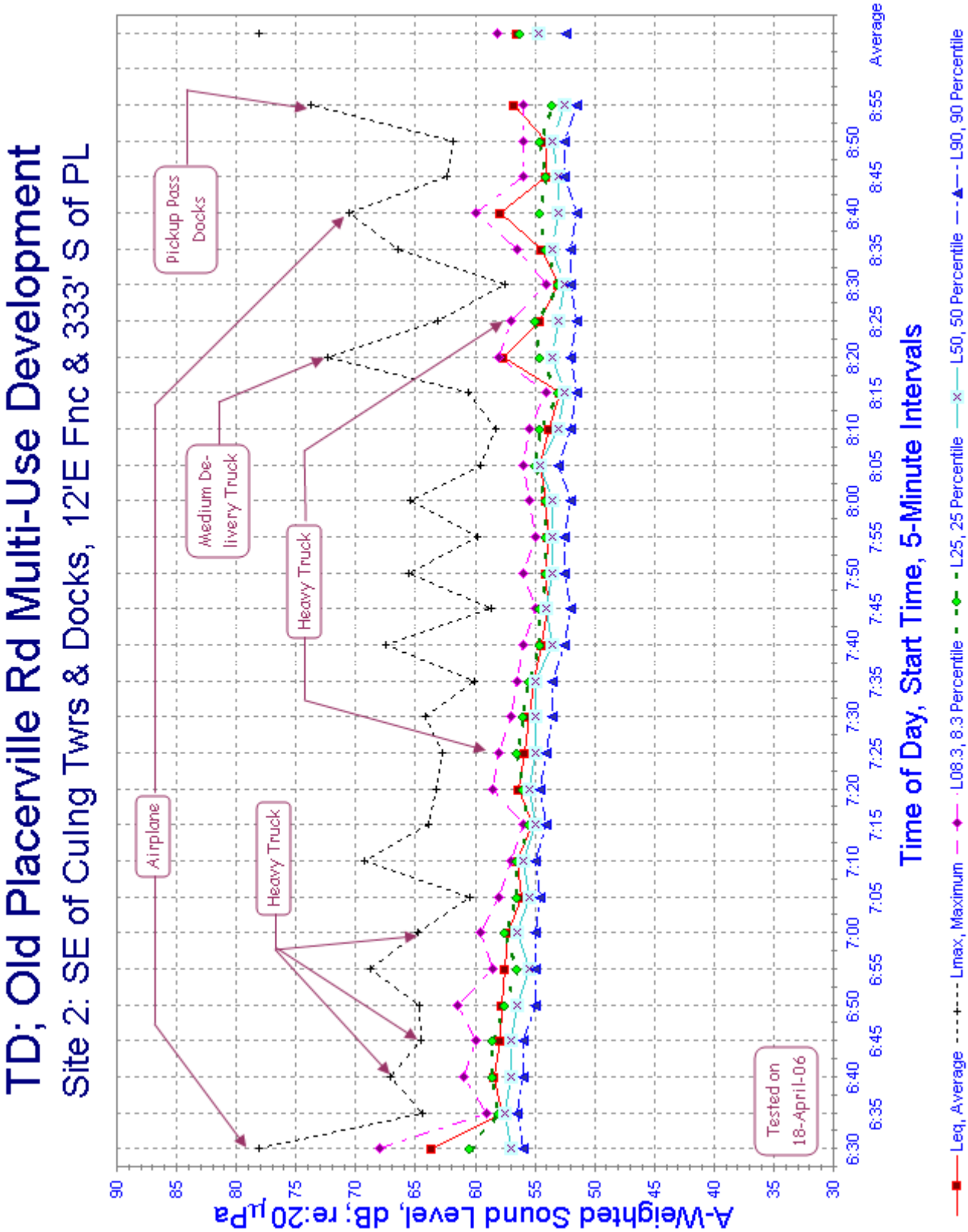

Figure 3. Sound Variations in 5-minute Intervals at Position #2 Near the South Loading Dock of the Supermarket.

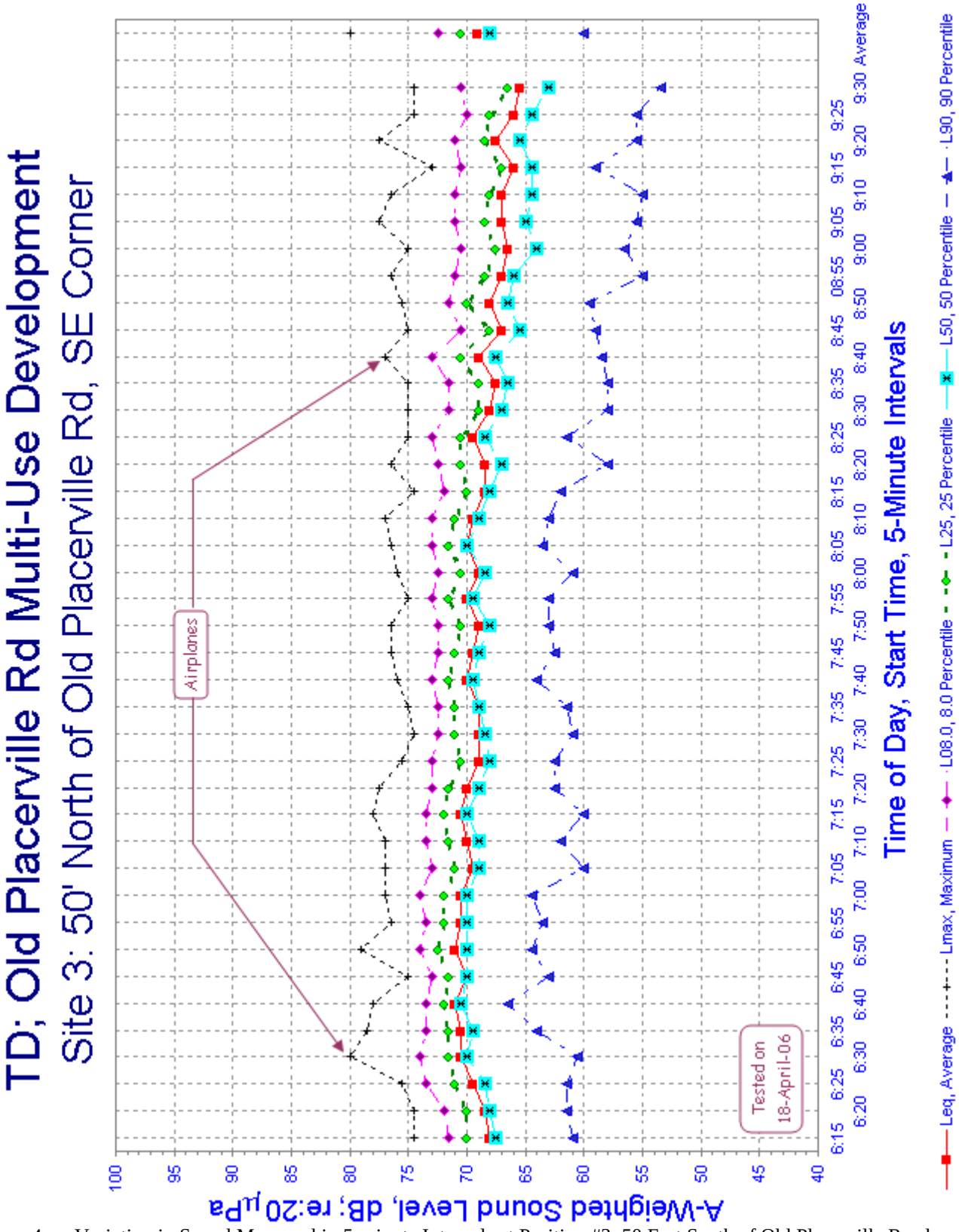

Figure 4. Variation in Sound Measured in 5-minute Intervals at Position #3, 50 Feet South of Old Placerville Road.

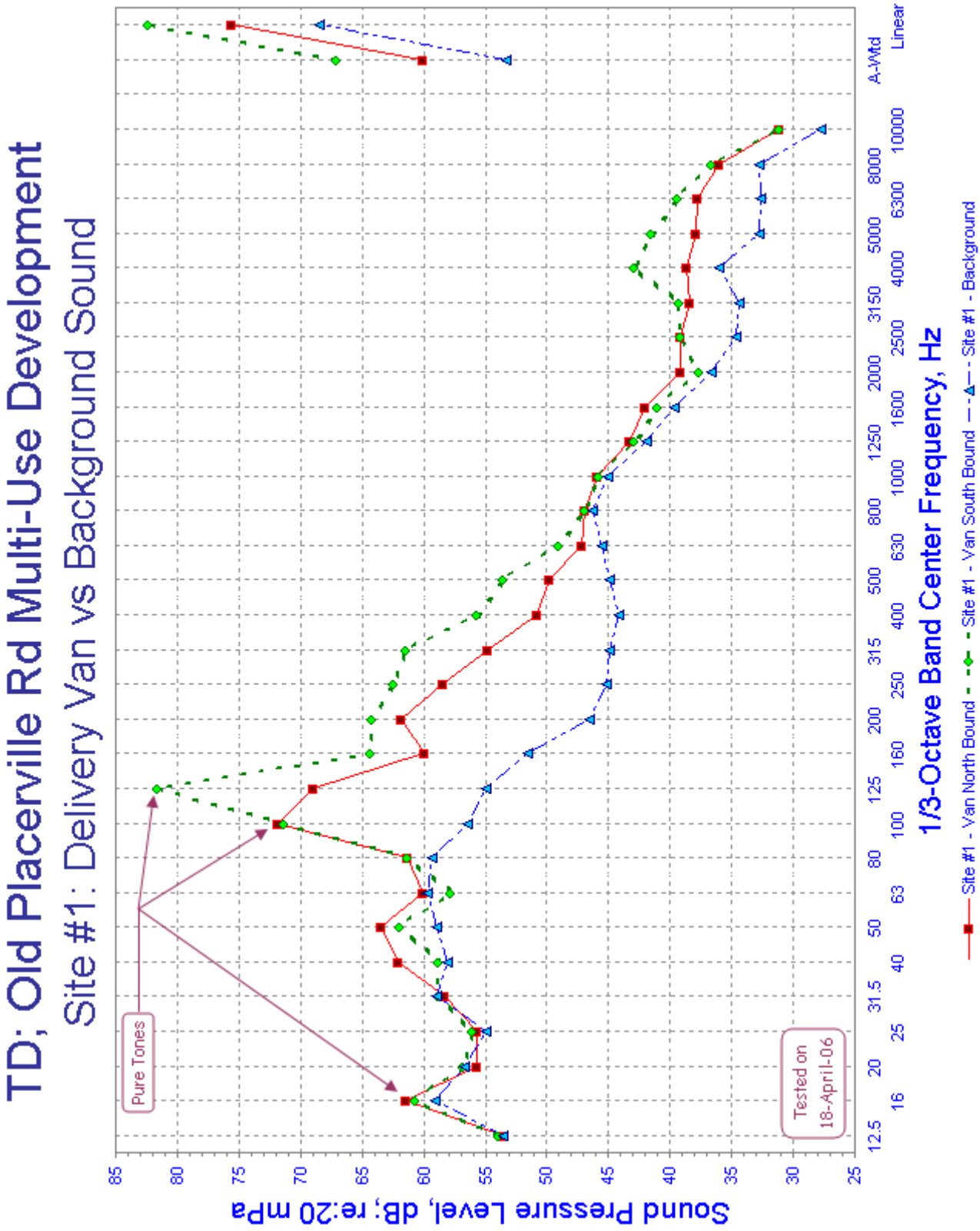

Figure 5. Tonal Content of Medium Truck Leading Supermarket Docket Area When Measured at Positions #1.

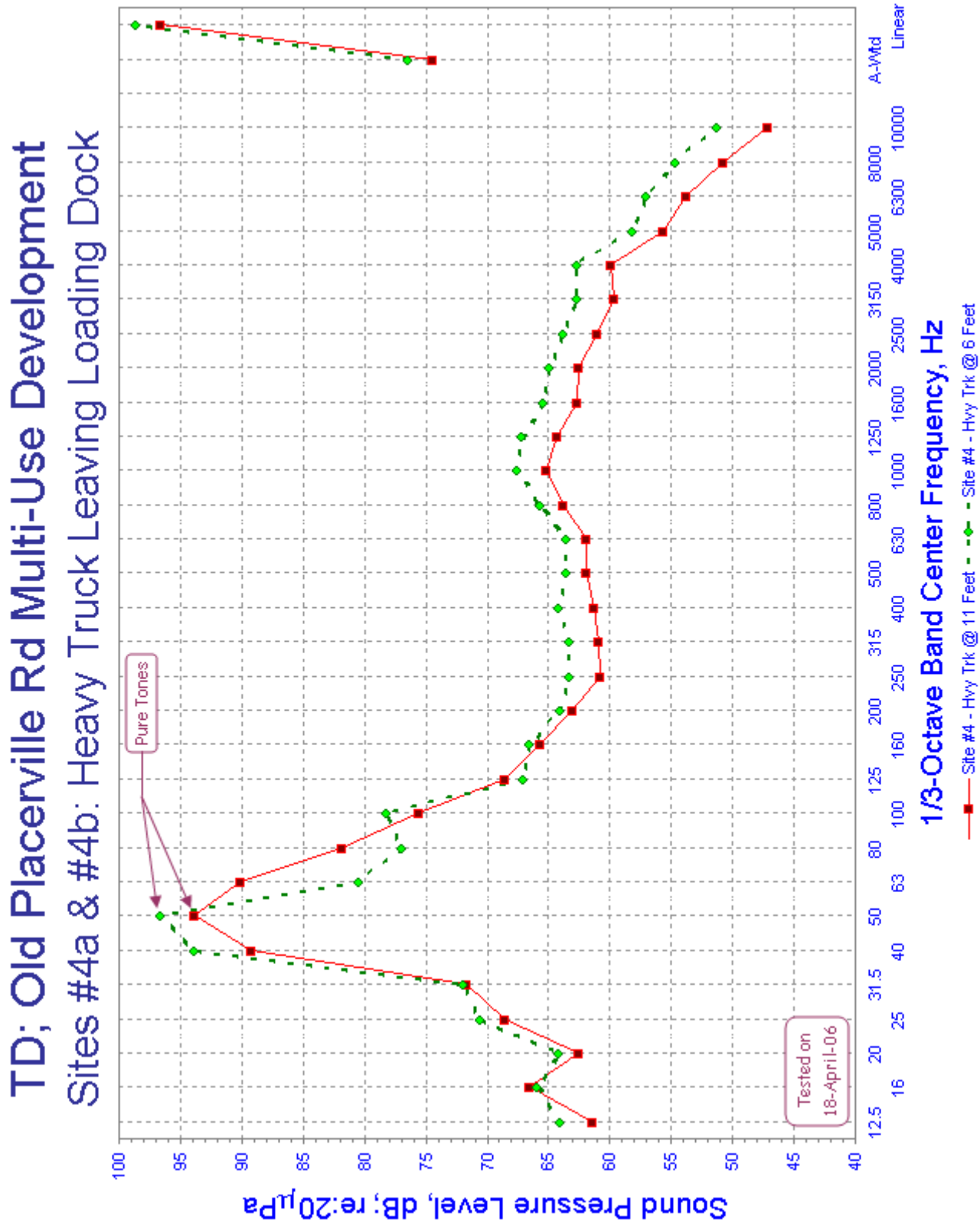

Figure 6. Comparison of 15-Second Average Tonal Content of Heavy Truck Leaving Supermarket Dock Area.

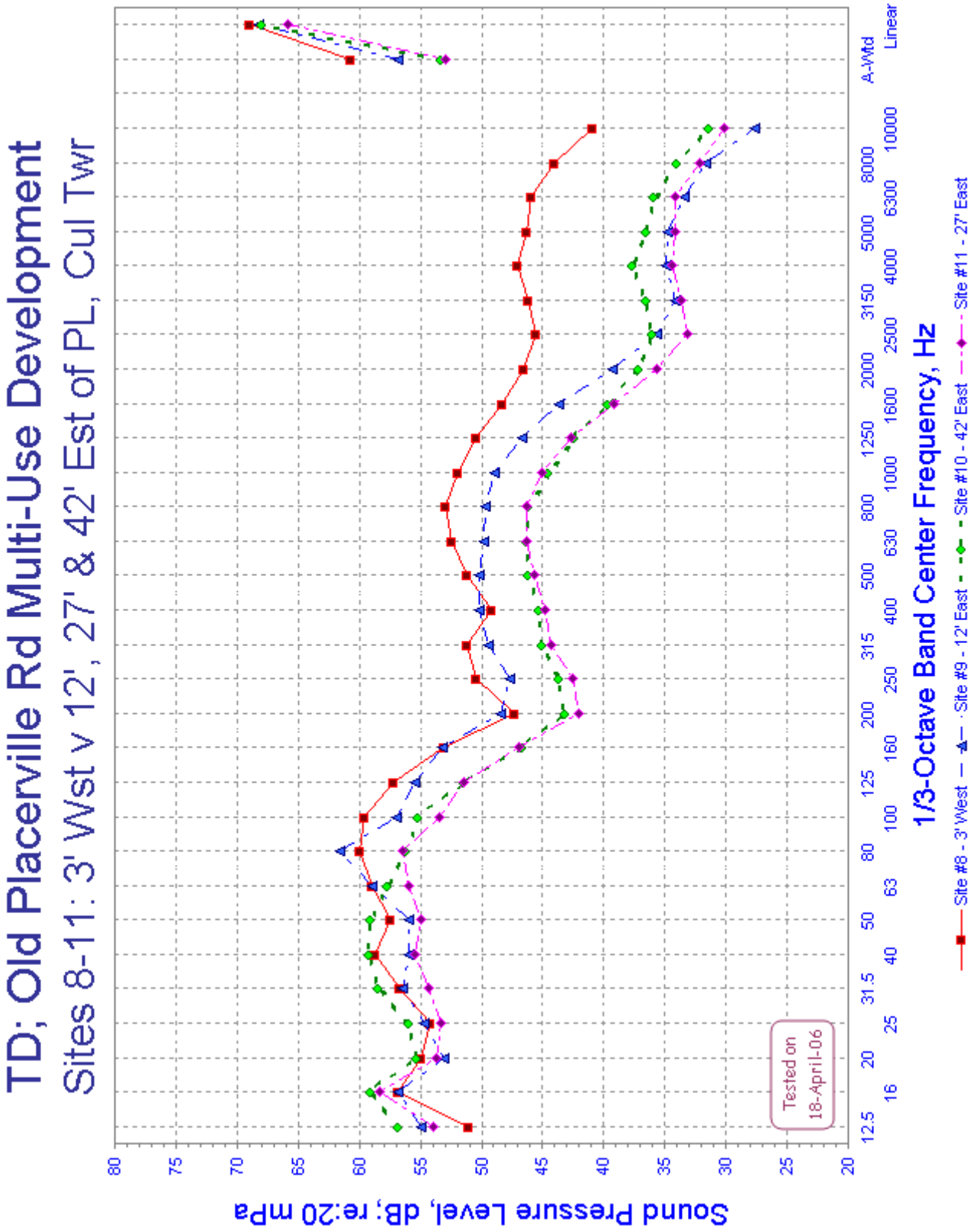

Figure 7. Tonal Content of Cooling Towers Measured at Supermarket Compared with Tests at Three Project Positions.