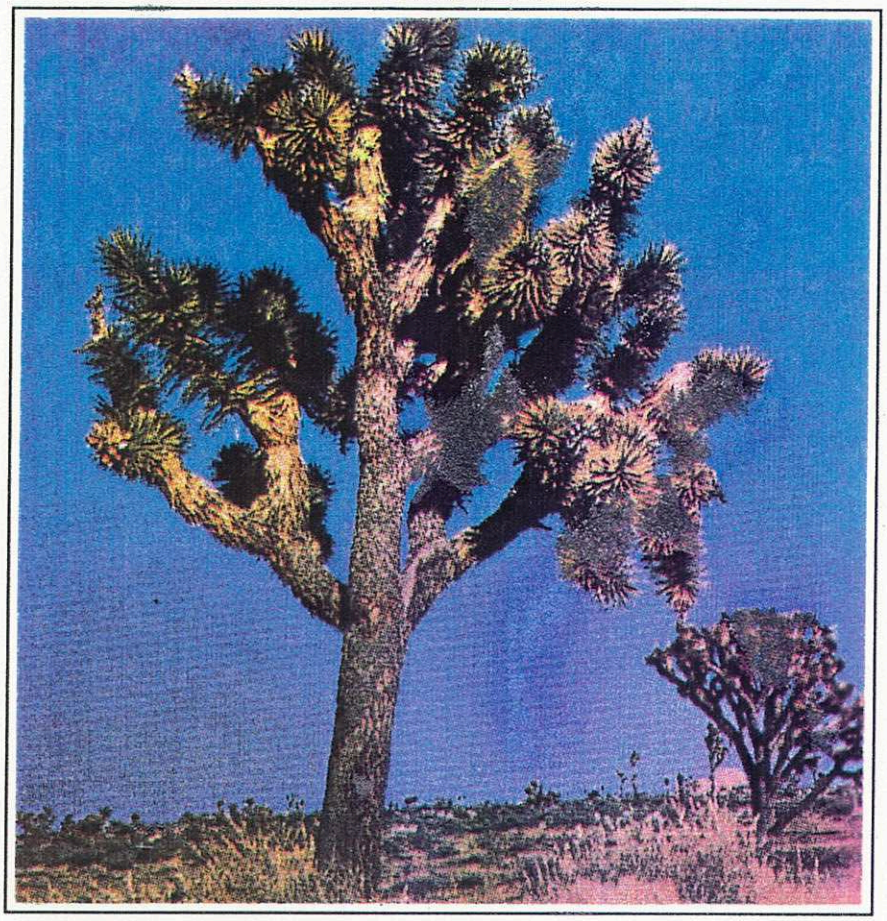
FINAL



ENVIRONMENTAL IMPACT REPORT

Palmdale Trade & Commerce Center Final Specific Plan

Prepared for:

City of Palmdale

Prepared by:

Robert Bein, William Frost & Associates

July 1990

JN 25957-2898

CITY OF PALMDALE

COUNTY OF LOS ANGELES, CALIFORNIA

RESOLUTION NO. 93-57

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALMDALE, CALIFORNIA ADOPTING AN ADDENDUM TO THE PALMDALE TRADE AND COMMERCE CENTER ENVIRONMENTAL IMPACT REPORT NO. 90-1

THE CITY COUNCIL OF THE CITY OF PALMDALE DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. On May 24, 1990, the City Council of the City of Palmdale adopted Resolution No. 90-142, certifying EIR No. 90-1 for the project known as the Palmdale Trade and Commerce Center Specific Plan.

Section 2. Subsequent to certification of EIR No. 90-1, an omission was discovered in the project description section of the EIR.

Section 3. Consistent with section 15164 of the Guidelines For Implementation of the California Environmental Quality Act, Addendum No. 1 to EIR No. 90-1 has been prepared which adds text to the project description section of EIR 90-1 to include the acquisition of property by the Community Redevelopment Agency for the purposes of development consistent with the provisions of the Palmdale Trade and Commerce Center Specific Plan. Addendum No. 1 is attached hereto as Exhibit I, and made a part of this resolution.

Section 4. Pursuant to Section 15164 of the Guidelines For Implementation of the California Environmental Quality Act, the City Council finds that:

1. None of the conditions described in Section 15162 of the Guidelines For Implementation of the California Environmental Quality Act calling for preparation of a subsequent EIR have occurred. Specifically: (a) the proposed addition of language to the Project Description section of the EIR does not represent a change to the original project which would generate new significant environmental impacts not already considered in EIR 90-1; (b) substantial changes with respect to the circumstances under which the project is undertaken (i.e. a substantial deterioration in air quality) has not occurred which would otherwise require important revisions in EIR 90-1; and (c) no new information of substantial importance to the project has been presented.

2. Only minor technical changes or additions are necessary to make the EIR under consideration adequate under CEQA. Specifically, the proposed addendum to EIR 90-1 will add necessary language to the Project Description section of EIR 90-1 to clarify that future acquisition of property within the Specific Plan area by the Community Redevelopment Agency is an action covered by EIR 90-1; and

3. The acquisition of property within the project area by the Community Redevelopment Agency does not raise important new issues about any significant effects on the environment because no additional physical impact on the environment not already contemplated in EIR 90-1 will result.

Section 5. Based upon the afore-mentioned findings, the City Council hereby adopts addendum No. 1 to the Palmdale Trade and Commerce Center EIR, No. 90-1, as shown on Exhibit I to this resolution.

Section 6. The City Clerk shall certify to the adoption of this Resolution, and shall transmit a copy of this Resolution to the applicant.

PASSED, APPROVED and ADOPTED this 11th day of March 1993, by the following vote:

AYES:_____

NOES:_____

ABSENT:_____ ABSTAIN:_____

_____
James C. Ledford, Jr., Mayor

ATTEST:

_____
Victoria L. Denham, City Clerk

Approved As to Form:

_____
City Attorney

wp11403

EXHIBIT I

ADDENDUM NO. 1 TO THE PALMDALE TRADE AND COMMERCE CENTER
FINAL ENVIRONMENTAL IMPACT REPORT
NO. 90-1

Section 15164 of the Guidelines for implementation of the California Environmental Quality Act (CEQA) states that the lead agency may prepare an addendum to an EIR when: 1) none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR have occurred; 2) only minor technical changes or additions are necessary to make the EIR under consideration adequate under CEQA; and 3) the changes to the EIR made by the addendum do not raise important new issues about the significant effects on the environment.

This proposed addendum adds language to the Project Description section (page 39) of Final EIR No. 90-1 as follows. The proposed text addition is underlined.

III. PROJECT DESCRIPTION

A. LOCATION - No Change

B. HISTORY AND BACKGROUND - No Change

C. SITE DESCRIPTION - No Change

D. PROJECT CHARACTERISTICS

The proposed project is the adoption of the Palmdale Trade and Commerce Center Specific Plan. <u>This Program EIR will evaluate: (1) development of the approximately 756-acre site consistent with the provisions of the Palmdale Trade and Commerce Center Specific Plan;</u> and <u>(2) the potential environmental impacts from future acquisition of property within the Specific Plan area by the Community Redevelopment Agency for the purposes of site development consistent with the provisions of the Palmdale Trade and Commerce Center Specific Plan.</u>

The Specific Plan allows for a wide variety of commercial and industrial uses on the approximately 756-acre project site. Ultimate development of the project site is assumed to result in approximately 2.71 million square feet (SF) of general retail land use, 2.18 million SF of commercial office use, 2.68 million SF of industrial use and 82,000 SF of hotel use (see Table 1, ULTIMATE DEVELOPMENT PROFILE). No residential uses will be allowed. The Specific Plan is flexible with regard to type and location of specific land uses (the Specific Plan has no "cap" on square feet for any land use). Each future application will require environmental review in consideration of the land uses and square footage assumed in the EIR.

wp11403

Notice of Completion

Appendix F

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 916/445-0613

See NOTE below

SCH # 89090618

Project Title: Palmdale Trade and Commerce Center Specific Plan

Lead Agency: City of Palmdale **Contact Person:** Robert Stanley

Street Address: 38306 Ninth Street East **Phone:** (805) 272-9613

City: Palmdale, CA **Zip:** 93550 **County:** Los Angeles

Project Location

County: Los Angeles **City/Nearest Community:** Palmdale

Cross Streets: Avenue P, 10th St.West, Palmdale Blvd., Division Street **Total Acres:** 756

Assessor's Parcel No. _____ **Section:** 22, portions of 15&27 **Twp.** 6N **Range:** 12W **Base:** _____

Within 2 Miles: **State Hwy #:** 14 & 138 **Waterways:** Amargosa Creek, Lake Palmdale

Airports: U.S.A.F. Plant 42 **Railways:** Southern Pacific Railroad **Schools:** _____

Document Type

CEQA:
- ☐ NOP
- ☐ Early Cons
- ☐ Neg Dec
- ☒ Draft EIR
- ☐ Supplement/Subsequent
- ☐ EIR (Prior SCH No.)_____
- ☐ Other _____

NEPA:
- ☐ NOI
- ☐ EA
- ☐ Draft EIS
- ☐ FONSI

Other:
- ☐ Joint Document
- ☐ Final Document
- ☐ Other_____

Local Action Type

- ☐ General Plan Update
- ☐ General Plan Amendment
- ☐ General Plan Element
- ☐ Community Plan
- ☒ Specific Plan
- ☐ Master Plan
- ☐ Planned Unit Development
- ☐ Site Plan
- ☐ Rezone
- ☐ Prezone
- ☐ Use Permit
- ☐ Land Division (Subdivision, Parcel Map, Tract Map, etc.)
- ☐ Annexation
- ☐ Redevelopment
- ☐ Coastal Permit
- ☐ Other_____

Development Type

- ☐ Residential: *Units* _____ *Acres* _____
- ☒ Office: *Sq.ft.* 2177000 *Acres* 147 *Employees* _____
- ☒ Commercial: *Sq.ft.* 2701000 *Acres* 261 *Employees* _____
- ☒ Industrial: *Sq.ft.* 2676000 *Acres* 175 *Employees* _____
- ☐ Educational _____
- ☐ Recreational _____
- ☐ Water Facilities: *Type* _____ *MGD* _____
- ☐ Transportation: *Type* _____
- ☐ Mining: *Mineral* _____
- ☐ Power: *Type* _____ *Watts* _____
- ☐ Waste Treatment: *Type* _____
- ☐ Hazardous Waste: *Type* _____
- ☒ Other: Hotel, 82,000 s.f. 9.4 Acres

Project Issues Discussed in Document

- ☒ Aesthetic/Visual
- ☐ Agricultural Land
- ☒ Air Quality
- ☒ Archeological/Historical
- ☐ Coastal Zone
- ☒ Drainage/Absorption
- ☒ Economic/Jobs
- ☐ Fiscal
- ☒ Flood Plain/Flooding
- ☐ Forest Land/Fire Hazard
- ☒ Geologic/Seismic
- ☒ Minerals
- ☒ Noise
- ☒ Population/Housing Balance
- ☒ Public Services/Facilities
- ☒ Recreation/Parks
- ☒ Schools/Universities
- ☐ Septic Systems
- ☒ Sewer Capacity
- ☒ Soil Erosion/Compaction/Grading
- ☒ Solid Waste
- ☒ Toxic/Hazardous
- ☒ Traffic/Circulation
- ☒ Vegetation
- ☒ Water Quality
- ☒ Water Supply/Groundwater
- ☐ Wetland/Riparian
- ☒ Wildlife
- ☒ Growth Inducing
- ☒ Landuse
- ☒ Cumulative Effects
- ☐ Other _____

Present Land Use/Zoning/General Plan Use

Manufacturing Planned Development and Commercial Planned Development

Project Description

The project is a Specific Plan governing 756.2 acres of primarily undeveloped desert land. The Specific Plan allows retail, office, industrial and hotel uses, and is intended to create a focus for commercial development in the City of Palmdale. The project will provide needed employment opportunities and support services, and will help to alleviate regional jobs/housing imbalance.

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. from a Notice of Preparation or previous draft document) please fill it in.

Revised October 1989

TO: All Interested Parties REVIEW DATE: March 28, 1990

FROM: Planning Department

SUBJECT: REQUEST FOR REVIEW OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR PALMDALE TRADE AND COMMERCE CENTER SPECIFIC PLAN. THE SPECIFIC PLAN ALLOWS FOR A WIDE VARIETY OF COMMERCIAL AND INDUSTRIAL USES ON APPROXIMATELY 756-ACRES. ULTIMATE DEVELOPMENT OF THE PROJECT SITE IS ANTICIPATED TO RESULT IN APPROXIMATELY 2.70 MILLION SQUARE FEET (SF) OF GENERAL RETAIL LAND USE, 2.18 MILLION SF OF OFFICE COMMERCIAL USE, 2.68 MILLION SF OF INDUSTRIAL USE AND 82,000 SF OF HOTEL USE. THE SPECIFIC PLAN IS FLEXIBLE WITH REGARD TO TYPE AND LOCATION OF SPECIFIC LAND USES WITHIN THE PROJECT SITE.

The attached Draft Environmental Impact Report has been forwarded to you for possible comment relating to your specific area of interest.
Comments should be received within 45 days of your receipt of this notice and directed to:

City of Palmdale Planning Dept.
38306 9th Street East
Palmdale, CA 93550
(805) 272-9613
Attn: Robert Stanley

Copies sent to:

<u>City of Palmdale</u>

City Council (5)
Planning Commission (5)
City Attorney's Office
City Manager
City Clerk
Planning Director
Case Planner
Environmental Planner
Counter Copy
Building and Safety
Engineering
Traffic Engineer

<u>Los Angeles County</u>

L.A. Co. Sheriff's Dept.
L.A. Co. Fire Dept.
L.A. Co. Fire Prevention
L.A. Co. Public Works
L.A. Co. Water Dist. #34
L.A. Co. Regional Planning
L.A. Co. Sanitation Dist.
L.A. Co. Health Department

<u>State of California</u>

State Clearinghouse
State Air Resources Board
State Dept. of Conservation
Caltrans
Native Heritage Commission
Dept. of Parks and Recreation
State Dept. of Water Resources
State Dept. of Fish and Game
Lahontan RWQCB
Dept. of Health
Calif. Waste Management board
Parks and Recreation
State Water resource Control Board
Division of Water Quality

<u>Miscellaneous Agencies/Individuals</u>

Archaeological Survey Office, UCLA
Antelope Valley Archaeological Soc.
Westside Union School District
Antelope Valley Union High School Dis.
Soledad-Agua Dulce School District
Palmdale Water District
City of Lancaster
City of Santa Clarita
South Coast Air Qual. Management Dist.
Southern Cal. Assoc. of Governments
Applicant
Department of the Air Force
U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers
A.V.Resource Conservation Dist.

wp3112

EXHIBIT "A"

Addendum No. 2 to the Palmdale Trade and Commerce Center
Specific Plan Final Environmental Impact Report (EIR 90-1)
May 11, 1994

The following text revisions to the Palmdale Trade and Commerce Center Specific Plan Environmental Report are to clarify the intent of certain existing mitigation measures and to provide textual consistency with the amended Specific Plan document and the Palmdale General Plan. These revisions do not pose a significant deviation from the project conditions that were originally considered under the impact analysis of the environmental impact report. Therefore the proposed revisions are consistent with the scope and findings of the original EIR document.

1. ENVIRONMENTAL SUMMARY

IMPACTS

Page 3, Mitigation Measure i.a.: This measure has been revised to clarify the mitigation monitoring process and submittal requirements. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

> "Prior to the issuance of building permits, the applicant shall submit ~~a written report~~ the Mitigation Monitoring Program demonstrating that all mitigation measures imposed by the City to either reduce or avoid significant environmental impacts. . ."

In addition, the Mitigation Monitoring Program has been further revised as follows:

Monitoring and Reporting Process

"~~Monitoring/Report~~ Review the Mitigation Monitoring Program"

Monitoring Milestone

"Prior to ~~Building/Permit/Issuance~~ Occupancy of Building"

A. TRAFFIC AND CIRCULATION

Page 3, Mitigation Measure ii: This measure has been adequately addressed by other Mitigation Measures, the Los Angeles County Congestion Management Program and City ordinances. Where the mitigation measure appears in the EIR text it shall be revised to read as follows:

> "Each project developer within the Specific Plan area will required to~~submit a Transportation Management Plan for review and approval by the Planning Department prior to issuance of occupany permits and a focused traffic study~~

for review and approval by the City Engineer and/or City Traffic Engineer to determine the necessary improvements for impacts generated by the project. On the basis of this and other studies the developer will improve or fund a pro rata share of improvements and/or the City will undertake improvements through a capital improvements program comply with the Los Angeles County Congestion Management Program as well as applicable City ordinances and regulations."

In addition, the Mitigation Monitoring Program has been further revised as follows:

"Monitoring and Reporting Process

Review of Transportation Management Plan

Monitoring Milestone

Prior to Occupancy Permit Issuance

Responsible Party

City Traffic Engineer"

Page 4, Mitigation Measure #1: This measure has been revised to clarify street right-of-way requirements and to provide consistency with the Circulation Element of Palmdale General Plan. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

"The following improvements will be required to provide Level of Service D or better operation (individual applicants will be required to dedicate right-of-way for City streets for ultimate half-width improvements, where roads border their property, and/or fund a pro rata share of improvements and/or roads through their property, and/or fund a pro rata share of these improvements, as determined necessary by the City Engineer and/or the City Traffic Engineer):"

Additionally, measures (a) through (p) have also been reorganized to group regional or local street measures.

"a. Widen the SR 14 Freeway to 6 Lanes south of Palmdale Boulevard to be funded by Caltrans and/or other sources."

"g.b. Widen the north bound SR 14 off-ramp at Avenue P to provide two left and one right turn lanes.

"Hc. Widen the northbound SR 14 off-ramp at Palmdale Boulevard to provide two left and 1 right turn lane."

"bd. Widen Avenue P to 6 Lanes between the SR 14 Freeway and Sierra Highway as indicated in the General Plan."

"~~de. Provide 8 through lanes on~~ Widen 10th Street West between Avenue P and Avenue P-8 as indicated in the General Plan."

"~~dg.~~ Widen Palmdale Boulevard ~~to 6 lanes~~ from west of 5th Street West to Division Street as indicated in the General Plan."

"~~po.~~ A transit center should be placed at ~~or near the southeast corner of Avenue P and 10th Street West to be funded on a pro rata share by the Specific Plan developers as determined by~~ a location(s) within the Specific Plan area as determined by the City Engineer and/or City Traffic Engineer. ~~The center would allow for buses from several routes to have off-street transfer point with patron facilities.~~ Bus turnouts and transit access shall be provided throughout the Specific Plan area on a project by project basis as determined by the City Traffic Engineer."

In addition, the mitigation monitoring program has been further revised for Measures a through c as follows:

Monitoring and Reporting Process

"~~Plan Check for Individual Developments Within the Specific Plan Area~~ State Transportation Improvement Program (STIP)"

Monitoring Milestone

"~~Prior to Grading Permit~~ The STIP as amended by Caltrans"

In addition, the mitigation monitoring program has been further revised for Mitigation Measure p as follows:

Monitoring and Reporting Process

"~~Plan Check for Individual Developments Within the Specific Plan Area~~ Development Plan Application Review"

Monitoring Milestone

"Prior to ~~Grading Permit~~ Development Plan Application Approval"

Responsible Person

"City Engineer/City Traffic Engineer/City Planning Director"

HYDROLOGY

Page 7, Mitigation Measure 7: All flood control facilities proposed for the Amargosa Creek have been constructed. Where the Mitigation Measure appears in the EIR text it shall be revised to reflect this fact.

ELECTRICITY

Page 13, Mitigation Measure 25: This measure has been revised to reflect Ordinance 724 which was adopted by the City Council on November 10, 1988. Where the Mitigation Measure appears in the EIR text it shall be revised to read:

> "All overhead lines ~~below 33 KV (KILOVOLT)~~ as required by Ordinance 724 shall be placed underground by applicants prior to issuance of occupancy permits."

In addition, the mitigation monitoring program has been further revised as follows:

> Monitoring and Reporting Process
>
> "Site Specific ~~Development~~ Improvement Plan Review and Field Inspection"
>
> Responsible Party
>
> "~~City Planning Director~~ City Engineer"

Page 13, Mitigation Measure 26: This measure has been revised to clarify the appropriate development review process and approval authority. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

> Monitoring and Reporting
>
> "Will Serve Letter Required/Plan Reviewed and Approved by Southern California Edison"
>
> Monitoring Milestone
>
> "Prior to ~~Occupancy Permit Issuance~~ Issuance of Electrical Permit"
>
> Responsible Party
>
> "~~City Planning Director~~ Building and Safety Director"

SEWER

Page 14, Mitigation Measure 27: This measure has been revised to clarify the correct development review process and approval authority. Where the Mitigation Measure appears in the EIR

text it shall be revised to read as follows:

Monitoring Milestone

"Prior to ~~Building/Permit/Issuance/~~Occupancy of Building"

Responsible Party

"~~City/Planning/Director~~ City Engineer"

WATER

Page 14, Mitigation Measure 28: This measure has been revised to clarify the City's intent to require water service for subsequent development within the Specific Plan area. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

> "Provisions of water service to the proposed project will be required as part of project development and will occur to the satisfaction of the City of Palmdale prior to approval of each site-specific development plan. ~~Previous studies have identified several alternatives to mitigate water impacts for projects in the immediate area.~~ These ~~a~~Alternatives for water service include the provision of on on-site water supply system participation in an existing water agreement . . ."

In addition, the mitigation monitoring program has been further revised as follows:

Monitoring Milestone

"Prior to Occupancy of Building ~~Permit/Issuance~~"

Responsible Party

"~~City/Planning/Director~~ City Engineer"

Page 15, Mitigation Measure 30: This measure has been revised to incorporate reference to the Water Efficient Landscaping Ordinance which was adopted by the City Council on February 11, 1993. Additionally, some provisions relating to interior water conservation have been deleted due to monitoring infeasibility. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

"Interior

e. Hotel Rooms: ~~Conservation reminders posted in rooms and restroom.~~ Thermostatically controlled mixing valves should be installed for bath/shower.

f. Restaurants: Water-conserving models of dishwashers be used for spray emitters that have been retrofitted for reduced flow. ~~Drinking water be served upon request only.~~"

"Exterior

~~a. Landsacpe with low water-using plants wherever feasible.~~

~~b. Minimize use of lawn by limiting it to law-dependent uses, such as playing fields. When lawn is used, require warm season grasses.~~

~~c. Group plants of similar water usage to reduce over-irrigation of low-water-using plants.~~

~~d. Provide information to occupants regarding benefits of low-water-using landscaping and sources of additional assistance.~~

~~e. Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.~~

~~f. Install efficient irrigation systems that minimize runoff and evaporation and maximize the water that will reach the plant roots. Drip irrigation, soil moisture sensors and automatic irrigation systems are a few methods of increasing irrigation efficiency.~~

~~g. Use pervious paving materials whenever feasible to reduce surfact water runoff and to aid in groundwater recharge.~~

~~h. Grade slopes so that runoff of surface water is minimized.~~

~~i. Investigate the feasibility of using reclaimed wasterwater stored rainwater or grey water for irrigation.~~

~~j. Encourage cluster development, which can reduce the amount of land being converted to urban use. This will reduce the amount of impervious paving created and thereby aid in ground water recharge.~~

~~k. Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new development. This aids ground water recharge.~~

~~1. To aid in ground water recharge, preserve flood plains and aquifer recharge areas as open space.~~

All development applications within the Specific Plan area shall comply with the provisions of Ordinance No. U-992 (the Water Efficient Landscape Ordinance)."

SOLID WASTE

Page 15, Mitigation Measures 31, 32, 33 and 36: These mitigation measures have been deleted since solid waste disposal and recycling have been superseded by the City's Solid Waste Management Plan (1991) and by other City-wide ordinances. Where the Mitigation Measures appear in the EIR text they shall be revised to reflect the following:

"31. ~~Information shall be provided to new business owners concerning the recycling services in the development area. Said information shall identify nearby recycling centers, identify possible markets for recyclables in the area and suggest to the business owners that they recycle glass, metal, paper, cardboard, and other materials to the maximum extent feasible.~~"

"32. ~~Source separation facilities shall be incorporated into building design to insure that materials such as metals, glass, paper, plastics and composting matter are recycled.~~"

"33. ~~Insulation and other projects made of recycled materials may be used in the construction of homes and commercial buildings.~~ Impacts to solid waste have been adequately addressed by the City's Solid Waste Management Plan (1991) and by other City-wide ordinances implementing that plan; therefore, Mitigation Measures 31, 32, 33 and 34 are no longer required."

"36. "Trash receptacle design guidelines/standards for the commercial/industrial developments shall include siting of recycling facilities within trash receptacle enclosures."

In addition, the Mitigation Monitoring Program for Mitigation Measures 37 and 38 have been revised to reflect the appropriate review and approval process as follows:

No. 37

Monitoring and Reporting Process

"Site Specific ~~Building~~/Construction Plan Review"

Responsible Party

No. 38

Responsible Party

"~~City/Planning/Director/and~~/Fire Department"

LAND USE

Page 19, Mitigation Measure 47: This measure has been revised to clarify the appropriate development review procedures and approval authority. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

"~~The/three/~~Flood control ~~detention/basins/~~ facilities shall be landscaped as required by the City to serve as combined recreational and drainage facilities and to buffer offsite residential uses from incompatibility impacts."

In addition, the Mitigation Monitoring Program has been further revised as follows:

Monitoring and Reporting Process"

"~~Detention/Basin/~~Site Plan Review"

Monitoring Milestone

"Prior to ~~Detention/Basin/Construction~~ Completion"

Responsible Party

"City Planning Director/Landscape Architect"

Page 19, Mitigation Measure 48: This measure has been revised to reflect existing City requirements and development application review procedures. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

"b. Construction of temporary ~~opaque~~//fencing to ~~screen~~ secure onsite construction operations, materials and equipment from adjacent property owners and to protect the safety of pedestrian traffic."

In addition, the Mitigation Monitoring Program has been further revised as follows:

Responsible Party

"City ~~Inspector~~ Building and Safety Director/Planning Director"

Page 20, Mitigation Measure 51: This measure has been revised to delete language requiring the incorporation of building design features to reduce electromagnetic radiation since it is infeasible for the City to monitor such a requirement at this time. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

> "Applicants for future development within the Specific Plan area shall incorporate all feasible measure to reduce project impacts upon USAF Plant 42. Where necessary, these measures shall include minimizing airborne substances and light or glare that may impair visibility in flight path; ~~providing design features to reduce electromagnetic that may affect avoidance of ground-based electronic instrumentation~~ and where possible, avoiding land uses and designs which may attract birds that produce safety hazards during flight operations."

BIOLOGICAL RESOURCES

Page 20, Mitigation Measure No. 53: This measure has been revised to reference the Native Desert Vegetation Ordinance and to clarify the appropriate review process. Where the Mitigation Measure appears in the EIR text it shall be revised to read as follows:

> "Upon implementation of the project, any Joshua Tree plants that are removed will be transplanted to onsite landscaped areas and/or offsite in accordance with the City's ~~Draft Joshua Tree~~ Native Desert Vegetation Preservation Ordinance. Such transplantation will be on a project-by-project basis. Preservation Plans shall be submitted to the Department of Planning for review and approval prior to issuance of grading permits."

In addition, the introduction to the Mitigation Monitoring Program for Biological Resources has been deleted since Mitigation Measure No. 52 was previously deleted as part of the Final EIR therefore this llanguage is no longer necessary.Mitigation Measure No. 54: This measure has been deleted as it has been adequately addressed by other mitigation measures. All applicable portions of the EIR text shall be revised to reflect this deletion.

> ~~"A Joshua Tree Preservation and Transplantation Plan will be developed and submitted to the City of Palmdale Planning Department prior to grading permit issuance."~~

Page 21, Mitigation Measure No. 55: The mitigation monitoring program has been revised to reflect that drainage improvements required by this measure have been completed. Where the Mitigation Measure appears in the EIR text it shall be revised to indicate compliance.

Page 22, Mitigation Measure No. 59: This measure has been deleted since it is not feasible for the City to implement at this time. Where the Mitigation Measure appears in the EIR text it shall be revised to reflect this deletion as follows:

> "A City-wide assessment district should be established to implement offsite mitigation in the form of barriers and structural upgrades. This would require project applicants to work with the City, other developers and homeowners to determine final wall heights and building upgrades. Funding of improvements would be on a fair share" or prorata basis."

AESTHECTICS

Page 60, Mitigation Measure 60: This measure has been deleted since the intent of the measure is unclear, therefore, making implementation infeasible. Where the Mitigation Measure appears in the EIR text it shall be revised to reflect this deletion as follows:

> "In order to mitigate the potential cumulative short-term effect of multiple parcels being developed over a 20-year period, the City Planning Department shall endeavor to group future Specific Plan projects together and approval to minimize continuous construction in any one portion of the site."

Page 23, Mitigation Measure 61: This measure has been revised to reflect the appropriate development review process. Where the Mitigation Measure appear in the EIR text it shall be revised to reflect the following:

> "During project construction (where Site Plan Review is required), the applicant shall be required to provide appropriate screening (as with temporary fencing with opaque material), dust control (see Section IV. AIR QUALITY), restricted construction hours, and a traffic control plan (Section IV. A. TRAFFIC AND CIRCULATION)."

Page 23 and 24, Mitigation Measures 63 through 68: The mitigation monitoring program for these measures has been revised to reflect the appropriate review process as follows:

Monitoring and Reporting Process

> "Site Plan Review Development Application Review"

PUBLIC HEALTH AND SAFETY

Page 25, Mitigation Measure 70: This measure has been revised

to reflect the appropriate development review process. Where the Mitigation Measure appears in the EIR text it shall be revised as follows:

> "Prior to issuance of grading permits, Hazardous Materials Waste Products Certification ~~Hazardous materials assessments~~ shall ~~will~~ be ~~performed~~ provided for individual properties.

In addition, the Mitigation Monitoring Program has been revised as follows:

> Monitoring Milestone
>
> "Prior to ~~Grading Permit Issuance~~ Development Application Completeness"

Page 25, Mitigation Measure 73: This measure has been revised to reflect the adoption of the City's Hazardous Waste Management Plan. Where the Mitigation Measure appears in the EIR text it shall be revised as follows:

> "Future project land uses involving the use, storage or transportation of hazardous materials must comply with applicable local, state and federal health and safety regulations, including the ~~proposed~~ City of Palmdale Hazardous Waste Management Plan, upon its completion."

CULTURAL RESOURCES

Page 26, Mitigation Measure 76: This measure has been revised to clarify that reports for Cultural Resources shall be submitted by a project applicant as required by the City. Where the Mitigation Measure appears in the EIR text it shall be revised as follows:

> "~~Prior to issuance of a grading permit,~~ For a site which has not been previously rough graded, a qualified paleontologist shall be retained to formulate and carry out a mitigation program for the site. This paleontologist shall have the power to temporarily direct or divert operations to allow evaluation, and if necessary, salvage any exposed fossils."

In addition, the introduction for the Cultural Resources portion of the Mitigation Monitoring Program has been deleted since it is addressed by other mitigation measures. All applicable portions of the EIR text shall be revised as follows:

> ~~"The following mitigation measures shall be implemented and monitored on a project by project basis following approval of the Palmdale Trade and Commerce Center Specific Plan and certification of the EIR, and a written report shall be~~

~~submitted to the Department of Planning t all phases of the project."~~

Pages 27 and 28, Mitigation Measures 81 through 84a: The mitigation monitoring program for Archaeological Resources, Verification of Compliance shall be revised to indicate that all mitigation measures have been completed.

Page 29, Mitigation Measure 89: This mitigation measure has been revised to reference Ordinance 999 (the Trip Reduction Ordinance) which supersedes this measure. Where the Mitigation Measure appears in the text it shall be revised as follows:

> ~~"Encourage the use of alternative transportation modes by promoting public transit usage and providing secure bicycle facilities. The applicant will provide bicycle routes (either dedicated or off-street) where feasible, as determined necessary by the City. The City shall distribute educational materials to all business regarding the availability of public transit and other alternative transit methods and the location of bicycle routes in the project vicinity. In addition the education material shall describe the available methods for reducing energy consumption."~~ Comply with the City's Trip Reduction Ordinance (Ord. 999).

Page 29, Mitigation Measure 90: This measure has been revised to reference the appropriate development review process. Where the Mitigation Measure appears in the EIR text it shall be revised as follows:

> "Prior to Subsequent ~~site/plan~~ Development Application approvals, energy conservation practices, as required by the Subdivision Map Act, . . ."

In addition, the Mitigation Monitoring Programs for Mitigation Measures 90 and 91 have been revised as follows:

Monitoring and Reporting Process

"~~site/plan~~ Development Application Review"

Page 30, Mitigation Measure 92: This measure has been deleted since other mitigation measures and City requirements adequately address impacts to Air Quality. Where the Mitigation Measure appears in the EIR text it shall be deleted as follows:

> ~~"Projects that exceed SCAQMD thresholds shall contribute to the Commuter Computer per City requirements."~~

Additionally, the Mitigation Monitoring Program has been revised to delete the following:

Monitoring and Reporting Process

"Development/Application/Review"

Monitoring Milestone

"Prior/to/Future/Development/Approval"

Responsible Party

"City/Planning/Director"

Page 37, SECTION II. INTRODUCTION AND PURPOSE, E. INCORPORATION BY REFERENCE (4th Paragraph): The text has been revised to provide textual consistency with the Specific Plan document which has been updated by the City pursuant to Resolution 94-43 on May 12, 1994. These revisions do not propose any significant deviation from those conditions considered under the original impact analysis. All applicable portions of the EIR text shall be revised as follows:

> Palmdale Trade and Commerce Center Draft Specific Plan, prepared/for/the/City/of/Palmdale/by/the/Keith/Companies/February/1990 was orginally adopted by the City Council on May 24, 1990 by Resolution No. 90-152. In 1994, the City conducted a comprehensive review of the Specific Plan in order to update information and regulatory provisions to reflect conditions and meet the needs of the community at that time. The City Council adopted a Specific Plan Amendment by Resolution No. 94-43 on May 12, 1994 to incorporate these changes into the 1994 edition of the Specific Plan. The Specific Plan is the primary document governing development of the proposed site. Included within the Specific Plan are: project goals, objectives and policies; a detailed description of the project (including a Land Use Plan, Circulation Plan and related maps); project implementation strategy; and design regulations and guidelines. The document is available for review at the City of Palmdale Planning Department.

SECTION III PROJECT DESCRIPTION: The text has been revised provide textual consistency with the Specific Plan document which has been updated by the City pursuant to Resolution 94-43 on May 12, 1994. These revisions do not propose any significant deviation from the conditions considered under the original impact analysis.

Page 38, B. HISTORY AND BACKGROUND, (2nd Sentence): This section and all applicable portions of the EIR text have been revised as follows:

> "A site plan and E for a proposed auto mall, the Antelope

Valley auto center, at the center of the site was previously approved by the City on February 9, 1989."

Page 38, B. HISTORY AND BACKGROUND, (7th Sentence): This section has been deleted as follows:

"~~At present, there are seven development applications for the site pending adoption of the proposed Specific Plan (these are available for review at the City of Palmdale Planning Department).~~"

Page 38, C. SITE DESCRIPTION, (5th Sentence): This section has been revised as follows:

"~~There are approximately 43 acres of Joshua Tree Juniper woodland located on the northwest portion of the site~~ However, the majority of the site has been previously rough graded, and street and infrastructure improvements have been installed in conjunction with Assessment District 90-1."

Page 38, C. SITE DESCRIPTION (6th Sentence): This section has been revised as follows:

~~The central west portion of the site has been graded (approximately 158 acres, including 91 acres of the project site) as part of the Antelope Valley Center Tentative Tract Map area) refer to Exhibit 3, AERIAL PHOTO~~

Page 39, 2nd Paragraph, (2nd Sentence): This section has been revised as follows:

The 68-acre Antelope Valley Auto Center is ~~currently under construction~~ located on the westside of the freeway north of Avenue Q ~~(anticipated to open at the end of 1990)~~. The center contains six automobile dealerships with a seventh underway."

Page 39, D. PROJECT CHARACTERISTICS, 2nd Paragraph (3rd Paragraph): This section has been revised as follows:

"Refer to the ~~Draft~~ Palmdale Trade and Commerce Center Specific Plan for a more detailed discussion of the project characteristics (available for review at the City of Palmdale Planning Department)."

Page 44, MX: Mixed Use (Planning Areas 4 and 6) (2nd Sentence): This section has been revised as follow:

"~~Agricultural~~ Transportation and public utility uses, as well as certain manufacturing uses, are permitted with a

Conditional Use Permit."

Page 46, FC: Flood Control (Planning Area 3): This section is revised as follows:

> "~~FC: Flood Control~~ PF: Public Facilities (Planning Area 3): This zone ~~contains two landscaped flood control basins~~ allows public and quasi-public or institutional uses, including community facilities and capital improvements such as flood control facilities."

Page 47 and 48, TABLES 2 and 3: These tables have been revised to reflect uses and land use designation as indicated in the Specific Plan document as amended by Resolution No. 94-43.

Page 54, Exhibit 5, Circulation Plan: This exhibit has been revised to reflect the Specific Plan document as amended by Resolution No. 94-43.

Page 55, Landscape Concept Plan, 2nd Paragraph (3rd and 4th Sentences): This section has been revised as follows:

> "Primary project entries will utilize landscape easements incorporating circular or semicircular ~~plantings of magnolia trees and project entry monument signs. Secondary project entry intersections will utilize~~ enhanced ground-plane planting and ~~smaller~~ project entry monument signs."

Page 55, Sewer, (3rd, and 5th Sentences): This section has been revised as follows:

> "All wastewater generated within the Specific Plan area will be collected and routed to an ~~18~~12" line in Avenue P-8 ~~(currently under construction)~~." The sewage will flow east from that point to the Palmdale Wastewater Reclamation Plant located at Avenue P-8 and 30th Street East. Proposed sewer lines within the Plan area range from 8" to ~~24~~39."

Page 57, E. PROJECT OBJECTIVES (the 8th objective): This section has been revised as follows:

> Ensure that future development in the Specific Plan minimizes environmental impacts to the extent feasible ~~environmentally sensitive habitats within the Specific Plan area are adequately protected.~~"

Page 57, F. AGREEMENTS, PERMITS AND APPROVALS: This section has been revised as follows:

> Several agreements, permits and approvals will be required as part of the proposed project. Following distribution of the draft EIR, a 45-day public review period is provided for public comment. In accordance with CEQA, at the end of the review period, the Palmdale City Council will make a determination regarding the adequacy of the Final EIR.
>
> The Final EIR will include the Draft EIR (with revisions if necessary) as well as comments received during the review period and responses to those comments. Following a determination that the Final EIR is adequate and certification of the Final EIR by the City Council, a Notice of Determination will be issued by the City should the project be approved. The Palmdale Trade and Commerce Center Specific Plan EIR was certified by the City Council on May 24, 1990 by Resolution No. 90-142 and a Notice of Determination was filed by the City.
>
> The following is a list of responsible agencies and the associated approval and permits anticipated to be required for the proposed project.

Responsible Agency	Approval/Permit
City of Palmdale City Council	Final EIR Certification
City Council	Project Approval (Adoption of Specific Plan)
City Council	Specific Plan Amendments

Page 59, Section IV, Description of Environmental Setting, Impacts and Mitigation Measures: The existing conditions discussion contained throughout Section IV of the EIR reflect those conditions that existed in 1990 when the project was originally evaluated. Since this time, certain components of the Specific Plan such as drainage and street improvements, and other infrastructure have been constructed. Additionally, two large commercial shopping centers consisting of over have been developed within the Specific Plan area. This development modified previously existing traffic and drainage patterns, land use conditions, and reduced open space lands; however, his development was within the scope of development originally contemplated by the Specific Plan document and evaluated by the EIR. Therefore, the impact analysis section contained in Section IV of the EIR reflects an overall consideration of

existing and proposed development within the Specific Plan area and is therefore in compliance with Section 15125 of the California Environmental Quality Act (CEQA). Thus, no revisions have been proposed to Section IV of the EIR in conjunction with the Specific Plan Amendment.

TDH:wp2306

FINAL

EIR 90-1

ENVIRONMENTAL IMPACT REPORT

PALMDALE TRADE AND COMMERCE CENTER SPECIFIC PLAN

(SCH NO. 89090618)

Prepared for:

CITY OF PALMDALE
38306 Ninth Street East
Palmdale, CA 93550
Contact: Robert Stanley
(805) 272-9613

Prepared by:

ROBERT BEIN, WILLIAM FROST & ASSOCIATES
14725 Alton Parkway
Irvine, CA 92718
Contact: Kevin Thomas
(714) 855-3659

July, 1990

JN 25957

MEMORANDUM TO REVIEWERS OF THE FINAL EIR

The document contained herewith constitutes the Final Environmental Impact Report for the Palmdale Trade and Commerce Center Specific Plan project. The text of the Draft Environmental Impact Report has been revised to respond to comments made during the public review period for the Draft EIR. Additions to the text are denoted by shaded text while deletions are indicated by ~~strike-out text~~, to provide the reader with a vehicle for recognizing any changes to the document. In addition, Section XII of the Final EIR contains comments and responses on the Draft EIR and additional relevant information.

The Final Environmental Impact Report for the Palmdale Trade and Commerce Center Specific Plan project has been prepared pursuant to CEQA Sections 15088 - 15090 and Section 15132, which states that a Final EIR must contain:

1. The Draft EIR or a revision of the draft.

2. Comments and recommendations received on the Draft EIR either verbatim or in summary.

3. A list of persons, organizations and public agencies commenting on the Draft EIR.

4. The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

5. An additional information added by the Lead Agency.

Section XII of this Final EIR contains a list and copy of each comment formally received on the Draft EIR during a 45-day public review period (including a summary of verbal comments made at the Palmdale Planning Commission Public Hearings on May 3 and May 14, 1990). The Comments section is followed by the Responses section, which contains responses keyed to notations in the margin of each comment (adjacent to each comment or recommendation made). Responses are provided for each significant comment, in addition to information in the text of the Final EIR where revisions to the Draft were necessary.

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for the
Palmdale Trade and Commerce Center Specific Plan

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I. Executive Summary

I. EXECUTIVE SUMMARY

A. PROJECT SUMMARY

The Palmdale Trade and Commerce Center Specific Plan area is located in western Palmdale in the Antelope Valley. It is bordered by Avenue P and the Antelope Valley Freeway (SR 14) to the north, 10th Street West to the west, Palmdale Boulevard to the south, and Division Street to the east.

The site is 756.2 acres in area. Of this acreage, approximately 593.2 net acres are available for development with the remainder reserved for flood control facilities and as right-of-way (ROW) for internal roadways and a potential future Antelope Valley Freeway interchange with the proposed Highway 138. The Specific Plan area surrounds the 68-acre Antelope Valley Auto Center which is currently under construction but is not a part of the project. The Antelope Valley Freeway bisects the site north to south.

The site is approximately 90 percent undeveloped, with most existing development located in the southern portion of the site between Avenue Q and Palmdale Boulevard. Existing onsite development includes hotels, restaurants, gasoline service stations, retail establishments, a church, an automobile dealership, and a self storage operation. Adjacent land uses include residential uses to the north, east and west, and hotel, restaurant, gasoline service stations and retail establishments to the south along Palmdale Boulevard.

The project, as defined in this Environmental Impact Report (EIR), is all actions associated with implementation and development of the Palmdale Trade and Commerce Center Specific Plan. The Specific Plan serves as a means of managing the use of land, establishes provisions for detailed site development, and provides a comprehensive approach to infrastructure planning and financing. The Specific Plan provides project-wide land use, landscape, circulation, and infrastructure plans as well as design regulations and guidelines. Provisions have been made for the proposed Antelope Valley Freeway/Highway 138 interchange, however, the interchange is not part of the Specific Plan.

The environmental analysis was performed assuming ultimate site buildout by the year 2010 of a development scenario derived from a market analysis performed by The Keith companies. The assumed ultimate buildout of the project site includes 300,000 square feet

(SF) of post market auto sales/service, 756,000 SF of off-price/promotion center, 1,645,000 SF of retail, 2,177,000 SF of commercial office, 2,676,000 SF of industrial, and 82,000 SF of hotel land uses. The Specific Plan is flexible, and development is intended to be guided by market forces. Although the Specific Plan has no "cap" on square footage, the EIR has assumed conservative (high) estimates. Each future submittal will require environmental review in consideration of the land uses and square footage assumed in the EIR.

B. ENVIRONMENTAL SUMMARY

This section provides a summary of project impacts, mitigation measures and unavoidable adverse impacts. Portions of mitigation measures have been summarized. Please refer to Section IV of a complete discussion of project impacts and mitigation measures.

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	#i.a. Prior to the issuance of building permits, the applicant shall submit a written report demonstrating that all mitigation measures imposed by the City to either reduce or avoid significant environmental impacts identified in the Final EIR have either been incorporated in the project design or undertaken as required. Final determination of compliance with imposed mitigation measures pursuant to the requirements of Section 21081.6 of the Public Resources Code shall in turn be subject to the review and approval of the Department of Planning.	
	#i.b. Prior to the issuance of building permits, the applicant shall pay to the Department of Planning all fees required for the monitoring of mitigation measures required for project development, as determined by the Director of Planning.	
A. TRAFFIC AND CIRCULATION	A. TRAFFIC AND CIRCULATION	A. TRAFFIC AND CIRCULATION
	# ii. Each project developer within the Specific Plan area will be required to submit a Transportation Management Plan for review and approval by the Planning	Future (year 2010) traffic would result in three intersections operating at Level of Service E after implementation of all recommended mitigation measures.

Department prior to issuance of occupancy permits, and a focused traffic study for review and approval by the City Engineer and/or City Traffic Engineer, to determine the necessary improvements for impacts generated by that project. On the basis of this and other studies, the developer will improve or fund a pro rata share of improvements and/or the City will undertake improvements through a capital improvement program.

Existing Plus Project Traffic Conditions

The project circulation system includes elimination of the existing intersection of Palmdale Boulevard/Avenue Q and construction of a new intersection at Street A/Palmdale Boulevard. The new intersection will accommodate existing traffic on Avenue Q as well as some of the future traffic generated by the Palmdale Trade and Commerce Center.

Without mitigation measures, the following roadway segment impacts are anticipated:

Avenue P between SR 14 and Division Street	LOS F
10th Street West between Avenue P and Avenue P-8	LOS F
Palmdale Boulevard between 5th Street West and SR 14	LOS F

Existing Plus Project

1. The following improvements will be required to provide Level of Service D or better operation (individual applicants will be required to dedicate right-of-way for full ultimate half-width improvements, where roads border their property, full ultimate right-of-way for roads through their property, and/or fund a pro rata share of these improvements, as determined necessary by the City Engineer and/or the City Traffic Engineer):

a. Widen the SR 14 Freeway to 6 lanes south of Palmdale Boulevard to be funded by CalTrans and/or other sources.

b. Widen Avenue P to 6 lanes between the SR 14 Freeway and Sierra Highway.

IMPACTS		MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
Avenue P between Division Street and Sierra Highway	LOS E	c. Provide 8 through lanes on 10th Street West between Avenue P and Avenue P-8.	
SR 14 South of Palmdale Boulevard	LOS E	~~d. Upgrade Street B to a 4 lane divided street.~~	
		e. Widen Palmdale Boulevard to 6 lanes from west of 5th Street West to Division Street.	
		f. Provide separate right turn lanes on the northbound, eastbound, and westbound approaches at 10th Street West/Avenue P.	
		g. Widen the northbound SR 14 off-ramp at Avenue P to provide two left and one right turn lane.	
		h. Widen the northbound SR 14 off-ramp at Palmdale Boulevard to provide two left and 1 right turn lane.	
		i. At the future intersection of 5th Street West/Avenue P-8, provide two through, two left and one right turn lane on the southbound 5th Street West approach and two through and two left turn lanes on the eastbound Avenue P-8 approach.	

Intersection Capacity Utilization (ICU) values for the existing plus project traffic conditions have been calculated. Several intersections would operate at Level of Service E or worse, including:

- 10th Street West/Avenue P (p.m.= F)
- Avenue P/SR 14 northbound offramp (a.m. = E, p.m.= F)
- 5th Street West/Avenue P-8 (a.m. = E, p.m.= F)
- Palmdale Boulevard/5th Street West (p.m.= F)
- Palmdale Boulevard/SR 14 southbound offramp (p.m.= F)

Traffic signals are expected to be needed at the following freeway ramps:

SR 14 Southbound Off Ramp/10th Street West
SR 14 Northbound Off Ramp/Avenue P
SR 14 Southbound Off Ramp/Palmdale Boulevard
SR 14 Northbound Off Ramp/Palmdale Boulevard

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	~~j. On the northbound Street B approach at Avenue P, provide two left and one right turn lane.~~	
	k. Provide a second southbound left turn lane on 5th Street West at Palmdale Boulevard.	
	l. Provide a southbound right turn lane on Sierra Highway at Avenue P.	
	m. Provide two left and one right turn lane on Avenue P-8 at Sierra Highway.	
	n. Provide two left and one right turn lane on southbound Street A at Palmdale Boulevard (needed to minimize the possibility of the vehicle queue blocking the intersection at Street A/Avenue Q).	
	o. Provide traffic signals at the following intersections: • Street A & P-8, Street A & P-12, Street A & Avenue Q, Street A & Palmdale Boulevard, and Avenue P-12 & 5th Street West.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	p. A transit center should be placed at or near the southeast corner of Avenue P and 10th Street West to be funded an a pro rata share by the Specific Plan developers as determined by the City Engineer and/or City Traffic Engineer. The center would allow for buses from several routes to have an off-street transfer point with patron facilities.	
	# 2. All road improvements shall be provided in accordance with City design standards to the satisfaction of the City Engineer, prior to issuing occupancy permits.	
	# 3. Each applicant shall be required to submit a Traffic Control Plan for review and approval by the City Traffic Engineer, prior to issuance of grading permits to minimize construction-related traffic impacts.	
Existing + Project + Auto Mall Traffic Conditions	**Existing Plus Project Plus Auto Mall**	
Palmdale Boulevard between 5th Street West and SR 14 is anticipated to operate at LOS E under these conditions. All other segments will operate at LOS D or better. ICU calculations are based on the intersection geometrics required to accommodate existing plus project traffic.	# 4. The improvements required for existing plus project traffic volumes will be able to accommodate the traffic generated by the Antelope Valley Auto Mall, except at ~~Sierra Highway/Avenue P~~ the following, where ~~this~~ additional improvements will be needed (to be funded on a pro rata basis by project applicants):	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
The following intersections exceed LOS D: 10th Street West/Avenue P (p.m.= E) 10th Street West/Avenue P-4 (p.m.= E) 5th Street West/Palmdale Boulevard (p.m.= E) Sierra Highway/Avenue P (p.m.= E)	a. Provide a second eastbound left turn lane on Avenue P at Sierra Highway. b. Provide a fourth northbound through lane on 10th Street West at Avenue P and SR14. c. Provide a second southbound left turn lane on 10th Street West at Avenue P-4. ~~d. Provide a second westbound left turn lane on Palmdale Boulevard at 5th Street West.~~ e. Widen Palmdale Boulevard to eight lanes between 5th Street West and the SR 14 Freeway.	

Future Traffic Conditions

Year 2010 traffic volume estimates for the Antelope Valley Freeway (SR 14) indicate that future traffic between Avenue P and Palmdale Boulevard will be 363,200 ADT and the volume south of Palmdale Boulevard will be 229,200 ADT (based on CALTRANS data).

For future intersection operation projections, it is assumed that existing plus project plus Auto Mall traffic mitigation measures have been implemented. With these improvements, the following three intersections would still operate at LOS E:

- 10th Street West/Avenue P (p.m.= E)

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
• SR 14 SB Off-Ramp/Palmdale Boulevard (p.m.= E) • Sierra Highway/Avenue P (p.m.= E) The proposed project is expected to generate approximately 27 percent more trips than was used in the General Plan Circulation Study prepared by DKS. Two observations pertaining to this impact can be made: 1. The existing plus project plus Auto Mall daily volumes are higher than the Year 2010 volumes at the following locations: a. On Avenue P east of the SR 14 Freeway. b. On Palmdale Boulevard between 5th Street West and the SR 14 freeway. c. On Avenue P-8 between 5th Street West and 10th Street West. 2. The intersection geometrics needed for existing plus project plus Auto Mall conditions are compatible with those for 2010 conditions except at 10th Street West/Avenue P and at 5th Street West/Avenue P-8.		

IMPACTS

B. HYDROLOGY

Project implementation will convert the area to impervious surfaces, with the exception of landscaped areas. This will result in increased storm runoff volumes. In accordance with the drainage ordinance for Palmdale, the difference in runoff volume for existing and developed conditions will be retained onsite.

Three retention basins are proposed to be located on the west and east of Division Street between Palmdale Boulevard and Avenue "P", and are intended to reduce the peak flood discharge and sediment. The proposed detention facilities will be designed to retain the difference between the post development storm runoff and the pre-development storm runoff from the upstream subareas. The resulting retention of runoff completely mitigates the runoff impacts of the project on downstream facilities. For the same reason, no significant cumulative downstream drainage impacts are anticipated.

Implementation of the proposed Specific Plan will result in an increase in the quantities of urban pollutants that enter the local drainages. The automobile traffic associated with the proposed commercial office, light industrial and retail land uses will produce pollutants such as hydrocarbon fuels, lubricants, and rubber. Light industrial uses also introduce the possibility of accidental contamination by industrial pollutants. Improper maintenance of landscaping can introduce fertilizers and pesticides into drainages.

MITIGATION MEASURES

B. HYDROLOGY

5. All facilities shall be designed and constructed in accordance with the City of Palmdale Drainage ~~Management~~ Master Plan and LACFCD Hydrology Manual to the satisfaction of the City engineer. Local facilities will be installed by individual applicants prior to issuing building permits. Regional facilities (Amargosa Creek improvements and the three detention basins) shall be constructed for portions onsite a given parcel and/or funded on a pro rata basis by each applicant, and shall be completed prior to Specific Plan buildout (site specific studies for each applicant will determine the need for interim measures).

6. According to the City of Palmdale's Master Drainage Plan, the project site shall include local storm drain facilities ranging in size from 30 inches to 78 inches. The site shall also include regional storm drain facilities ranging in size from 66 inches to a 6 foot by 6.5 foot concrete trapezoidal channel.

7. The construction of a concrete trapezoidal channel with a 15 foot base and 1.5:1 side slopes will be required for Amargosa Creek improvements. The channel will have culvert crossings for upstream and downstream transitions.

UNAVOIDABLE ADVERSE IMPACTS

B. HYDROLOGY

With implementation of the required mitigation measures, no unavoidable adverse impacts are anticipated.

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
The construction phases of the various components of the Specific Plan could result in increased erosion onsite, increased sediment load in runoff and resultant sedimentation and siltation downstream.	# 8. Three detention basins at the eastern boundary of the project site are required for collection of runoff from the west and south, and are intended to replace the City's regional system. One detention basin north of Avenue P-8 will have a volume of 157 acre-feet. This offsite detention basin will require an agreement with the affected property owner(s) prior to final design approval. Two basins south of Avenue P-8 will have a combined total volume of 145 acre-feet.	
	# 9. An emergency spillway adequately sized and armored to pass at least the 50-year recurrence flood flow shall be provided.	
	#10. An emergency flow path shall be provided in the case of spillway overflows.	
	#11. Seepage collars on supplemental piping outlets shall be installed.	
	#12. Installation of a cutoff trench beneath the outlet works shall be provided.	
	#13. An energy dissipator or other protection device shall be installed on the outlet pipes at the end of the detention facility in order to reduce erosion.	
	#14. Sloped embankment faces shall be provided for structural stability.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	#15. Grates, cages, hoods and other devices shall be provided over detention outlet works to prevent objects and debris from blocking openings.	
	#16 to 21 Refer to Section IV.B for detention basin design and safety measures.	
	#22. Each applicant shall submit a Water Quality/Erosion Control Plan for City review and approval, prior to issuing grading permits. The Plan shall indicate specific means of reducing urban pollutants and sedimentation (see Section IV. B for a list of suggested means).	
C. PUBLIC SERVICES AND UTILITIES	C. PUBLIC SERVICES AND UTILITIES	C. PUBLIC SERVICE AND UTILITIES
Police Service	**Police Service**	The project represents a significant increase in local water and sewer service demand, and a significant cumulative increase in solid waste generation.
The proposed development will have a significant impact on the department's ability to provide law enforcement services. The project development is expected to result in some increases in calls for service to the project site. Both general law and traffic related incidents are expected to increase as a result of this project. Manpower increases may be necessary to accommodate the proposed Specific Plan.	#23. Future developments on the project site shall have adequate emergency access and circulation, adequate address signage and landscape features which do not conceal potential criminal activity. See Section IV.C for a more detailed discussion of required mitigation.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
Parks and Recreation	**Parks and Recreation**	
The City of Palmdale's Parks and Recreation Department anticipates project-related impacts to park facilities to be less than significant. The development of drainage basins for compatible park and recreation purposes will further reduce impacts.	No mitigation measures are required.	
Library Services	**Library Services**	
The proposed project will not significantly affect library operations.	No mitigation measures are required.	
Telephone	**Telephone**	
Although the possibility exists of having to extend and/or relocate existing facilities, no significant impacts to telephone service are anticipated at the present time.	#24. Developers of individual properties within the Specific Plan area will be responsible for payment of assessment fees and installation of required conduits prior to issuance of occupancy permits.	
Electricity	**Electricity**	
The proposed project is expected to utilize approximately 75.1 million Kilowatt hours (KWh) per year. SCE has indicated they have the capability to service the proposed project area, and SCE expects no significant impacts concerning electrical service for the proposed project.	#25. All overhead lines below 32 KV (Kilovolt) shall be placed underground by applicants prior to issuance of occupancy permits. #26. The individual project applicants shall coordinate with SCE to ensure that adequate electrical service is provided to the proposed development and that service connection activities will be performed in cooperation with SCE to minimize any short term impacts.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
Gas	**Gas**	
The proposed project is expected to utilize approximately 17.9 million cubic feet per month of natural gas. Although the proposed project will increase gas usage, potential impacts to system capacity, existing customers, and the environment are expected to be less than significant.	No mitigation measures are required at this time.	
Sewer	**Sewer**	
The implementation of the project will represent a significant increase in service demand; however, the L.A. County Sanitation District is capable of serving the proposed project area at the present time.	#27. The project developer will be required to pay prevailing sewer assessment fees, provide adequate onsite wastewater conveyance facilities, and will conform with City Public Works Department and County Sanitation District No. 20 development standards pertaining to wastewater.	
Water	**Water**	
The proposed project is anticipated to represent a significant increase in water demands. Service availability for the ultimate project buildout (year 2010) will likely be dependent on developing additional water supplies and improving water conservation methods. Proposed water lines have been located so that any tract within the Specific Plan area can receive service without offsite improvements (although additional storage capacity will be required to meet cumulative peak and emergency demands within the Palmdale Water District).	#28. Provision of water service to the proposed project will be required as a part of project development and will occur to the satisfaction of the City of Palmdale prior to approval of each site-specific development plan. Project implementation will require mitigation in coordination with the City of Palmdale, the Los Angeles County Waterworks District No. 34, the Palmdale Water District and the Los Angeles County Fire Department.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	#29 Future applicants shall comply with State laws requiring water-efficient plumbing fixtures in structures (see Section IV.C for a list of applicable laws).	
	#30. Future applicants shall implement recommended interior and exterior water conservation measures where applicable (see Section IV.C for a list of recommended measures).	
Solid Waste	**Solid Waste**	
The project will result in a significant cumulative increase in solid waste generation, and may generate hazardous materials that would require disposal at one of the relatively few remaining Class I landfills. This is a cumulatively significant impact.	#31. Information shall be provided to new business owners concerning the recycling services in the development area. Said information shall identify nearby recycling centers, identify possible markets for recyclables in the area, and suggest to the business owners that they recycle glass, metal, paper, cardboard, and other materials to the maximum extent feasible.	
	#32 to 37. Refer to Section IV.C for additional measures regarding solid waste reduction and recycling.	
Fire Service	**Fire Service**	
It is expected that the proposed project will generate an increase in area service calls. However, provision of City revenue through property taxes and other means is expected to adequately fund future manpower and equipment increases.	#38. Site-specific development plans shall require review and approval by the City Fire Department with respect to adequate fire flows, emergency access and building construction standards.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
School	**School**	
Future project applicants will pay prevailing school impact assessment fees to mitigate impacts from increased demand from project employees. No significant impacts are anticipated.	Other than mandatory developer fees, no mitigation measures are required at the present.	
D. GEOLOGY AND SOILS	D. GEOLOGY AND SOILS	D. GEOLOGY AND SOILS
Topography	**Topography**	~~Development of the proposed Specific Plan will modify existing onsite topography and alter and/or eliminate existing natural drainages.~~ With implementation of the mitigation measures, no unavoidable adverse impacts are anticipated.
Modifications of the existing topography will occur during grading for the proposed developments. The elevation of the ground may be raised in some areas and lowered in others due to cut and fill slopes associated with grading. Due to relatively flat terrain, no significant impacts are expected.	#39. All grading and landform modifications shall be conducted in conformance with state-of-the-practice construction and design parameters set forth in Chapter 70 of the Uniform Building Code.	
Natural surface water drainage would be altered and/or eliminated with construction of the proposed developments, this is an unavoidable significant impact.	#40. All graded slopes shall be constructed to be grossly and surficially stable.	
Geology	**Geology**	
The relatively dry, coarser grained older channel (Qoc) and older alluvial units (Qoa1 and Qoa2) are considered to be subject to hydroconsolidation and could significantly impact the proposed development. Hydroconsolidation, if left untreated, may cause unacceptable total and differential settlement of foundations supported by the collapsible soil layers.	#41. Remedial grading shall be performed to decrease the hydroconsolidation potential and its potential effects to lightly loaded structures. Refer to Section IV. D for a list of suggested remedial grading measures.	
	#42. To decrease the potential for hydroconsolidation and its potential effects on heavily	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
Sand and gravel resources would be lost within the northwestern corner of the site, which is an unavoidable impact, but not considered significant in context of regional resources.	loaded structures, deep foundations shall be used.	
Land subsidence within the project area may occur if significant groundwater extractions are made from the principal or deep aquifer underlying the project site, causing the water table to drop below historically low levels. In addition, the proposed development could be impacted by ground fracturing and differential changes in elevation associated with subsidence.		
Soils	**Soils**	
All surficial soil materials within the project area are considered to be subject to collapse and hydroconsolidation upon placement of structural loads and/or saturation. If these soil materials were to be left in place, the structural integrity of the proposed development would be significantly impacted.	#43. Prior to site development, remedial grading shall be performed within the site to remove collapsible surficial soils.	
Based on data compiled by the Soil Conservation Service, the potential impacts due to expansivity and corrosivity of the onsite soils is considered to be low.	#44. Additional laboratory testing of clayey soils shall be performed where they are encountered during subsequent geotechnical investigations.	
Groundwater	**Groundwater**	
Project development is expected to result in increased groundwater recharge in the areas where	#45. Adequate moisture barriers and positive drainage control shall be employed to	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
irrigation of landscaping would occur. However, it is unlikely that groundwater levels within the principal aquifer beneath the project area would be significantly impacted.	mitigate the creation of perched groundwater beneath portions of the site.	
Over-irrigation of landscaping could produce "perched" groundwater conditions beneath the site where permeable sand layers close to the surface are underlain by laterally extensive and relatively impermeable clayey layers. The development of perched groundwater is likely to promote hydroconsolidation of certain soils beneath the project site.		
Seismicity	**Seismicity**	
It is anticipated that the project site will be affected by moderate to strong ground shaking due to earthquakes on one or more active faults in the region. Due to the depth of groundwater (425 feet below ground surface), soil liquefaction is not considered to have a potential impact. Based on the relatively dense nature of the underlying sandy, older alluvial units (Qoa1 and Qoa2), seismically induced liquefaction within these materials, which could contain perched groundwater, is not anticipated to occur.	#46. The applicant(s) shall adhere to seismic design requirements of the Uniform Building Code which will reduce the likelihood of structural failure and minimize potential impacts resulting from seismic activity.	

IMPACTS

E. LAND USE

As the project is a Specific Plan intended to direct development on the site over the next twenty years, short-term impacts will occur for individual or neighboring groups of parcels as they are developed. These impacts include construction-related erosional, noise, dust, aesthetic, and traffic impacts. These impacts and associated mitigation measures are discussed in Sections IV.B, IV.G, IV.K, IV.H, IV.A, respectively.

Implementation of the Specific Plan will result in replacement of existing open space with urban uses and infrastructure. This will permanently commit the land to urban expansion. Adherence to landscaping and architectural guidelines within the Specific Plan document will substantially reduce aesthetic and land use compatibility impacts, although significant impacts will remain after implementing mitigation measures. Development of commercial and industrial land uses within the project site will result in increased traffic and related noise and air quality impacts in the immediate site vicinity.

MITIGATION MEASURES

E. LAND USE

#47. The three flood control detention basins shall be landscaped to serve as combined recreational and drainage facilities and to buffer offsite residential uses from incompatibility impacts.

#48. Measures to mitigate short-term impacts due to project construction will be implemented by the applicant as required and monitored by the City Planning Department and will include:

a. Limiting the hours of construction activity to the hours of ~~7:00~~ 6:30 am to ~~6:00~~ 8:00 pm Monday through Saturday, with no construction on Sundays or nationally observed holidays.

b. Construction of temporary opaque fencing to screen onsite construction operations, materials and equipment from adjacent property owners and to protect the safety of pedestrian traffic.

#49. Land uses within each of the Planning Areas will be governed by Table 3, PALMDALE TRADE AND COMMERCE CENTER LAND USE MATRIX, of the Specific Plan which indicates permitted, prohibited and conditionally permitted land uses within each category.

UNAVOIDABLE ADVERSE IMPACTS

E. LAND USE

Implementation of the proposed Palmdale Trade and Commerce Center Specific Plan will result in loss of existing open space areas, and will result in land use incompatibilities due to development of office, commercial and public administrative uses adjacent to existing offsite residential uses along Avenue P, 10th Street West and Division Street.

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	#50. Adherence to all design regulations and guidelines from the Palmdale Trade and Commerce Center Specific Plan is required. Said monitoring and verification of compliance with adopted Specific Plan development standards shall be performed prior to individual project Site Plan approval.	
	#51. Applicants for future development within the Specific Plan area shall incorporate all feasible measures to reduce project impacts upon USAF Plant 42 (see Section IV.E for a more detailed discussion).	
F. BIOLOGICAL RESOURCES	F. BIOLOGICAL RESOURCES	F. BIOLOGICAL RESOURCES
The proposed modification of land uses allowed on the site will result in the removal of existing native vegetation. The only significant impact expected will be the loss of the Joshua Tree Woodland.	~~#52. Where possible, project development within the Specific Plan area should be designed to avoid displacement or destruction of Joshua Tree habitat. Areas adjacent to the woodland shall have a 50 foot setback from the Joshua Tree plants. Within that setback, native plant cover should be restored to natural habitat values to serve as a buffer if such plant cover is not present.~~	~~Ultimate buildout of the Palmdale Trade and Commerce Center Specific Plan area will result in the loss of desert habitat, including Joshua Tree Woodland.~~ With implementation of the mitigation measures, no unavoidable adverse impacts are anticipated.
	#53. Upon implementation of the project, any Joshua Tree plants that are removed will be transplanted to onsite landscaped areas and/or offsite in accordance with the City's Draft Joshua Tree Preservation ordinance.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	Such transplantation will be on a project-by-project basis. Preservation Plans shall be submitted to the Department of Planning prior to issuance of grading permits.	
	#54. A Joshua Tree Preservation and Transplantation Plan will be developed and submitted to the City of Palmdale Planning Department prior to grading permit issuance.	
	#55. Prior to issuance of a grading permit for work within the Amargosa Creek Channel, the applicant shall obtain a 1603 Agreement from the California Department of Fish and Game.	
G. NOISE	G. NOISE	G. NOISE
Short-term noise impacts to onsite and surrounding land uses which would occur as a result of the proposed project include noise generated by construction activities. Grading activities typically represent one of the highest potentials for noise impacts. In some areas, grading will occur adjacent to newly-developed residential areas. With local control of construction hours, these impacts can be reduced to less than significant levels.	**Project**	Project implementation will result in significant individual and cumulative noise increases in the project vicinity. Onsite project impacts can be mitigated with appropriate noise attenuation measures employed on future developments. Noise impacts upon surrounding areas will be significant without establishment of a City-wide assessment district, or similar means, to mitigate project and cumulative noise impacts.
Onsite noise levels greater than 65 CNEL could be experienced as a result of future traffic levels with the proposed project. Future land uses along the Antelope Valley Freeway (SR-14), Palmdale	#56. Prior to issuance of building permits, all future commercial, office, and industrial uses within the 65 CNEL (indicated on Exhibit 26) shall be required to prepare acoustical reports.	
	#57. Prior to issuance of building permits, all hotel land uses to be built within the 60 CNEL contour (indicated on Exhibit 26) shall be required to prepare acoustical reports.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
5th Street West, Avenue Q, and Division Street may experience traffic noise levels greater than 65 CNEL without some form of mitigation. If commercial, office, industrial and hotel land uses are to be built adjacent to the above roadways, they could be exposed to noise levels exceeding 70 CNEL.	#58. Prior to issuance of building permits, all future development applications within the Specific Plan area shall be required to submit evidence to the satisfaction of the Planning Director that all proposed uses will comply with City noise standards.	
Two hotel land uses existing onsite, the Days Inn and Motel 6, will be located within the 65 CNEL. This will exceed the 65 CNEL typical exterior noise standard for hotels and therefore is considered a significant impact (as a result of project and cumulative traffic levels).	**Cumulative**	
According to the 1978 AICUZ noise contours for Air Force Plant 42, the project site will experience noise levels outside the 65 CNEL contour, and therefore, the noise impact due to Plant 42 is less than significant.	#59. A City-wide assessment district should be established to implement offsite mitigation in the form of barriers and structural upgrades. This would require project applicants to work with the City, other developers and homeowners to determine final wall heights and building upgrades. Funding of improvements would be on a "fair share" or pro rata basis.	
Impacts to surrounding land uses will occur due to traffic generated by the proposed Palmdale Trade and Commerce Center. Maximum noise increases of 4.8, 9.2, 5.2 and 4.0 dB will occur along Avenue P, Avenue P-8, Palmdale Boulevard and 10th Street West, respectively. As a result, these roadways will have noise levels greater than 65 CNEL. Existing residences that will be adversely impacted by future noise are located along Avenue P, between Antelope Valley Freeway and 3rd Street, along 10th Street West and along Division Street. Project implementation is anticipated to result in a significant individual and cumulative impact to existing offsite land uses.		

IMPACTS

H. AESTHETICS

Initial construction for the proposed Palmdale Trade and Commerce Center will increase impacts to area aesthetics as a result of project grading, dust created by construction activities and equipment, and construction-related air emissions and traffic congestion. These impacts are temporary, and are anticipated to be mitigated to less than significant levels with implementation of recommended mitigation measures. With the construction and subsequent buildout of the project, existing natural desert vegetation will be removed. Removal of Juniper and Joshua tree woodland would further reduce the natural character of this site. However, project landscaping will be designed to partially offset the loss of naturally occurring desert scrub brush.

Channelization, if implemented, would significantly impact the natural character and overall aesthetic quality of Amargosa Creek. In addition, initial construction for the channel would result in significant visual impacts.

The proposed development will impact the surrounding residential and commercial communities by reducing natural viewshed that is now available to offsite area residents and motorists. Furthermore, increases in area traffic, construction activities and daytime population will negatively affect the aesthetic quality of the immediate area.

Glare from project office structures, hotels, and other glare producing buildings (from reflective

MITIGATION MEASURES

H. AESTHETICS

#60. In order to mitigate the potential cumulative short-term effect of multiple parcels being developed over a 20-year period, the City Planning Department shall endeavor to group future Specific Plan project review and approvals to minimize continuous construction in any one portion of the site.

#61. During project construction the applicant shall be required to provide appropriate screening, dust control, restricted construction hours, and a traffic control plan.

#62. All landscaping will be installed prior to issuance of occupancy permits.

#63. Landscaping will be consistent with the Specific Plan in order to maintain a cohesive theme across the project site, and in order to reduce aesthetic impacts of structures to adjacent roadways and residential properties.

#64. Any lights used to illuminate the parking areas, driveways, and other exterior or interior areas, shall be designed and located so that direct lighting is confined to the property.

UNAVOIDABLE ADVERSE IMPACTS

H. AESTHETICS

The Palmdale Trade and Commerce Center will result in development of existing open space areas. This will significantly affect the aesthetic character of the project site and may obstruct certain views from neighboring residences. Structures, signs and lighting may also result in significant light and glare impacts.

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
glass and other materials) may impact the project area and its inhabitants, as well as traffic travelling on adjacent arterials and the Antelope Valley Freeway. In addition, evening lights from business signs may cause significant lighting impacts in the project area. Implementation of mitigation measures is anticipated to reduce, but not eliminate, these impacts.	#65. In addition to directional lighting, lighting should not be of greater intensity (wattage) than otherwise necessary for public safety.	
	#66. During Site Plan Review, project design should incorporate additional techniques to reduce light and glare, such as use of opaque glass instead of reflective glass.	
The maximum building height for the proposed project is 45 feet to 55 feet. Although the proposed building heights are relatively modest, these buildings will decrease the viewshed and increase glare impacts within the project site. Project implementation will result in increased structural density. This will result in significant viewshed degradation for local area residents and businesses in both existing and future developments.	~~#67. Amargosa Creek flood control improvements shall be composed of natural materials (or simulated rock) with interspersed vegetation to maintain existing aesthetic qualities.~~	
	#68. Impacts upon view corridors along adjacent roadways will be minimized by means of the design standards (building setbacks, height limitations, etc.) and landscaping criteria as set forth in the Specific Plan.	
I. PUBLIC HEALTH AND SAFETY	I. PUBLIC HEALTH AND SAFETY	I. PUBLIC HEALTH AND SAFETY
The project site does not currently present an undue risk in terms of the potential presence of a contamination problem resulting from hazardous materials. Proper mitigation measures should be performed, however, to ensure that the existing underground storage tanks as well as new businesses are properly monitored with regard to hazardous materials. Trash and debris encountered in certain areas of the property should be properly tested and disposed of if there is a risk of hazardous materials contamination.	#69. In order to verify verbal, written and visual information obtained to date, additional information on current conditions of underground storage tanks including operating permits and reports of investigation/testing performed by owners, shall be obtained prior to issuance of grading permits.	None have been identified, after implementation of the required mitigation measures.

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
Implementation of the Palmdale Trade and Commerce Center Specific Plan may result in the development of businesses that could use or store hazardous materials on their property (present land use designations allow similar land uses). Compliance with local, state, and federal regulations regarding hazardous materials is expected to reduce this risk to a less than significant level.	#70. Prior to issuance of grading permits, hazardous materials assessments will be performed for individual properties. #71. Future grading plans and specifications for individual properties within the Specific Plan area shall include a clause regarding observation, testing, and proper disposal of any hazardous materials encountered during grading and construction, particularly for the trash/debris dumping areas. #72. Prior to issuance of grading permits for work on the property containing the previously described onsite unauthorized dumping ground west of future Division Street and north of future Avenue P-8, the area shall be inspected, tested and any hazardous materials encountered disposed of. #73. Future project land uses involving the use, storage or transportation of hazardous materials must comply with applicable local, state and federal health and safety regulations, including the proposed City of Palmdale Hazardous Waste Management Plan, upon its completion. #74. No uses that involve the use, storage or transportation of hazardous materials shall be permitted adjacent to residential areas.	

IMPACTS

J. CULTURAL RESOURCES

Paleontological Resources

No known significant paleontological resources are located on the Specific Plan site. However, the Palmdale Trade and Commerce Center Specific Plan area is underlain by sediment rated with a "High" paleontological sensitivity. Therefore, unmitigated project grading and excavating could possibly expose and destroy unknown paleontological resources resulting in a significant impact. Adherence to required mitigation measures is anticipated to reduce impacts to less than significant levels.

MITIGATION MEASURES

#75. Any use involving hazardous materials will require site plan review and/or a Conditional Use Permit, to minimize land use conflict. Said review shall involve all agencies with jurisdiction such as the local Air Quality Management District and Regional Water Quality Control Board.

J. CULTURAL RESOURCES

Paleontological Resources

#76. Prior to issuance of a grading permit, a qualified paleontologist shall be retained to formulate and carry out a mitigation program for the site. This paleontologist shall have the power to temporarily direct or divert operations to allow evaluation, and if necessary, salvage any exposed fossils.

#77. Paleontological monitoring efforts shall be based on the sensitivity of the units being excavated, the number of equipment in operation at one time, and the amount of material (in cubic yards) being moved (see Section IVJ for a description of monitoring frequency for "high" and "low" sensitivity geologic units).

#78. Matrix samples for microvertebrate screening shall be collected and processed during monitoring. If microvertebrates are present, up to 6,000 pounds of matrix will need to be sampled.

UNAVOIDABLE ADVERSE IMPACTS

J. CULTURAL RESOURCES

No unavoidable adverse impacts are anticipated with implementation of the recommended mitigation measures.

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	#79. All fossils collected need to be prepared to the point of identification. These remains should be donated to an institution with an educational and/or research interest in the materials and a retrievable storage system, such as the Los Angeles County Museum of Natural History and the San Bernardino County Museum. This shall occur within one year of individual project completion.	
	#80. A final report summarizing findings, including an itemized inventory, contextual stratigraphic data, and photographs shall accompany the fossils to the designated repository with an additional copy sent to the City of Palmdale Planning Department.	
Archaeological Resources	**Archaeological Resources**	
Site CA-LAn-1554-H is a potentially historic archaeological site of undetermined significance. Although the surface of the site does not obviously indicate the existence of a subsurface deposit, such a deposit may exist. Project related grading could possibly destroy such a deposit and/or unknown deposits of historic or archaeologic importance resulting in a significant impact. However, required mitigation measures are anticipated to reduce this impact to less than significant levels.	The following mitigation measures pertain to development on or within 50 meters of historic site CA-LAn-1554-H.	
	#81. Prior to issuance of a grading permit, site CA-LAn-1554-H, and the area within a 50 meter radius of the approximate center of the site, shall be subjected to a surface collection by a qualified archaeologist.	
	#82. Subsequently, the initial stages of grading shall be monitored by a qualified archaeologist. This archaeologist shall have the power to temporarily direct or divert grading operations to allow evaluation, and if necessary, salvage any exposed artifacts.	

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
	The following mitigation measures apply to all development involving grading within the Specific Plan area.	
	#83. During grading operations, the project Construction Manager shall be responsible for informing the City of Palmdale Planning Department within 12 hours of the discovery of any material of an archaeological nature.	
	#84. Should the City Planning Department determine that the uncovered material is of an archaeological nature, a professional archaeologist shall be retained to collect and document the archaeological deposit as quickly as is consistent with good archaeological practice. The archaeologist shall have the power to stop or redirect the construction in order to properly recover the artifacts.	
	#84a. Following the surface collection and monitoring activity, all the artifacts recovered and features found (if any) should be analyzed and described in a monitoring report. The monitoring report shall be submitted to the Planning Department for review and approval prior to any grading or construction activity on the project site. If it is determined that the site was a homestead, a title search should be performed to determine associations with any historic persons, events or themes.	

IMPACTS

MITIGATION MEASURES

The report should present the kind of descriptive and interpretive information usually found in Phase II evaluation reports. An updated form DPR-422 should also be filed with the Archeological Information Center to include new data discovered as a result of mitigation.

UNAVOIDABLE ADVERSE IMPACTS

K. AIR QUALITY

Temporary impacts would result from project construction activities due to air pollutants emitted by construction equipment and dust generated during grading and site preparation. These impacts will be relatively small scale but ongoing, as the project site is developed parcel by parcel, until ultimate buildout of the Specific Plan area.

Although the project may result in minor local alterations to wind and temperature patterns, there are no anticipated significant impacts to climate as a direct result of the project.

Increased vehicle travel would lead to an overall increase in the local pollutant load due to direct impacts from vehicle emissions. Regional pollutant emissions from stationary sources would also increase due to increased electrical and natural gas consumption. Due to the large scope of the project and the anticipated volumes of traffic generated by the proposed land uses, the Palmdale Trade and Commerce Center Specific Plan will have a significant individual and cumulative impact upon regional air quality. However, implementation of the Specific Plan will supply much needed local

K. AIR QUALITY

#85. To mitigate potential dust generation impacts, the project will comply with State, County and City dust control regulations.

#86 to 88. See Section IV.J for measures to mitigate construction vehicle emissions.

#89. The applicant shall, ~~to the extent feasible,~~ as required by the Planning Department and the City of Palmdale's Air Quality Element, implement applicable Tier I Control Measures contained in the Final 1989 AQMP (see Section IV.J for applicable measures).

#90. Prior to Subsequent Site Plan approvals, energy conservation practices, as required by the Subdivision Map Act, Building Energy Efficiency Standards (California Energy Commission, 1988), and state and local laws, shall be incorporated into the design of the project to have the secondary effect of limiting stationary source pollutants both on and offsite.

K. AIR QUALITY

Implementation and buildout of the Palmdale Trade and Commerce Center Specific Plan is anticipated to have a significant individual and cumulative impact upon local and regional air quality. This impact will be due primarily to increased emissions from mobile sources. It should be noted that the project provides additional employment and retail services in the Antelope Valley which will result in a regional reduction in air emissions by reducing vehicle miles travelled.

IMPACTS	MITIGATION MEASURES	UNAVOIDABLE ADVERSE IMPACTS
employment opportunities and support services. This is anticipated to reduce commuter traffic to the greater Los Angeles Basin and consequently partially mitigate mobile source emission impacts. It should be noted that the air quality analysis figures are for 1996 and assume project buildout. This results in a worst-case assessment, as 1996 emission factors are anticipated to be higher than future year 2010 rates and due to buildout contributing maximum ADT and utility consumption toward pollutant generation.	#91. All phases of the project shall comply with applicable rules and regulations of the South Coast Air Quality Management District.	
The project is estimated to result in an ultimate ADT of 169,400 vehicles. The project average trip length is estimated at 7.2 miles (the regional average for non-residential vehicle trips). This results in a total VMT (Vehicle Miles Traveled) estimate of 1,220,000.	#92. Projects that exceed SCAQMD threshold levels shall contribute to the Commuter Computer per City requirements.	
The mobile vehicle emissions and stationary natural gas and power plant emissions would result in the following estimated daily pollutant generation: 12,438 pounds of Carbon Monoxide, 3,371 pounds of Nitrogen Dioxide, 669 pounds of Sulphur Dioxide, 752 pounds of Particulates and 999 pounds of Reactive Hydrocarbons. Project emissions are considered to represent a significant addition of pollutants into the Southeast Desert Air Basin, and will be cumulatively significant. The project would significantly increase air emissions in the site vicinity, particularly along roadways (although resultant concentrations will not exceed state standards).		

C. SUMMARY OF PROJECT ALTERNATIVES

The following is a summary of project alternatives described in Section VI, ALTERNATIVES TO THE PROPOSED PROJECT. Refer to Section VI for a complete discussion of project alternatives.

"NO DEVELOPMENT" ALTERNATIVE (AUTO MALL ONLY)

None of the impacts associated with the construction of the Palmdale Trade and Commerce Center would occur if the "No Development" alternative was selected. Implementation of the "No Development" option would retain existing natural open space and would avoid any adverse physical, biological and human environmental impacts associated with development with the exception of the Auto Mall site (which was previously approved). In general, no project related environmental impacts would occur as the site would remain in its current state.

Under the "No Development" alternative, land use, relevant planning and fiscal projections would be inconsistent with the City of Palmdale General Plan guidelines which have anticipated project site development. This alternative has been rejected due to the loss of regional vehicle trip reduction, employment opportunities, service availability and economic benefits provided by the proposed project. In addition, this alternative would not preclude site development at a future date.

"NO PROJECT" ALTERNATIVE

The "No Project" alternative would allow development based on the existing land use zoning on the subject property, which consists of Commercial Planned Development (approximately 60% of the site) and Manufacturing Planned Development (approximately 40% of the site, or 300 acres). Buildout of the site may be slower and/or more costly with this alternative as more individual plans and associated environmental documents would have to be processed.

Ultimate impacts are anticipated to be similar to those of the proposed project as the land use designations would permit similar land uses. The project permits commercial/office land uses over a larger area, and therefore this alternative may result in lower development intensity than the proposed project. Lower density could result in decreased local traffic, noise and air quality impacts. However, the resultant loss of potential local employment and support services would impact regional traffic and air pollution.

Under the "No Project" alternative, the site would be developed parcel by parcel, and might result in greater land use and planning impacts than with the current project. The "No Project" alternative was rejected because it would not provide as many employment opportunities and support services, and would lack the planning and design benefits gained from a comprehensive Specific Plan.

"REDUCED DENSITY" ALTERNATIVE

This alternative has the same allowable land use types and site plan as the proposed project. However, the maximum square footage of each land use has been reduced by 25 percent. For example, the proposed Specific Plan allows up to 300,000 square feet of Post Market Auto Sales/Service use; the "Reduced Density" alternative would allow a maximum of only 225,000 square feet (75 percent of 300,000). The lower development intensity will reduce local traffic, public service and utilities demand, and glare/aesthetic impacts. The decreased local traffic volumes will result in consequent reductions in noise and local air quality impacts. It should be noted that the difference in impacts between this alternative and the proposed project will not be felt until the site has approached ultimate buildout (approximately 15-20 years from present).

The "Reduced Density" alternative is not being considered at present, as it is not anticipated to achieve the project goal of creating a diversified employment center in central Palmdale as effectively as the proposed Specific Plan. It may result in a less efficient use of prime developable land. Due to a reduction of certain environmental impacts, this alternative is considered the "environmentally superior" alternative. Market conditions may result in this alternative being realized (the EIR addresses a worst-case estimated buildout). Moreover, although the Specific Plan has no "cap" on maximum square footage (the EIR figures are based on a conservative development scenario), the "Reduced Density" alternative will be considered during the Specific Plan review process.

"ALTERNATIVE LAND USE" ALTERNATIVE

The market analysis performed by The Keith Companies for the City examined three alternative development scenarios.[1] The proposed Specific Plan is a modified version of Alternative No. 2 from the market analysis. Alternative No. 1 proposed a mixture of retail nd commercial uses, and Alternative No. 3 proposed a mixed use business park with retail

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[1]The Keith Companies, City of Palmdale Freeway Business Park Specific Plan: Adjustments to Demand Forecast, December 13, 1989.

and residential uses. Both of these alternatives were projected to leave a considerable portion of the site's developable land vacant at the end of 20 years (32 and 27 percent, respectively).

Both Alternative Scenario No. 1 and No. 3 are projected to result in less intense use of the project site, therefore the respective impacts are anticipated to be less significant than those of the proposed Specific Plan and similar to those of the "Reduced Density" alternative. Biological and aesthetic impacts would be further reduced due to the existence of undeveloped land. However, these alternatives result in inefficient utilization of prime developable land relative to the proposed project, and buildout of the site would likely still occur sometime beyond year 2010. Alternative Nos. 1 and 3 were not addressed within the EIR because they failed to utilize the entire site and were less representative of anticipated market demands.

"URBAN RESIDENTIAL" ALTERNATIVE

If a residential alternative is undertaken, most of the environmental impacts associated with the proposed project would still exist. The aesthetic characteristics of the project site would be altered from that of open space to that of a residential community, which would be similar to many environmental impacts of the proposed Trade and Commerce Center.

Impacts associated with land use and relevant planning would be significant because this alternative would be inconsistent with the land use and relevant planning designations of the City of Palmdale General Plan. Local traffic, noise and air quality impacts would be decreased. However, regional traffic and consequent air quality impacts would be greater than those of the proposed Specific Plan, due to a jobs/housing imbalance and loss of local employment opportunities and support services. Light and glare impacts would also be decreased due to the absence of signage.

Despite these reduced impacts, this alternative was rejected because it would exacerbate the City's jobs/housing imbalance rather than alleviate the current situation, and therefore fails to achieve a primary project objective to "provide a viable mix of commercial, industrial and public uses".

"ALTERNATIVE SITE"

Development of the proposed project on an alternate site would not be anticipated to provide a significant reduction in the project's overall environmental impact. Relocation of the project could reduce hydrological, biological and cultural/scientific resource related impacts if the alternate site contained these resources in lesser quantities or lower quality

than the proposed site. Noise and light and glare/aesthetic impacts would be reduced if the alternate site were located in a more remote area. However, location of the project in a more remote area would be likely to result in increased impacts upon traffic, public services and utilities, and air quality. The proposed site's location near downtown Palmdale and accessibility from SR 14 make it ideal for the proposed land uses. It would be difficult to achieve the project's primary objectives of facilitating the positive growth of the Palmdale employment base by locating the project further from the existing commercial areas along the freeway. Consequently, this alternative is not being considered at present.review in consideration of the project assumptions addressed in this EIR.

D. AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Specific Plan Maximum Square Footage and Traffic Generation

As discussed in Section III, PROJECT DESCRIPTION, this Environmental Impact Report has assumed conservative (high) estimates of potential ultimate development potential pursuant to the proposed Palmdale Trade and Commerce Center Specific Plan. However, as the Specific Plan has no "cap" on maximum square footage, it is possible (although considered unlikely) that ultimate land uses will exceed the maximum square footage assumed in the EIR. The EIR also makes conservative assumptions regarding the anticipated types of land uses (retail, commercial office, industrial), which directly affects the project traffic generation estimates. Although the Specific Plan does not limit the amount of retail land uses (the highest traffic generating land use), it is not considered likely that ultimate land uses will result in greater traffic generation than that assumed in this EIR. Also, each future site specific development application will require environmental review, and if warranted, will require a revised traffic study.

Property Acquisition

The proposed project site is comprised of approximately 68 parcels, ranging in size from less than an acre to nearly 100 acres. Although the proposed Circulation Plan was developed to minimize disruption to developable parcels, necessary road and flood control improvements are expected to require acquisition of privately owned parcels. The City of Palmdale, in accordance with existing federal, state and local laws, will be required to compensate property owners for any right-of-way acquisition, whether it be a part of or an entire parcel. This is based on "fair market value" of the land, as determined by a real estate assessor.

II. Introduction and Purpose

II. INTRODUCTION AND PURPOSE

A. PURPOSE OF THE EIR

The purpose of this Environmental Impact Report (EIR) is to review the existing conditions, analyze the potential environmental impacts and suggest feasible mitigation measures to reduce significant adverse environmental effects of the proposed project to acceptable levels. The proposal, referred to as the Palmdale Trade and Commerce Center Specific Plan, consists of approximately 756 acres located in western Palmdale planned for a variety of business park land uses. This EIR is intended to address all environmental aspects of project construction and development. The proposed project site is generally bounded by Avenue P to the north, Palmdale Boulevard to the south, future Division Street to the east, and 10th Street West to the west. The Antelope Valley Freeway (SR-14) bisects the site north to south. For more detailed information regarding the proposed development, please refer to Section III, PROJECT DESCRIPTION.

The project addressed within this EIR is defined as all actions associated with development of the proposed site. This includes, but is not limited to, direct and indirect effects resulting from implementation, construction and ultimate buildout of the proposed business park. This EIR will be used by the City of Palmdale, and any other responsible agencies, trustee agencies and interested parties to evaluate the environmental impacts of the proposed project. Refer to Section III.F, AGREEMENTS, PERMITS AND APPROVALS, for a list of required project approvals.

B. COMPLIANCE WITH CEQA

This EIR has been prepared in conformance with CEQA (the California Environmental Quality Act). The principle CEQA Guidelines Sections governing content of this document are Sections 15120 through 15132 (content of an EIR).

Pursuant to state and local CEQA guidelines, the City of Palmdale prepared an Initial Study (refer to Appendix A, INITIAL STUDY/NOTICE OF PREPARATION). The City determined that the project may result in significant adverse effects and therefore requires an EIR. This determination was based on the Initial Study, Appendix G of the CEQA guidelines, and a preliminary review of available project information.

C. SCOPE OF THE EIR

An Initial Study and a Notice of Preparation for the proposed project were distributed by the City of Palmdale on August 28, 1989. The Initial Study consists of a project description, checklist and discussion of anticipated significant environmental impacts of the project.

This EIR addresses potential significant impacts identified in the Initial Study. Additionally, this document includes relevant issues raised during the 30-day Notice of Preparation Review Period, which occurred from August 28 to September 26, 1989. The Initial Study identified the following topics requiring analysis within the EIR:

- Traffic/Circulation
- Hydrology
- Public Services and Utilities
- Geology and Soils
- Land Use
- Biological Resources
- Noise
- Light and Glare/Aesthetics
- Public Health and Safety
- Cultural Resources
- Air Quality

D. USE OF THE EIR

The EIR is part of the project review process for the proposed Palmdale Trade and Commerce Center Specific Plan. It is the intent of this EIR to enable the City of Palmdale, other responsible agencies, and interested parties to evaluate the environmental impacts of the proposed project. In addition, this EIR suggests measures to mitigate potential significant impacts of the project (refer to Section VII, INVENTORY OF MITIGATION MEASURES).

E. INCORPORATION BY REFERENCE

Pertinent documents relating to this EIR have been cited, in accordance with Section 15148 of the CEQA Guidelines, to eliminate the need for inclusion of voluminous engineering and technical reports within the EIR. A considerable sum of environmental information has been prepared previously which is relevant to the current project. In such circumstances, Section 15150 of the CEQA Guidelines encourages "incorporation by reference" as a means

of reducing redundancy and length of environmental reports. Of particular relevance are those previous EIRs which present information regarding descriptions of environmental settings, future onsite transportation facilities, and development-related growth and cumulative impacts. The following documents are hereby incorporated by reference into this Draft EIR (the appropriate EIR section has included relevant data); a synopsis of the scope and content of these documents follows:

Antelope Valley Mall Project Final EIR, SCH. No. 88101907, prepared for the City of Palmdale by Michael Brandman Associates, January 1989. This document was prepared to analyze the impacts associated with the development of 1,436,000 gross square feet of commercial building floor area on a 100-acre site at the northwest corner of 10th Street West and Avenue P, adjacent to the Specific Plan site. Issues discussed that are relevant to the current project and assisted in providing background information include traffic/circulation, air quality, noise, water/surface hydrology, and socioeconomics. The document is available for review at the City of Palmdale Planning Department.

Antelope Valley Auto Center Final EIR No. 88-4, SCH. No. 88071312, prepared for the City of Palmdale by LSA Associates, Inc., certified January 12, 1989. This document addresses a 173-acre site surrounded by the Specific Plan area, bounded by SR-14 to the east, 10th Street West to the west, Avenue P-8 to the north and Avenue Q to the south. Approximately 68 acres of the site are to be developed into 16 individual auto dealerships, restaurant uses and auto service/specialty stores. The 68-acre portion of the Auto Mall is not part of the Specific Plan area. As the Auto Center is located at the center of the Specific Plan area and the planned land uses are similar to those of the proposed Specific Plan, this EIR contains a considerable amount of information pertaining to existing conditions and project impacts (particularly for geology and hydrology). The document is available for review at the City of Palmdale Planning Department.

Palmdale Trade and Commerce Center Draft Specific Plan, prepared for the City of Palmdale by The Keith Companies, February 1990. This is the primary document governing development of the proposed site. Included within the Specific Plan are: project goals, objectives and policies; a detailed description of the project (including a Land Use Plan, Circulation Plan and related maps); project implementation strategy; and design regulations and guidelines. The document is available for review at the City of Palmdale Planning Department.

III. Project Description

III. PROJECT DESCRIPTION

A. LOCATION

The project area is an approximately 756-acre site located in the western portion of the City of Palmdale in northern Los Angeles County (see Exhibit 1, REGIONAL LOCATION). The site is generally bounded by Avenue P and the Antelope Valley Freeway (SR14) to the north, Palmdale Boulevard to the south, Division Street to the east and 10th Street West to the west (see Exhibit 2, SITE VICINITY MAP). The San Andreas Rift Zone and Anaverde Valley are located south and east of the site on the other side of a low ridgeline. Palmdale City center is approximately one mile southwest of the site. The City of Lancaster is located approximately seven miles north of the site.

B. HISTORY AND BACKGROUND

The project site is mostly undeveloped with some existing development along the southern, western and northern borders (see Exhibit 3, AERIAL PHOTO). A site plan and EIR for a proposed auto mall, the Antelope Valley Auto Center, at the center of the site was previously approved by the City on February 9, 1989. The 68-acre auto mall is not part of the proposed Specific Plan. The City of Palmdale has experienced rapid growth since the early 1960s. The tremendous increase in available housing and consequent residential population growth has resulted in a high demand for support services and industries. The Palmdale Trade and Commerce Center Specific Plan, proposed by the City of Palmdale, is intended to alleviate this demand by providing opportunity for increased development of the site with commercial and office uses. At present, there are seven development applications for the site pending adoption of the proposed Specific Plan (these are available for review at the City of Palmdale Planning Department). An Initial Study was completed for the Specific Plan on August 18, 1989. A Notice of Preparation of the Specific Plan EIR was distributed on August 29, 1989. Robert Bein, William Frost & Associates (RBF) was contracted by the City of Palmdale to prepare the EIR October 18, 1989.

C. SITE DESCRIPTION

The project site is located on the floor of the Antelope Valley. The topography is relatively flat with some gentle slopes. None of the slopes are steeper than a 15% grade. Three drainages, (including Amargosa Creek) cross the site diagonally from southwest to northeast. The vegetative communities onsite consist primarily of disturbed areas, rabbit brush scrub and introduced annual grassland. There are approximately 43 acres of Joshua Tree/Juniper woodland located on the northwest portion of the site. The central west

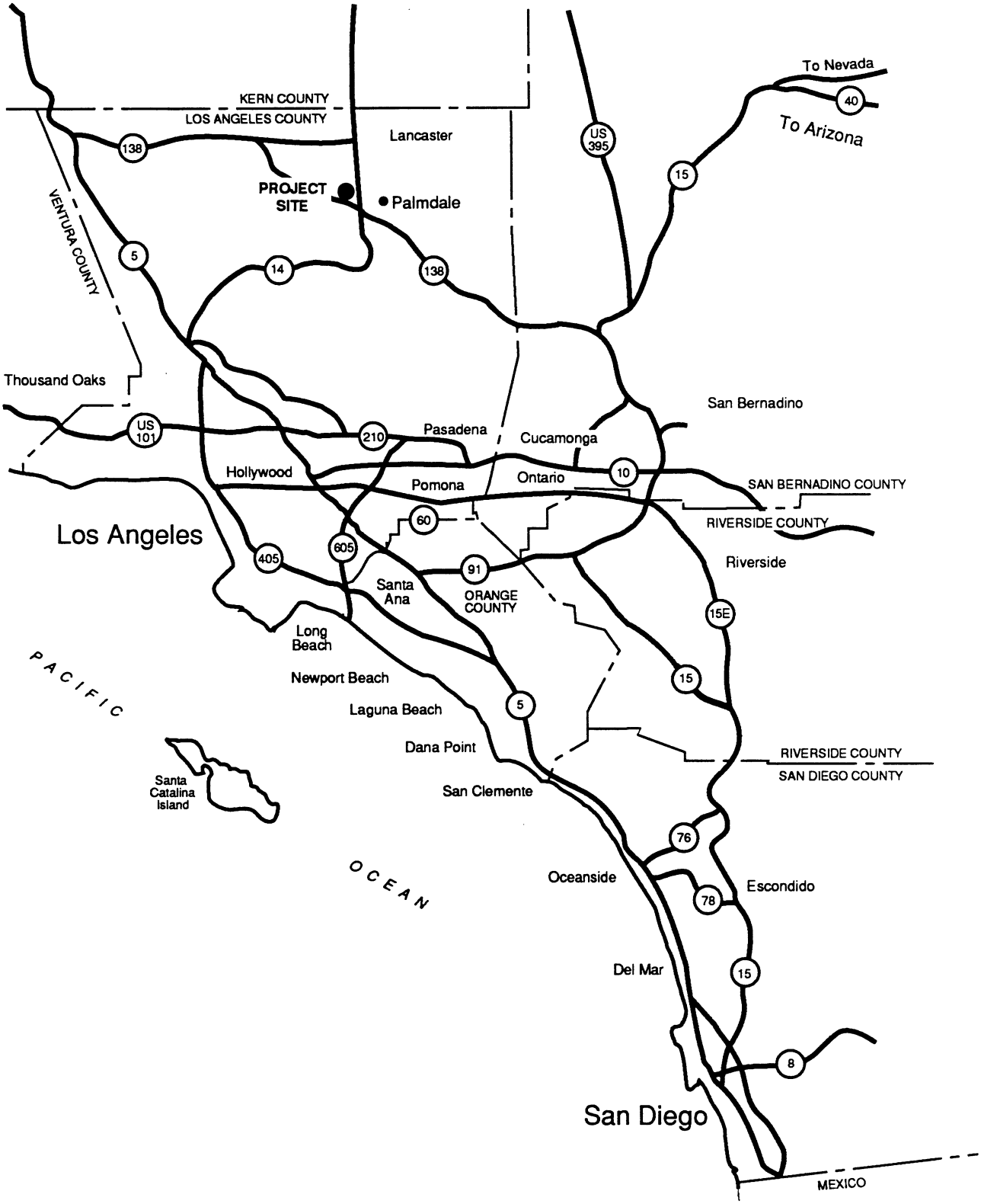
portion of the site has been graded (approximately 159 acres, including 91 acres of the project site) as part of the Antelope Valley Auto Center Tentative Tract Map area (refer to Exhibit 3, AERIAL PHOTO).

The project site is currently partly developed with travel related services along both sides of Palmdale Boulevard including several hotels, restaurants, an auto dealership and gasoline service stations. The 68-acre Antelope Valley Auto Center is currently under construction on the west side of the freeway north of Avenue Q (anticipated to open at the end of 1990). It is not included as part of the Specific Plan. The Faith Community Church and school and the Golden State Electric Company are located on the project site along 10th Street West. The Antelope Valley Freeway (SR14) bisects the site north to south. The site is mostly vacant on the east side of the freeway. A public storage facility is located on the northern portion of the site near the southeast corner of Avenue P and the Antelope Valley Freeway. Surrounding land uses include single-family residential uses on the north and east project boundaries, multi-family residential to the south and mixed commercial and multi-family residential to the west.

D. PROJECT CHARACTERISTICS

The proposed project is the adoption of the Palmdale Trade and Commerce Center Specific Plan. The Specific Plan allows for a wide variety of commercial and industrial uses on the approximately 756-acre project site. Ultimate development of the project site is assumed to result in approximately 2.71 million square feet (SF) of general retail land use, 2.18 million SF of commercial office use, 2.68 million SF of industrial use and 82,000 SF of hotel use (see Table 1, ULTIMATE DEVELOPMENT PROFILE). No residential uses will be allowed. The Specific Plan is flexible with regard to type and location of specific land uses within the project site. The EIR has assumed worst-case square footage and land uses (the Specific Plan has no "cap" on square feet for any land use). Each future application will require environmental review in consideration of the land uses and square footage assumed in the EIR.

It is City Staff's intent that this project will encourage development of needed service and employment opportunities, and provide a mixed use activity center for the City of Palmdale and the region as a whole. The following major project components are described in this section: Land Use, Circulation Plan, Landscape Concept, and Infrastructure. Refer to the Draft Palmdale Trade and Commerce Center Specific Plan for a more detailed discussion of the project characteristics (available for review at the City of Palmdale Planning Department).



Project Site

0 20 Miles

PALMDALE TRADE AND COMMERCE CENTER

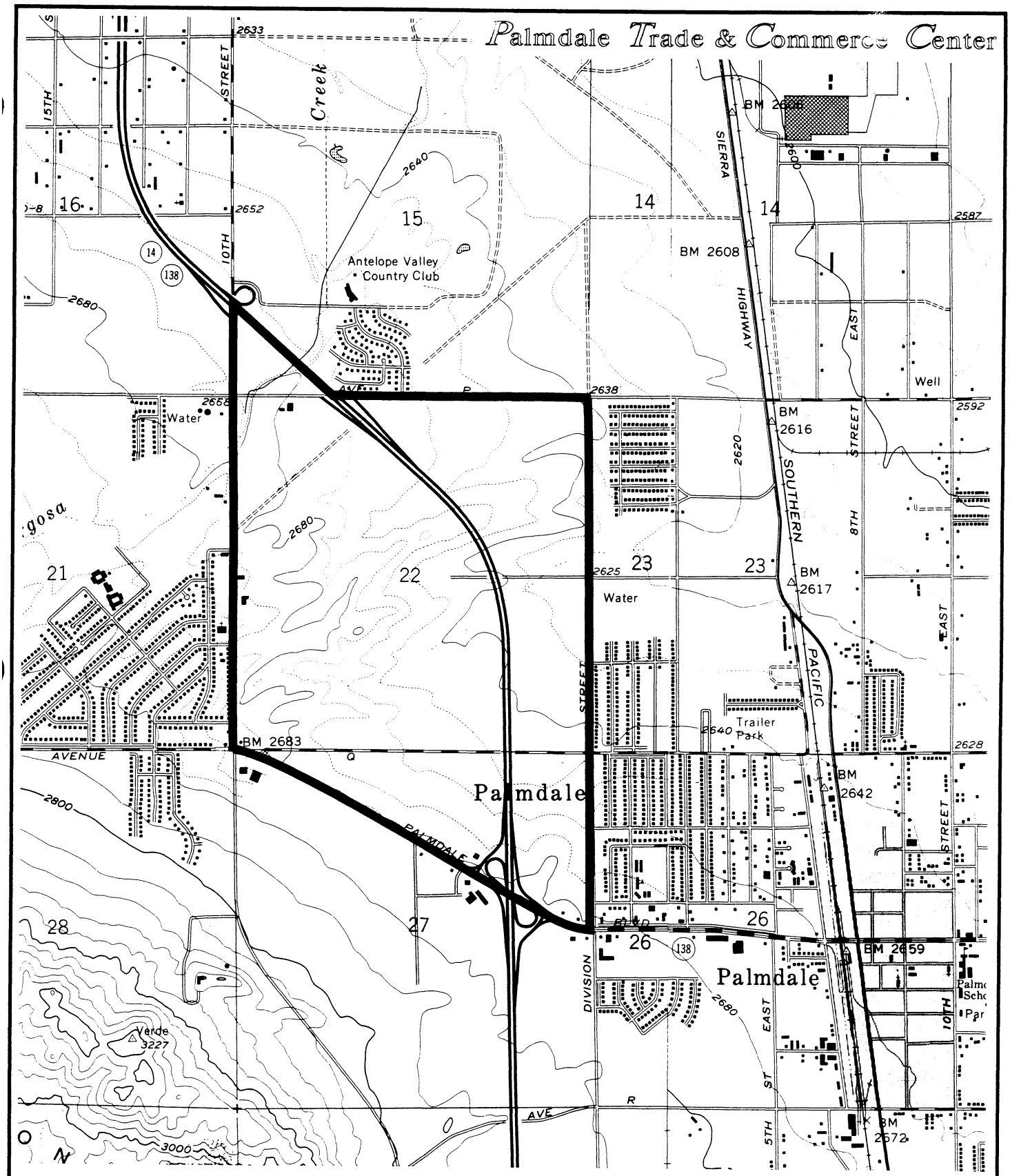
Regional Location

Robert Bein, William Frost & Associates

3-90

JN 25957-2898

Exhibit 1



PALMDALE TRADE AND COMMERCE CENTER

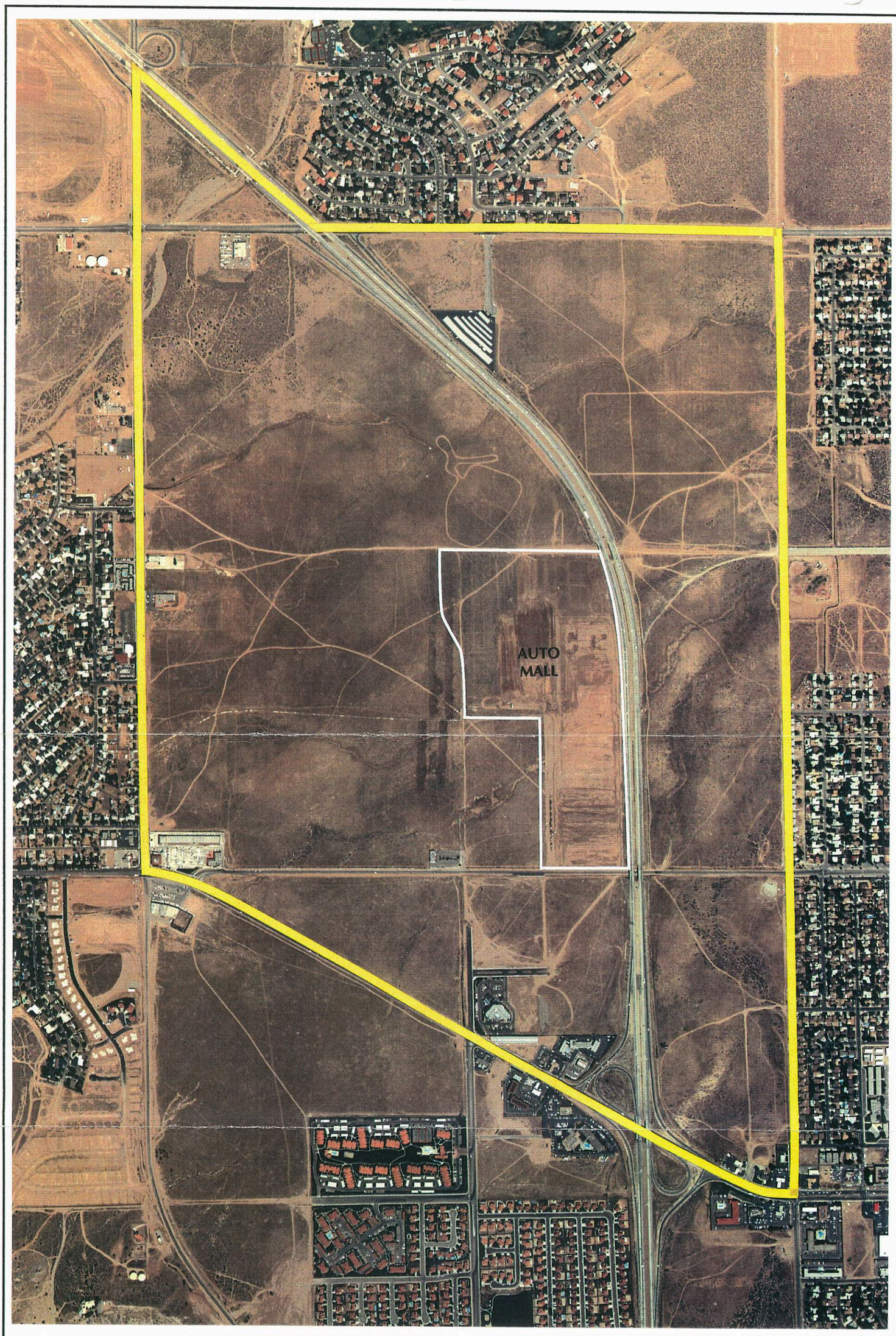
Site Vicinity Map

Robert Bein, William Frost & Associates

3-90

JN 25957-2898

Exhibit 2



Source: I.K. Curtis
Date of Flight: May 27, 1989

Project Boundary

0 750'

Robert Bein, William Frost & Associates
1-90 JN 25957-2898

PALMDALE TRADE AND COMMERCE CENTER

Aerial Photo

Exhibit 3

TABLE 1

ULTIMATE DEVELOPMENT PROFILE[1]

Land Use	Estimated Square Footage	Net Acreage
Post Market Auto Sales/Service[2]	300,000	27.4
Off-Price/Promotion Centers	756,000	82.6
Retail	1,645,000	151.1
Commercial Office	2,177,000	147
Industrial	2,676,000	175.7
Hotel[3]	82,000	9.4
Total Buildable Area ("Net Acreage")[4]	-	**593.2**[4]
Total Estimated Square Footage	**7,636,000**	-

Land Use Plan

A market analysis and an alternative land use analysis were conducted during the preparation of the Specific Plan. These analyses were performed to determine what types and quantities of proposed land uses are expected to be absorbed by the Palmdale market. The City chose a business/industrial park with retail uses as the preferred alternative for the Specific Plan (a modified version of alternative development scenario No. 2, as referenced in the marketing study). No residential uses are permitted within the Specific Plan area. A profile of this alternative is shown above in Table 1, ULTIMATE DEVELOPMENT PROFILE. This development profile was established by City staff and is based in part upon the findings of the above mentioned analyses. Land uses shown in

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[1]These land uses and associated square footages would be distributed throughout the Specific Plan, although anticipated Planning Areas (PA) are noted where applicable.

[2]These uses are anticipated to be located primarily in PA5, along Avenue Q south of and adjacent to the auto mall.

[3]The hotel is anticipated to be located within PA5 on the northeast corner of SR14 and Palmdale Boulevard.

[4]Does not include Planning Area 3 with 15.1 acres of flood control facilities.

this table are based on anticipated market demand and would be absorbed throughout the Specific Plan where permitted. As the actual buildout of the Specific Plan may vary from figures presented here (more, less and/or different land uses), the EIR has assumed ultimate development conditions as shown in Table 1 (also refer to Section IV.A, TRAFFIC AND CIRCULATION).

The development and design of the project has resulted in a Specific Plan which:

- Creates a circulation system that, for the most part, abides by existing property boundaries. However, efforts will be made during project development to consolidate smaller parcels within the Specific Plan area in order to create larger parcels and facilitate development of a more congruous character for the site.

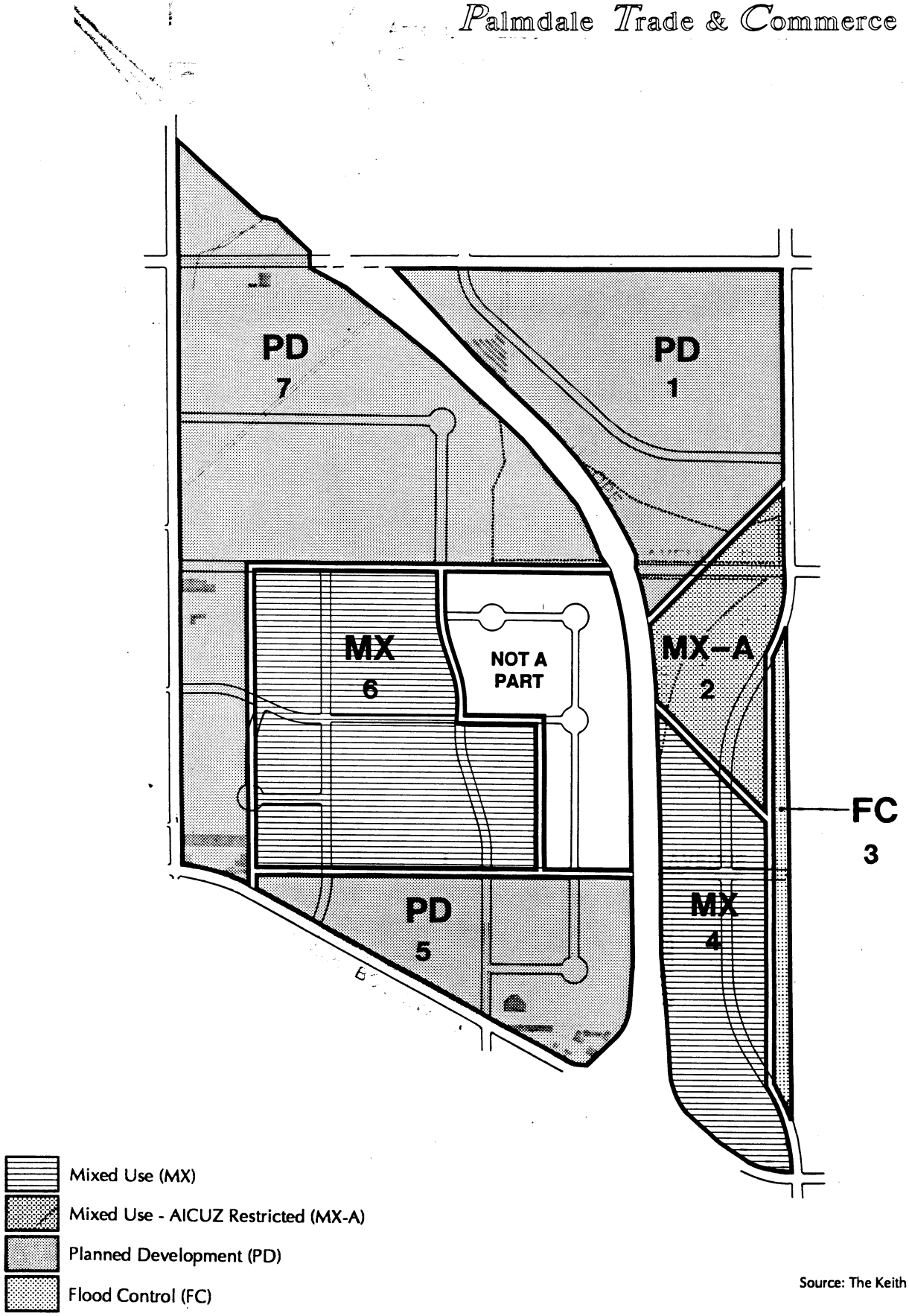
- Buffers adjacent residential land uses from higher intensity uses within the project area. This is achieved, in part, via realignment of arterials away from existing residential uses (Division Street), by landscaping and setbacks along major peripheral arteries, and by designating those lands adjacent to residential uses as planned developments.

- Locates landscaped flood control facilities such that they serve as buffers to offsite residential uses and can be utilized for joint drainage/recreational uses.

- Allows a maximum flexibility for development by permitting a wide range of uses in each of the land use zones, while maintaining a high level of design quality by utilization of relatively uniform development standards and architectural guidelines which will guide the visual character of the project site.

The land use distribution for the Palmdale Trade and Commerce Center Specific Plan is presented in Exhibit 4, LAND USE PLAN. The Specific Plan area has been divided into seven Planning Areas, each with one of four land use designations. The land use designations and their definitions as they pertain to the Specific Plan are as follows:

- <u>MX: Mixed Use</u> (Planning Areas 4 and 6): This land use category permits a wide range of commercial, office, public administration and manufacturing uses. Agricultural, transportation, and public utility uses, as well as certain manufacturing uses, are permitted with a Conditional Use Permit (CUP).



Source: The Keith Companies

PALMDALE TRADE AND COMMERCE CENTER

Land Use Plan

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 4

- MX-A: Mixed Use - AICUZ Restricted (Planning Area 2): This category allows for a majority of the uses permitted and conditionally permitted in the Mixed Use Zone. However, certain uses which are incompatible with the USAF Plant 42 Air Installation Compatibility Use Zone IIa are not permitted (due to height restrictions and crash hazard potential).

- PD: Planned Development (Planning Areas 1, 5 and 7): This category allows office, commercial and public administrative uses. Some commercial uses, depending on type, as well as agricultural, transportation and public utility uses require a CUP. Manufacturing uses are prohibited in this zone.

- FC: Flood Control (Planning Area 3): This zone contains two landscaped flood control basins.

Table 2, LAND USE STATISTICAL SUMMARY, gives the land use designation, estimated net area in acres and percentage of the total project acreage for each Planning Area. Allowable uses are shown in Table 3, PALMDALE TRADE AND COMMERCE CENTER LAND USE MATRIX.

Circulation Plan

The Circulation Plan for the proposed Specific Plan establishes a hierarchy of circulation features ranging from urban/divided major arterial streets to minor arterials and collectors (see Exhibit 5, CIRCULATION PLAN and Section IV.A, TRAFFIC AND CIRCULATION). Avenue P-8 will be constructed as an urban major arterial through the site to 10th Street West, and 5th Street West will serve as a major south access street for the project. Division Street will be realigned westerly to provide a buffer to adjacent offsite residential uses east of the Specific Plan area. The circulation plan includes right-of-way (ROW) requirements for Highway 138 and the associated interchange with SR-14 for future use, should Avenue P-8 be designated as the new route alignment. (The new freeway and interchange is a separate project presently under consideration by CALTRANS). As noted in Exhibit 5, collector roads, are subject to modification during future detailed site specific studies, and may be constructed as private drives (this will not significantly affect traffic or circulation).

TABLE 2

LAND USE STATISTICAL SUMMARY

Planning Area	Land Use Designation		Estimated Net Area (Acres)	% Total Site
1	PD	Planned Development	129.5	17.1
2	MX-A	Mixed Use-AICUZ	41.0	5.4
3	FC	Flood Control	15.1	2.0
4	MX	Mixed Use	62.7	8.3
5	PD	Planned Development	64.9	8.6
6	MX	Mixed Use	96.0	12.7
7	PD	Planned Development	199.1	26.3
		SUBTOTAL (net acres)	**608.3 acres**	**80.4**
		Streets/Other	94.7	12.5
		SR 14 ROW	53.2	7.1
		TOTAL (gross acres)	**756.2 acres**	**100%**

Source: The Keith Companies

TABLE 3

PALMDALE TRADE AND COMMERCE CENTER
LAND USE MATRIX

Standard Industrial Classification		Land Use Categories		
		MX	MX-A	PD
A. AGRICULTURE, FORESTRY, AND FISHING				
01	Agriculture Production -- Crops	CUP	CUP	CUP
02	Agricultural Production -- Livestock	-	-	-
07	Agricultural Services	CUP	CUP	CUP
08	Forestry	-	-	-
09	Fishing, Hunting, and Trapping	-	-	-
B. MINING				
10	Metal Mining	-	-	-
12	Coal Mining	-	-	-
13	Oil and Gas Extraction	-	-	-
14	Nonmetallic Minerals, Except Fuels	-	-	-
C. CONSTRUCTION				
15, 16, 17	Construction and Contractors (Offices Only)	P	P	CUP
15, 16, 17	Construction and Contractors (Operational Storage Yards)	CUP	CUP	-

- = Prohibited
P = Permitted Use
CUP = Conditional Use Permits Required

TABLE 3
(Continued)

PALMDALE TRADE AND COMMERCE CENTER
LAND USE MATRIX

Standard Industrial Classification		Land Use Categories		
		MX	MX-A	PD
D.	MANUFACTURING			
20	Food and Kindred Products	CUP	CUP	-
21	Tobacco Products	P	P	
22	Textile Mill Products	P	-	-
23	Apparel and Other Textile Products	P	-	-
24	Lumber and Wood Products	CUP	CUP	-
25	Furniture and Fixtures	CUP	CUP	-
26	Paper and Allied Products	CUP	CUP	CUP
27	Printing and Publishing	P	P	P
28	Chemicals and Allied Products	CUP	CUP	-
29	Petroleum and Coal Products	-	-	-
30	Rubber and Miscellaneous Plastics Products	CUP	CUP	-
31	Leather and Leather Products	CUP	-	-
32	Stone, Clay, and Glass Products	P	P	-
33	Primary Metal Industries	-	-	-
34	Fabricated Metal Products	P	P	-
35	Industrial Machinery and Equipment	P	P	-
36	Electronic and Other Electric Equipment	P	P	-
37	Transportation Equipment	P	P	-

- = Prohibited
P = Permitted Use
CUP = Conditional Use Permits Required

TABLE 3
(Continued)

PALMDALE TRADE AND COMMERCE CENTER
LAND USE MATRIX

Standard Industrial Classification		Land Use Categories		
		MX	MX-A	PD
38	Instruments and Related Products	P	-	-
39	Miscellaneous Manufacturing Industries	P	P	-
E.	TRANSPORTATION AND PUBLIC UTILITIES			
40	Railroad Transportation	CUP	CUP	CUP
41	Local and Interurban Passenger Transit	P	P	-
41a	Terminal and Service Vehicles	CUP	CUP	P
42	Motor Freight Transportation and Warehousing	CUP	CUP	CUP
43	U.S. Postal Service	P	P	P
44	Water Transportation	-	-	-
45	Transportation by Air	CUP	-	CUP
46	Pipelines, Except Natural Gas	-	-	-
47	Transportation Services	P	P	P
48	Communications	P	P	CUP
49	Electric, Gas and Sanitary Services	P	P	CUP
F.	WHOLESALE TRADE			
50	Wholesale Trade -- Durable Goods	P	P	-
51	Wholesale Trade -- Nondurable Goods (Except Farm Product Raw Materials, Chemicals and all IGD Products, Petroleum and Petroleum Products)	CUP	P	-

- = Prohibited
P = Permitted Use
CUP = Conditional Use Permits Required

TABLE 3
(Continued)

PALMDALE TRADE AND COMMERCE CENTER
LAND USE MATRIX

Standard Industrial Classification		Land Use Categories		
		MX	MX-A	PD
G. RETAIL TRADE				
52	Building Materials and Garden Supplies	P	-	CUP
53	General Merchandise Stores	P	P	P
54	Food Stores (excludes Convenience Markets)	P	P	P
54a	Convenience Markets	CUP	CUP	CUP
55	Automotive Dealers and Service Stations	CUP	CUP	CUP
56	Apparel and Accessory Stores	P	P	P
57	Furniture and Home Furnishings Stores	P	P	P
58	Eating and Drinking Places	CUP	-	P
59	Miscellaneous Retail	P	P	P
H. FINANCE, INSURANCE, AND REAL ESTATE				
60	Depository Institutions	P	P	P
61	Non-depository Institutions	P	P	P
62	Security and Commodity Brokers	P	P	P
63	Insurance Carriers	P	P	P
64	Insurance Agents, Brokers, and Services	P	P	P
65	Real Estate	P	P	P
67	Holding and Other Investment Offices	P	P	P

- = Prohibited
P = Permitted Use
CUP = Conditional Use Permits Required

TABLE 3
(Continued)

PALMDALE TRADE AND COMMERCE CENTER
LAND USE MATRIX

Standard Industrial Classification			Land Use Categories		
			MX	MX-A	PD
I.	SERVICES				
	70	Hotels and Other Lodging Places	P	-	P
	72	Personal Services	P	P	P
	73	Business Services	P	P	P
	75	Auto Repair, Services, and Parking	P	P	CUP
	76	Miscellaneous Repair Services	P	P	P
	78	Motion Picture Related	P	CUP	CUP
	79	Amusement and Recreation Services	P	CUP	CUP
	80	Health Services	P	P	P
	81	Legal Services	P	P	P
	82	Educational Services and Institutions	P	P	P
	83	Social Services	P	P	CUP
	84	Museums, Botanical, Zoological Gardens	P	P	P
	86	Membership Organizations	P	P	P
	87	Engineering and Management Services	P	P	P
	88	Private Households	-	-	-
	89	Services, Not Elsewhere Classified	P	P	P
J.	PUBLIC ADMINISTRATION				
	91	Executive, Legislative, and General	P	P	P
	92	Justice, Public Order, and Safety	P	P	P
	93	Finance, Taxation, and Monetary Policy	P	P	P
	94	Administration of Human Resources	P	P	P

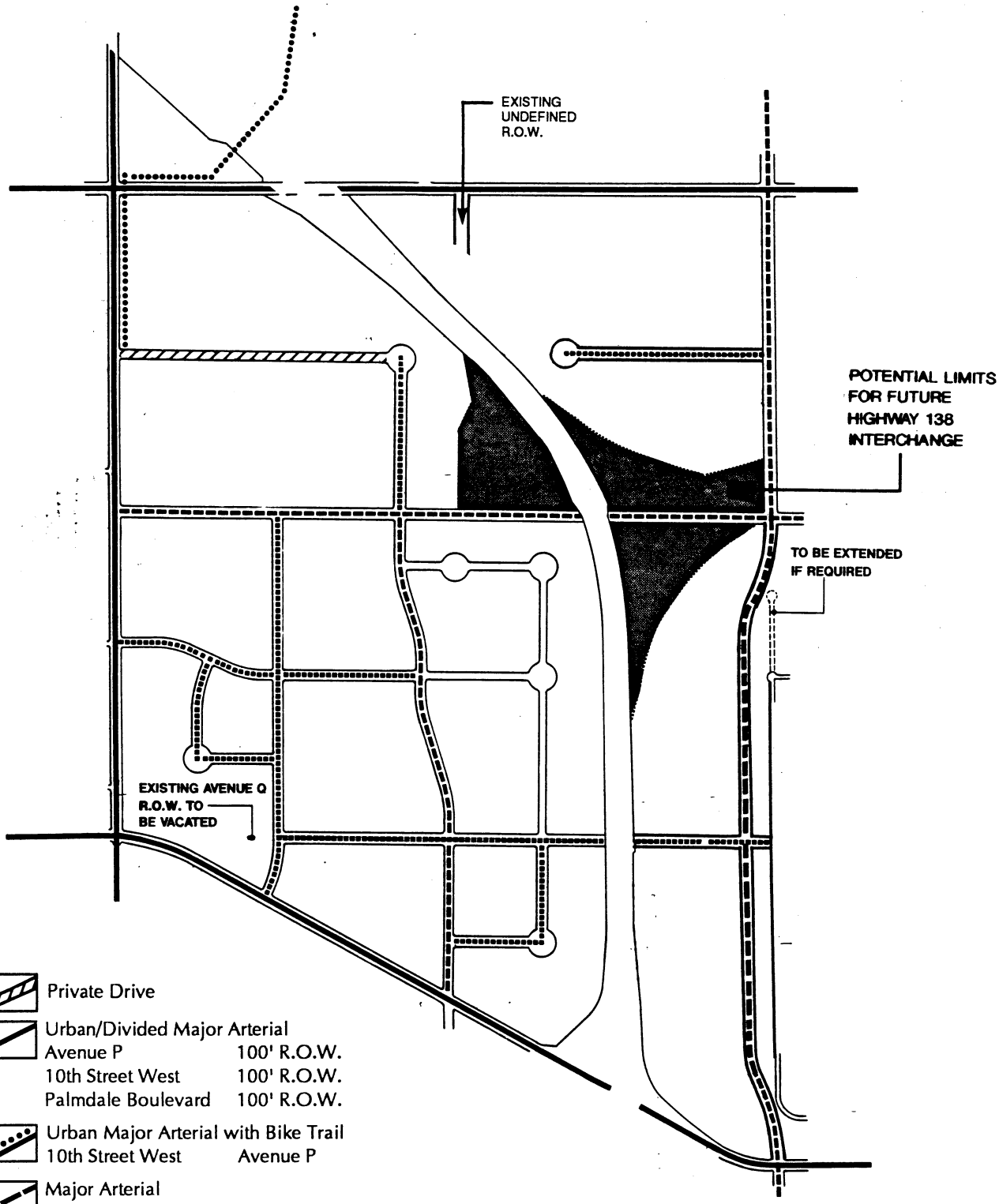
- = Prohibited
P = Permitted Use
CUP = Conditional Use Permits Required

TABLE 3
(Continued)

PALMDALE TRADE AND COMMERCE CENTER
LAND USE MATRIX

Standard Industrial Classification			Land Use Categories		
			MX	MX-A	PD
	95	Environmental Quality and Housing	P	P	P
	96	Administration of Economic Programs	P	P	P
	97	National Security and International Affairs	P	P	P
K.	NONCLASSIFIABLE ESTABLISHMENTS				
	99	Nonclassifiable Establishments	CUP	CUP	CUP
L.	RESIDENTIAL				
		Single-Family Detached	-	-	-
		Single-Family Attached	-	-	-
		Multi-Family Dwelling	-	-	-
		Mobile Home Parks or Courts	-	-	-
		Other Residential	-	-	-
M.	PARKS		P	P	P

- = Prohibited
P = Permitted Use
CUP = Conditional Use Permits Required



Private Drive

Urban/Divided Major Arterial

Avenue P	100' R.O.W.
10th Street West	100' R.O.W.
Palmdale Boulevard	100' R.O.W.

Urban Major Arterial with Bike Trail

10th Street West	Avenue P

Major Arterial

5th Street West	100' R.O.W.
Avenue P-8	100' R.O.W.
Division Streeet	100' R.O.W.

Minor Arterial/Collectors

Avenue Q	80' R.O.W.
Internal Collectors	84' R.O.W.

0 1000'

Source The Keith Companies

Notes: Collector configuration shown is the current plan based on landowner input. Other exhibits reflect a previous configuration. The differences between the current collector configuration and the previous plan are minor; there are no significant differences in environmental impacts between the two plans. All collectors are subject to change.

PALMDALE TRADE AND COMMERCE CENTER

Circulation Plan

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 5

In keeping with General Plan policies which call for internodal transportation facilities, the Specific Plan proposes bike trails that link east and west Palmdale. Avenue P-8, 5th Street West and Amargosa Creek will be furnished with bike trail facilities.

Landscape Concept Plan

The Landscape Concept Plan for the Palmdale Trade and Commerce Center is intended to establish a strong, formal framework of street tree plantings appropriate to the modified-grid character of the circulation plan (see Section IV.H, LIGHT AND GLARE/ AESTHETICS). Within this framework, each development is encouraged to utilize informal plantings to create a softer, park-like atmosphere and diversity in landscape design of individual developments as a counterpoint to the formality of the street landscaping. The landscape concept proposes that individual developments with freeway frontage use informal landscape plans, so that the image presented from the freeway will be of the more gentle interior landscaping of the site.

Special landscaping and design treatments are proposed for the project entries. This is to enhance the design quality of the project by announcing entrance to the project and highlighting major intersections. Primary project entries will utilize landscape easements incorporating circular or semicircular plantings of magnolia trees and project entry monument signs. Secondary project entry intersections will utilize enhanced ground-plane planting and smaller entry monument signs.

Infrastructure Plan

Sewer

The Specific Plan area is within, and will receive sewer service from, Los Angeles County Sanitation District No. 20. Existing and proposed sewage facilities within and adjacent to the project site are discussed in Section IV.C, PUBLIC SERVICES AND UTILITIES. All wastewater generated within the Specific Plan area will be collected and routed to an 18" line in Avenue P-8 (currently under construction). The sewage will flow east from that point to the Palmdale Wastewater Reclamation Plant located at Avenue P-8 and 30th Street East. Proposed sewer lines within the Plan area range from 8" to 24". All lines will utilize gravity flow.

Water

Water service to the proposed project area east of SR14 will be provided by the Palmdale Water District. The project area west of SR14 will be served by Los Angeles County Water District No. 34. Existing and proposed water lines within and adjacent to the Specific Plan

area are discussed in Section IV.C, PUBLIC SERVICES AND UTILITIES. Proposed water lines have been located such that any tract within the Plan area can receive service without offsite improvements. A 200,000 gallon storage reservoir will be required within Palmdale Water District to serve cumulative peak water demands. All lines proposed are 12" or 16" and have been sized to provide adequate fire flows.

Drainage

The project involves construction of on and offsite Master Plan of Drainage improvements including channelization of Amargosa Creek, as well as construction of stormdrains, two onsite flood control ponds, one offsite flood control pond and other offsite drainage improvements (see Section IV.B, HYDROLOGY). Stormdrains will be sized to convey 50-year flood volumes and will discharge into a series of stormwater detention ponds located along Division Street. These ponds will discharge into a regional drainage channel which will carry floodwaters east to Sierra Highway.

The detention ponds have been sized to detain the difference between peak runoff prior to and after development, as well as to accommodate future development in the watershed upstream. The ponds will be required to detain volumes approximating 302 acre-feet of water. Pond "A" will be 250 feet wide, 14 feet deep and hold up to 157 acre-feet of water. The two ponds designated "B" will be 150 feet wide, 12 feet deep and have a combined storage volume of 145 acre-feet. The ponds will be landscaped with drought tolerant vegetation and will be maintained as joint drainage and recreational facilities. Per City policy, the ponds will be fenced and gated to prevent unauthorized use during periods of heavy rainfall.

Other Utilities

Other utilities to be provided within the Specific Plan area include power, gas, telecommunications and cable television. Simple line extensions will make these services available to the Plan area.

E. PROJECT OBJECTIVES

The primary objectives of the Palmdale Trade and Commerce Center Specific Plan are to:

- Provide a viable mix of commercial, industrial and public uses consistent with the capabilities of the City and special districts to provide services.

- Establish a mixed use activity center to complement residential development in the City.

- Design and coordinate development within the Specific Plan to complement the central area of Palmdale, create an attractive activity center, and enhance the image and quality of life in the City.

- Ensure that the Specific Plan road network provides for the functional access needs of the area.

- Encourage the use of internodal transportation within the Specific Plan area.

- Provide for an attractive, safe and well functioning employment center with a high level of public services and facilities to enhance the quality of life for all residents and promote community identity.

- Provide for a range of recreational opportunities within the Specific Plan area.

- Ensure that environmentally sensitive habitats within the Specific Plan area are adequately protected.

- Ensure that development within the Specific Plan area is subject to public review in regards to seismic hazards.

F. AGREEMENTS, PERMITS AND APPROVALS

Several agreements, permits and approvals will be required as a part of the proposed project. Following distribution of the draft EIR, a 45-day public review period is provided for public comment, in accordance with CEQA. At the end of the review period, the Palmdale City Council will make a determination regarding the adequacy of the Final EIR.

The Final EIR will include the Draft EIR (with revisions, if necessary) as well as comments received during the review period and responses to those comments. Following a determination that the Final EIR is adequate and certification of the Final EIR by the City Council, a Notice of Determination will be issued by the City should the project be approved.

The following is a list of responsible agencies and the associated approvals and permits anticipated to be required for the proposed project.

Responsible Agency	Approval/Permit
City of Palmdale City Council	o Final EIR Certification
City Council	o Project Approval (Adoption of Specific Plan)
City Planning Department	o Site-Specific Environmental Review
U.S. Army Corps. of Engineers	o 404 Permit
California Dept. of Fish and Game	o 1603 Agreement
City Planning Commission	o Parcel Maps/Tract Maps/Conditional Use Permits
Planning Department	o Site Plans
City Engineering Department	o Grading Permits
City Building and Safety Department	o Building Permits

In addition to the above, the project will require public services and utilities. Accordingly, developers will pay mitigation fees and negotiate agreements with the utilities and service agencies as required. This will include assessment fees for water and sewer services. Additional fees will be required for fire protection services.

IV. Description of Environmental Setting, Impacts and Mitigation Measures

A. TRAFFIC AND CIRCULATION

This section contains the traffic impact analysis for the Palmdale Trade and Commerce Center Specific Plan in the City of Palmdale. Existing traffic conditions, project impacts upon traffic, and measures intended to mitigate these impacts are discussed in the following text. Data used in this analysis was obtained from the Palmdale Trade and Commerce Center Traffic Study, prepared by Kunzman and Associates in March, 1990 (Appendix B).

EXISTING CONDITIONS

The following discussion describes existing traffic conditions and planned improvements to the street system in the vicinity of the project.

Circulation

The project is located in the area bounded by 10th Street West, Avenue P, Division Street and Palmdale Boulevard. Roadways that provide access to the development include 10th Street West, Avenue P, Avenue P-8, Avenue Q, Palmdale Boulevard, Division Street, and the SR 14 Freeway. In the vicinity of the project site, the following roadway conditions exist (see Exhibit 6, EXISTING CIRCULATION SYSTEM).

10th Street West is a two lane street in the vicinity of the site. It is a key north-south street providing access to Lancaster to the north. 10th Street West has a partial interchange with the SR 14 Freeway (southbound off and northbound on-ramps).

Avenue P is an east-west arterial providing access to the employment and residential facilities to the east of the site and to the developing residential areas to the west. Avenue P has a partial interchange with the SR 14 Freeway (southbound on and northbound off ramps).

Avenue P-8 exists as a 4 lane divided street between the Division Street alignment and Sierra Highway.

Avenue Q extends easterly from Palmdale Boulevard and provides access to the existing residential areas to the east of the SR 14 Freeway. At present, Avenue Q does not connect with Sierra Highway.

Palmdale Boulevard is a 4-lane divided street serving as the major east-west arterial in Palmdale. It has a full interchange with the SR 14 Freeway and connects with Elizabeth Lake Road to the west of the site.

Division Street currently exists as a two lane road between Palmdale Boulevard and the future Avenue P-12 alignment. Division Street has direct residential frontage on the east side of the street. An element of the project's circulation system is the construction of Division Street west of its present alignment.

SR 14 Freeway (Antelope Valley Freeway) has 6 lanes north of Palmdale Boulevard and 4 lanes south of Palmdale Boulevard, linking Palmdale with the City of Lancaster and other north valley areas, and with the Los Angeles area to the south.

Planned Improvements

The following improvements have been funded for roadways in the vicinity of the site:

1. Widening of 10th Street West to 4 lanes north of the SR 14 Freeway.

2. Widening of 10th Street West to 6 lanes between the SR 14 Freeway and the future Avenue P-8.

3. Widening of 10th Street West to 5 lanes (3 northbound and 2 southbound) between the future Avenue P-8 and Elizabeth Lake Road.

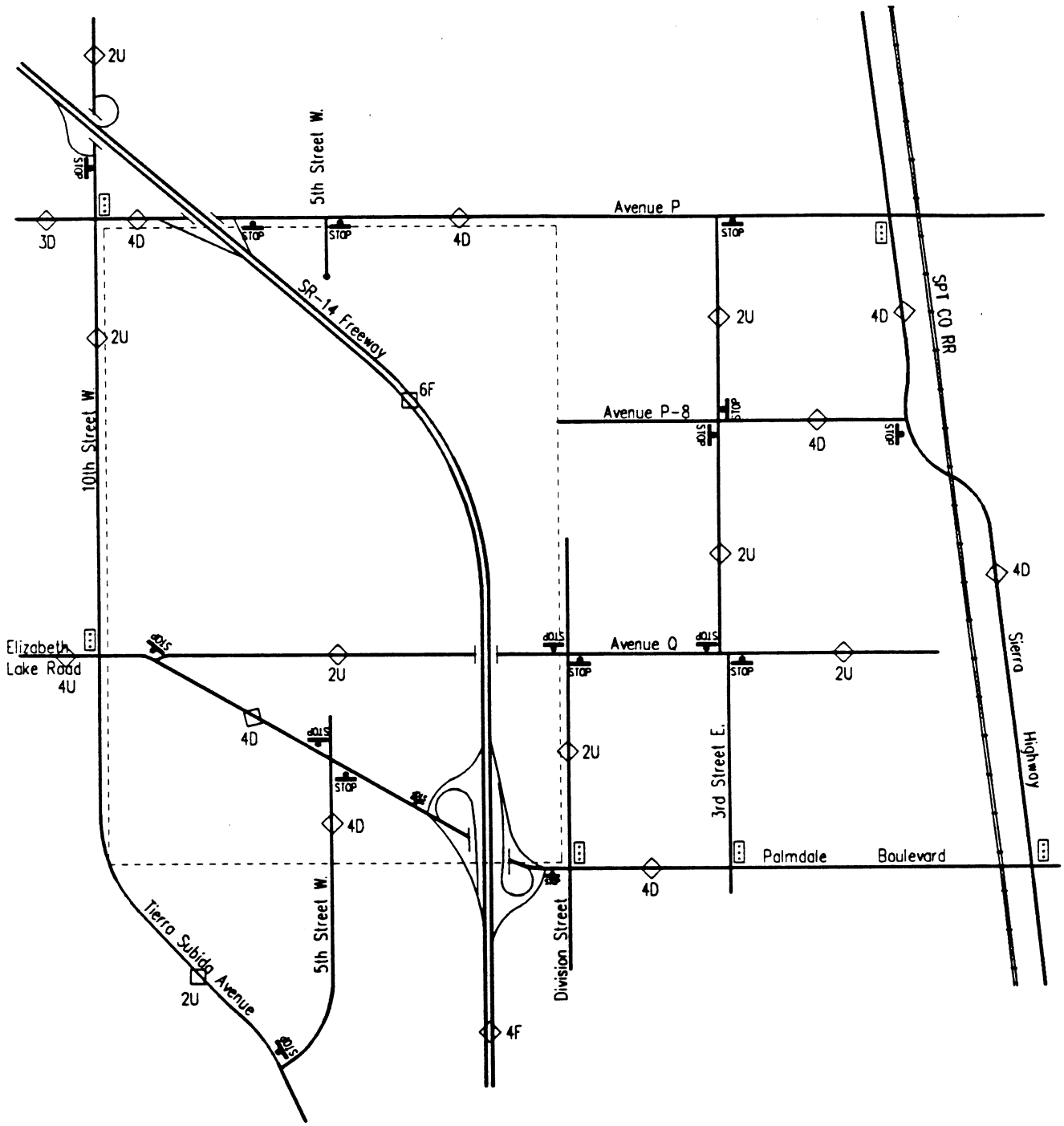
4. Widening of Avenue P to 6 lanes between the SR 14 Freeway and 15th Street West.

5. Construction of Avenue P-8 as a 4-lane street between 10th Street West and Division Street.

6. Widening of Avenue Q to 4 lanes between Palmdale Boulevard and Division Street.

7. Completion of 5th Street West as a 4 lane street between Palmdale Boulevard and future Avenue P-8.

8. Provision of double left turn lanes on all approaches at 10th Street West/ Avenue P.



2U	Number of Through Travel Lanes U=Undivided / D=Divided
	Traffic Signal
STOP	Stop Sign

Source: Kunzman Associates

PALMDALE TRADE AND COMMERCE CENTER

Existing Circulation System

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 6

The roadway conditions at the completion of these planned improvements are shown on Exhibit 7, CIRCULATION SYSTEM UPON COMPLETION OF PLANNED IMPROVEMENTS. These improvements are anticipated to be completed before the project is constructed. Therefore, subsequent analyses in this report are based on the widened street sections.

Traffic

Daily Traffic Volumes: Exhibit 8, EXISTING DAILY TRAFFIC VOLUMES AND VOLUME TO CAPACITY RATIOS, depicts the existing average daily two-way traffic volumes. Traffic volumes were obtained from the City of Palmdale Circulation Element prepared by DKS Associates and from CalTrans 1988 Traffic Volumes on State Highways.

Existing Daily Volume to Capacity Ratios: Roadway capacity is generally defined as the number of vehicles which can be reasonably expected to pass over a given section of road in a given time period. Congestion, high accident rates, the quality of traffic flow (Level of Service), and environmental acceptability are all considered in defining a particular roadway's effective capacity. It is possible to identify maximum desirable volumes for typical roadway types based on the number of roadway travel lanes. These daily volumes reflect estimates of the amount of daily traffic which will result in peak hour traffic volumes equal to the maximum desirable capacity of each roadway type. The following daily capacities are from the City of Palmdale's Circulation Element (except as noted) and were used in this report for consistency of analysis:

6 lane freeway	- 138,000
4 lane freeway	- 86,000
6 lane divided arterial*	- 56,000
5 lane divided arterial**	- 46,000
4 lane divided arterial	- 36,000
3 lane divided arterial	- 24,000
4 lane undivided arterial	- 24,000
2 lane undivided collector	- 12,000

*Based on Kunzman Associates experience with other jurisdictions.
**Interpolation between 4-lane and 6-lane arterial.

By dividing the existing daily traffic volumes by the capacities listed above, daily volume to capacity ratios have been calculated and are shown in Exhibit 8. The ratios at the completion of the funded improvements are also shown. Table 4, LEVEL OF SERVICE DESCRIPTION, equates the volume to capacity ratios to Level of Service. Roadways in the vicinity of the site are operating at Level of Service D or better for existing street segments. After completion of funded improvements, roadways are expected to operate at Level of Service (LOS) A.

Existing Intersection Capacity Utilization: The technique used to assess intersection operation is Intersection Capacity Utilization (ICU). To calculate an ICU the volume of traffic using the intersection is compared to the capacity of the intersection. ICU is usually expressed as a percent which represents that portion of the hour required to provide sufficient capacity to accommodate intersection traffic if all approaches operate at capacity. The ICU's for existing geometrics at intersections in the vicinity of the project are shown in Table 5, EXISTING INTERSECTION CAPACITY UTILIZATION AND LANE GEOMETRICS. Intersections are operating at Level of Service B or better for existing peak hour traffic conditions. After completion of planned improvements, the PM Peak Hour ICU at the intersection of 10th Street West and Avenue P is anticipated to be LOS A.

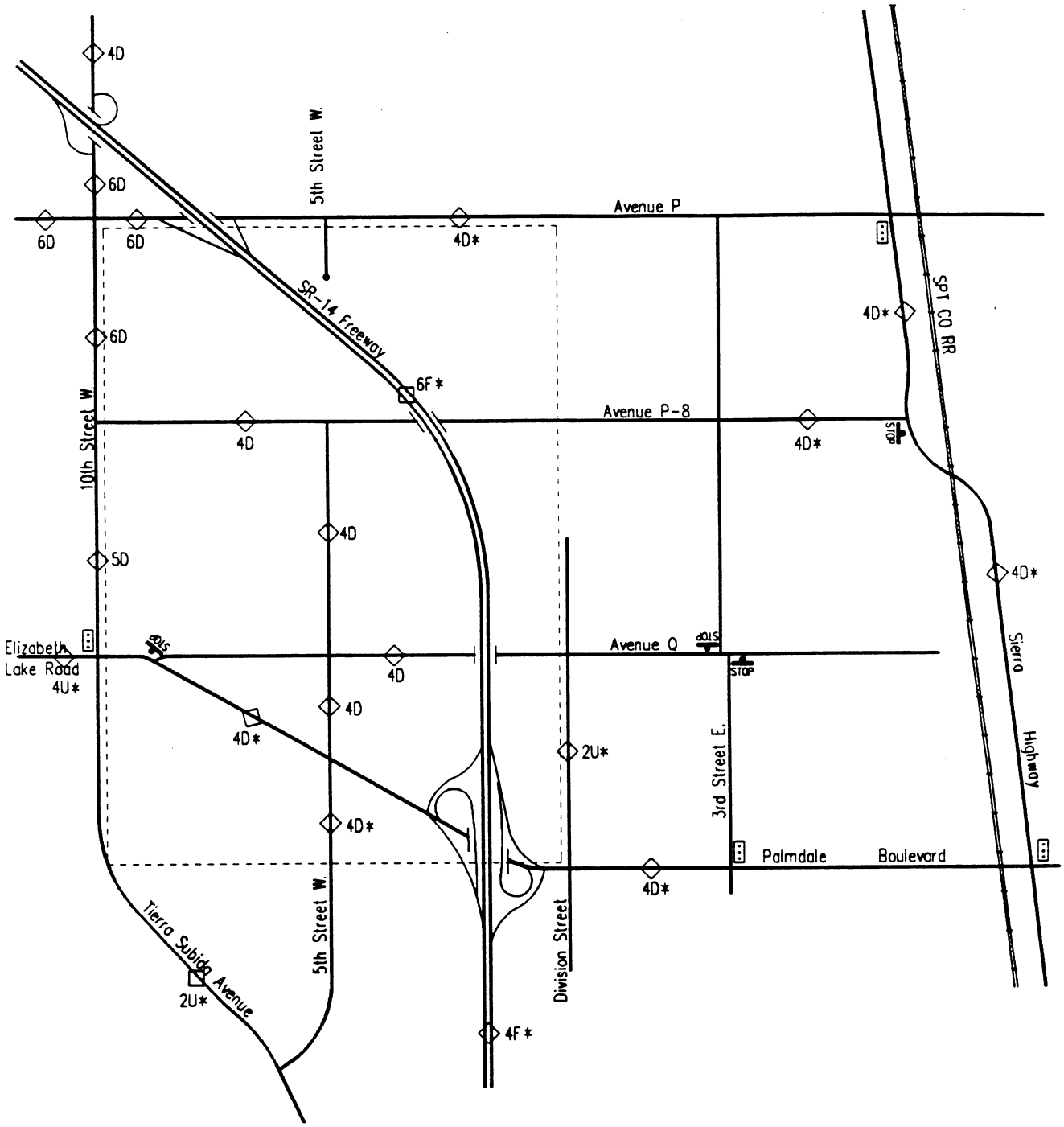
Comparison of daily volume to capacity ratios and corresponding Levels of Service, and peak hour Intersection Capacity Utilization and corresponding Levels of Service reveals differences. The daily volume to capacity ratios (for road segments) are a generalized indicator while peak hour Intersection Capacity Utilization actually represents what can be expected in the peak hour at intersections. Of the two indicators, the peak hour Intersection Capacity Utilization and corresponding Level of Service is the better measure of roadway performance.

IMPACTS

The Specific Plan area contains approximately 593.2 acres of land available for development. This land is proposed to be developed with commercial, office, industrial and hotel land uses. The commercial uses will include warehouse retail and discount centers.

The following describes the proposed land uses from a traffic engineering viewpoint:

Commercial: Commercial developments are characterized by a large number of short duration trips throughout the day. Their typical opening times produce minor traffic volumes during the morning peak hour. During the evening peak hour, people driving



2U	Number of Through Travel Lanes U=Undivided / D=Divided
*	Existing
	Traffic Signal
STOP	Stop Sign

Source: Kunzman Associates

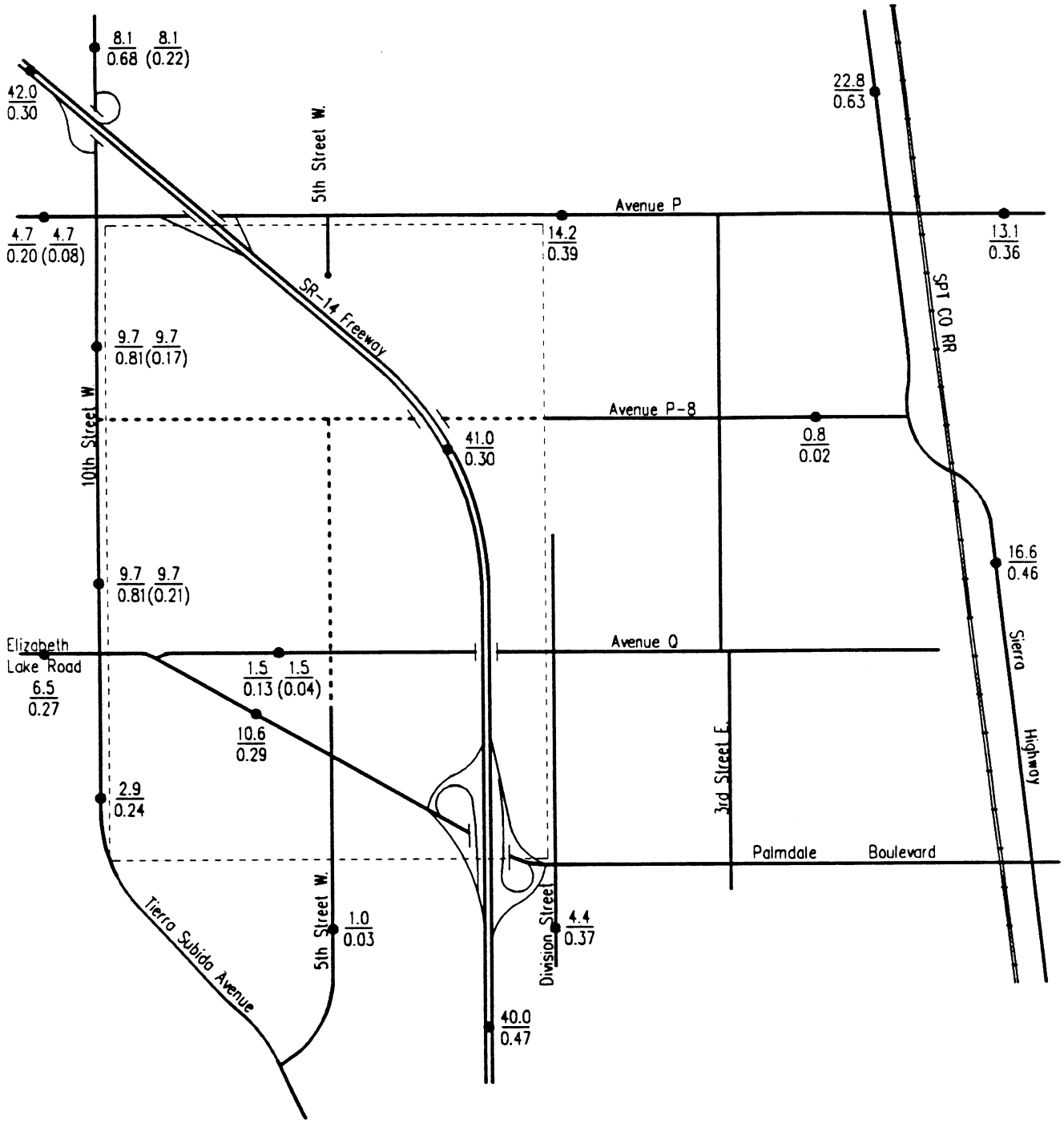
PALMDALE TRADE AND COMMERCE CENTER

Circulation System Upon Completion of Planned Improvements

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 7



8.1 / 0.68 — Vehicles Per Day (1000's) / Volume to Capacity Ratio

8.1 / (0.22) — Vehicles Per Day (1000's) / Volume to Planned Capacity Ratio

Source: Kunzman Associates

PALMDALE TRADE AND COMMERCE CENTER

Existing Daily Traffic Volumes and Volume to Capacity Ratios

Robert Bein, William Frost & Associates

3-90

JN 25957-2898

Exhibit 8

Table 4

LEVEL OF SERVICE DESCRIPTION

Level of Service	Description	Volume to Capacity Ratio
A	Level of Service A occurs when progression is extremely favorable and vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0.60 and below
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	0.61 to 0.70
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	0.71 to 0.80
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	0.81 to 0.90
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	0.91 to 1.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with over-saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	1.01 and up

Source: "Highway Capacity Manual" Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 1985, Pages 9-4 to 9-5.

Table 5

EXISTING INTERSECTION CAPACITY UTILIZATION
AND LANE GEOMETRICS

Intersection	Intersection Approach Lanes (1)												Peak Hour ICU-LOS (2)	
	North-bound			South-bound			East-bound			West-bound				
	T	R	L	T	R	L	T	R	L	T	R	L	AM	PM
10th Street West (NS) at														
SR-14 SB Off Ramp (EW)	1	*	*	1	*	*	*	1	1	*	*	*	32-A	48-A
Avenue P (EW)	2	0	1	2	1	1	2	1	1	1	1	1	46-A	70-B
Palmdale Boulevard (EW)	2	1	1	2	1	1	2	1	1	2	1	1	32-A	39-A
SR-14 NB Off Ramp (NS) at Avenue P (EW)	*	1	1	*	*	*	2	*	*	2	*	*	22-A	37-A
Sierra Highway (NS) at														
Avenue P (EW)	2	1	1	2	0	2	2	1	1	2	1	1	39-A	63-B
Avenue P-8 (EW)	2	*	1	2	1	*	*	1	1	*	*	*	32-A	45-A
SR-14 SB Off Ramp (NS) at Palmdale Boulevard (EW)	*	*	*	*	1	1	2	1	*	2	*	*	32-A	51-A
SR-14 NB Ramps (NS) at Palmdale Boulevard (EW)	*	1	1	*	*	*	2	*	*	2	1	*	23-A	39-A

(1) When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

(2) Intersection Capacity Utilization (ICU) - Level of Service (LOS)

T = Through
R = Right
L = Left
NB = Northbound
SB = Southbound
* = Movement not possible

home from work stop to shop, creating a minor peak in commercially generated traffic volumes.

Office: Offices will have pronounced traffic peak during the morning and evening peak hour periods as employees arrive and leave.

Industrial: Industrial land use will characteristically have fewer employees per acre than most other business or commercial uses, and fewer non-employee visits. There are pronounced traffic peaks as employees arrive in the morning and depart in the evening.

Hotel: Hotel traffic peaks with normal traffic and occurs all through the day and into the evening.

The following discussion first explains the methodology of the traffic analyses and gives the anticipated project generated traffic volumes. Then, existing plus project traffic conditions, existing plus project plus Auto Mall traffic conditions, and future (year 2010) traffic conditions are described.

Project Traffic

Methodology: To estimate project-related traffic volumes at various points on the street network, a three step process is utilized. First, the traffic which will be generated by the proposed development is determined. Secondly, the traffic volumes are geographically distributed to major attractions of trips, such as employment centers, commercial centers, recreational areas or residential areas. Finally, the trips are assigned to specific roadways and the project-related traffic volumes are determined on a route-by-route basis.

Traffic Generation: The traffic generated by the project is determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are expressed in terms of trip ends per person, trip ends per employee, trip ends per acre, trip ends per dwelling, or trip ends per thousand square feet of floor space.

Significant research efforts have been made by CalTrans, the Institute of Transportation Engineers (ITE), Kunzman Associates, and others to establish the correlation between trips and land use. From this body of information, trip generation rates can be estimated with reasonable accuracy for various land uses.

Table 6, TRIP GENERATION RATES, lists the morning inbound and outbound, afternoon inbound and outbound and daily trip generation rates. The trip generation rates for com-

Table 6

TRIP GENERATION RATES

Land Use	Units	Morning Peak Hour		Evening Peak Hour		Daily
		In	Out	In	Out	
Commercial (1)	Acre	5.81	2.50	14.40	15.02	350.83
OP/PC (2) (3)	Acre	11.61	5.01	28.80	30.03	701.66
Office (1)	Acre	26.35	4.63	5.64	21.54	249.90
Industrial (1)	Acre	7.20	1.61	1.90	7.29	66.04
Hotel (4)	Room	0.34	0.24	0.37	0.25	7.27

(1) As used in City of Palmdale Circulation Study.

(2) Off Price/Promotional Center

(3) Rates are twice the commercial based on data collected at warehouse retail/discount center facilities.

(4) Source: Institute of Transportation Engineers, Trip Generation, Fourth Edition, 1987, Land Use Category 312.

Note: Trip generation rates per acre are for net acres for each land use.

mercial, office and industrial uses documented in the City of Palmdale Circulation Study prepared by DKS Associates are the basis for the rates shown on Table 6. The city-wide study used trip rates per gross acre. These rates were modified by the ratio of the total project area to developable acres (767.2/593.2) to obtain trip rates per net acre. The rates for the off price/promotion centers land uses are twice the commercial rates and are based on trip generation studies for warehouse retail and discount center facilities. The trip generation rates for the hotel use are from ITE.

Traffic Distribution and Assignment: Traffic distribution is the determination of the directional orientation of traffic. For this project, it is based on the geographical location of existing and future residential area concentrations.

Traffic assignment is the determination of which specific route development traffic will use, once the generalized traffic distribution is determined. The basic factors affecting route selection are minimum time path and minimum distance path.

The Specific Plan area has been divided into 13 traffic zones to facilitate analysis. Exhibit 9, TRAFFIC ANALYSIS ZONES, shows the zone boundaries, and Table 7, LAND USE QUANTITIES BY ZONE, indicates the land uses assigned to each zone for this analysis. The Specific Plan is flexible, so actual land use distributions will probably be different. However, a hypothetical distribution was necessary in order to perform the traffic analyses, and this scenario was approved by the City of Palmdale Planning Department and Traffic Engineer.

Table 8, ESTIMATED PROJECT TRAFFIC GENERATION, gives the total project traffic and a breakdown by zone. The directional distribution and assignment of project traffic for each of the 13 zones can be found in Appendix B.

The circulation plan was modified after the traffic analysis was performed. Exhibit 5, CIRCULATION PLAN, indicates current collector configurations. Certain collectors were eliminated and some may become private drives. The changed collector configuration does not significantly impact the traffic analysis.

Existing Plus Project Traffic Conditions

This section discusses the impact of project traffic on the planned circulation system which includes improvements to 10th Street West, Avenue P, Avenue P-8, Avenue Q, and 5th Street West. Exhibit 10, PROPOSED CIRCULATION SYSTEM, illustrates the circulation system used in the traffic analysis.

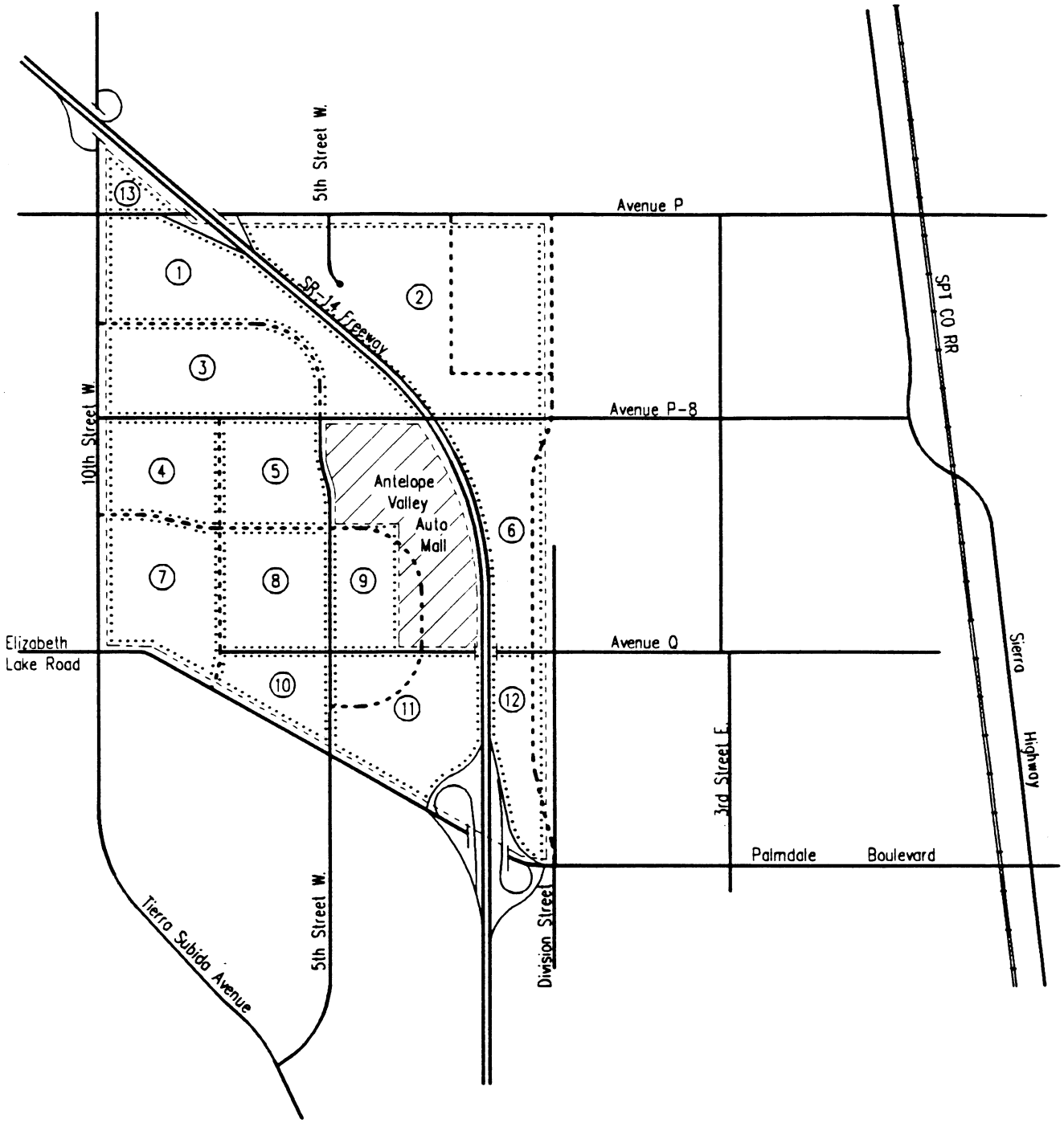
Table 7

LAND USE QUANTITIES BY ZONE

Zone Number	Land Use	Acres
1	OP/PC (1)	19.9
	Retail	7.3
	Office	49.0
2	OP/PC	24.2
	Retail	54.7
	Office	50.5
3	OP/PC	19.5
	Retail	19.6
	Office	32.7
4	OP/PC	9.7
	Retail	9.5
	Industrial	10.8
5	Industrial	21.6
6	Industrial	56.7
7	OP/PC	9.7
	Retail	16.4
	Industrial	10.8
8	Retail	12.0
	Industrial	18.0
9	Retail	6.0
	Industrial	10.8
10	Retail	29.4
11	Retail	11.3
	Office	14.8
	Hotel	9.4 (2)
12	Industrial	47.0
13	Retail	12.3
Total		593.2

(1) Off-Price/Promotion Centers (i.e. warehouse retail and discount centers).

(2) Assumed to have 80 guest rooms.



Zone Number

Zone Boundary

Source: Kunzman Associates

PALMDALE TRADE AND COMMERCE CENTER

Traffic Analysis Zones

Robert Bein, William Frost & Associates

3-90

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Exhibit 9

Table 8

ESTIMATED PROJECT TRAFFIC GENERATION

Zone Number	Morning Peak Hour		Evening Peak Hour		Daily
	In	Out	In	Out	
1	1,560	340	940	1,750	28,500
2	1,930	490	1,770	2,630	48,800
3	1,200	300	1,030	1,580	28,700
4	250	90	440	510	10,900
5	160	30	40	160	1,400
6	410	90	110	410	3,700
7	290	110	540	620	13,300
8	200	60	210	310	5,400
9	110	30	110	170	2,800
10	170	70	420	440	10,300
11	480	110	280	510	8,200
12	340	80	90	340	3,100
13	70	30	180	180	4,300
Total	7,170	1,830	6,160	9,610	169,400

Note: Trips generated are rounded to nearest 10 for peak hour and 100 for daily.

The project circulation system includes elimination of the existing intersection of Palmdale Boulevard/Avenue Q and construction of a new intersection at Street A/Palmdale Boulevard. The new intersection will accommodate existing traffic on Avenue Q as well as some of the future traffic generated by the Palmdale Trade and Commerce Center. The distance between intersections on Street A at Avenue Q and at Palmdale Boulevard is approximately 400 feet. This proposed modification will have the following impacts:

1. The north-south alignment of Street A allows for a better intersection design and approach at Palmdale Boulevard than does the east-west alignment of Avenue Q.

2. The maximum queue of vehicles southbound on Street A at Palmdale Boulevard is expected to extend approximately 480 feet. This estimate is based on the projected evening peak hour southbound left turn volume of 480 vehicles, 1 right and 1 left turn lane, a 90 second signal cycle and a factor of two which accounts for the maximum arrival rate/minute during the peak hour.

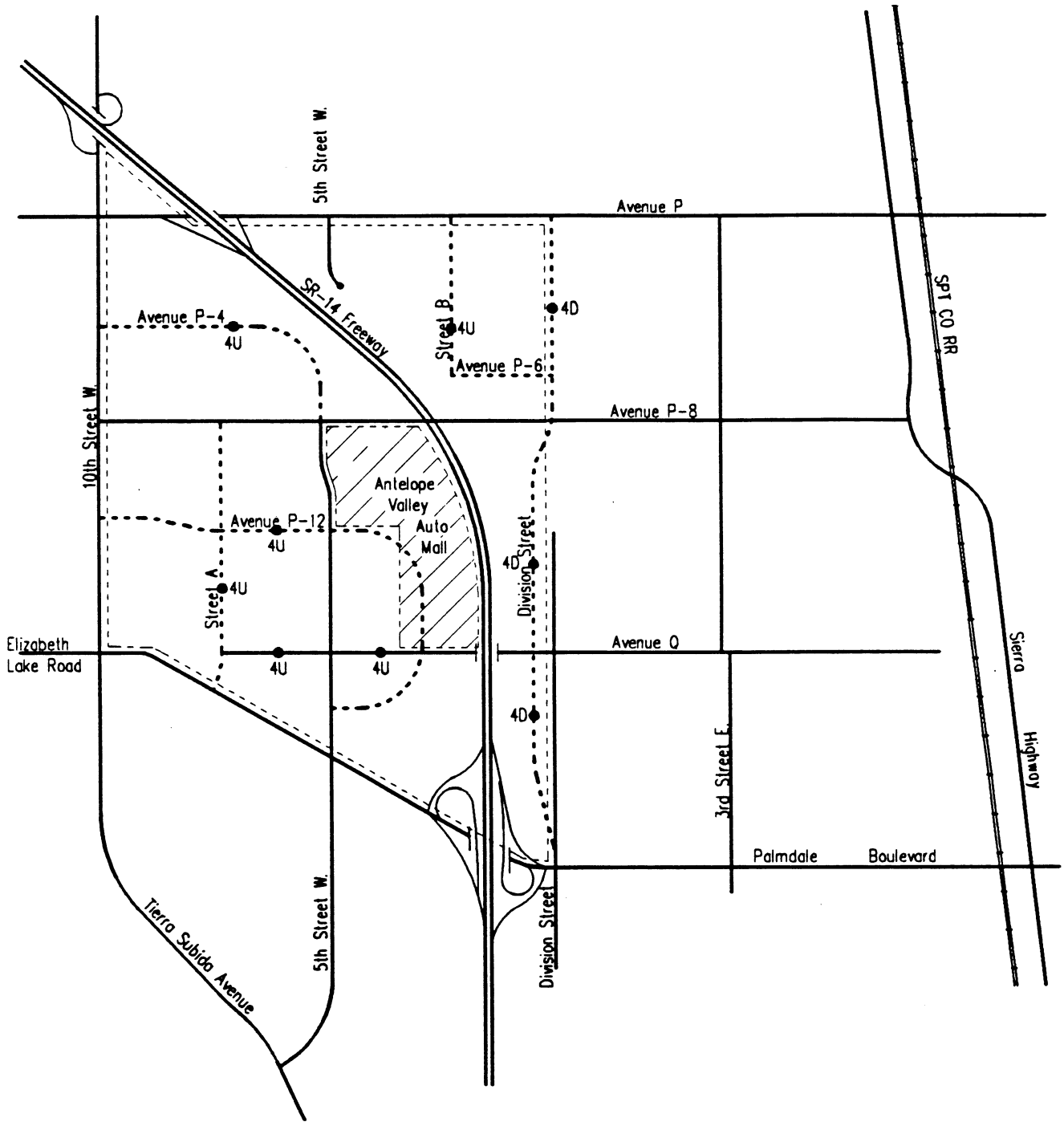
   Since the projected queue of vehicles (480 feet) exceeds the estimated distance between intersections (400 feet), it will be necessary to provide a second southbound left turn lane on Street A at Palmdale Boulevard so as to not create a queue which has the potential to block the intersection at Avenue Q.

Existing Plus Project Daily Traffic Volumes: Exhibit 11, EXISTING PLUS PROJECT DAILY TRAFFIC VOLUMES AND VOLUME TO CAPACITY RATIOS, indicates traffic conditions anticipated with combined project generated and existing traffic volumes.

Existing Plus Project Daily Volume to Capacity Ratios: For existing plus project traffic volumes, daily volume to capacity ratios have been calculated and are shown in Exhibit 11. The ratios are based on the road capacities and street sections previously described. Without mitigation measures, the following roadway segment impacts are anticipated:

Avenue P between SR 14 and Division Street	LOS F
10th Street West between Avenue P and Avenue P-8	LOS F
Palmdale Boulevard between 5th Street West and SR 14	LOS F
Avenue P between Division Street and Sierra Highway	LOS E
SR 14 South of Palmdale Boulevard	LOS E

Existing Plus Project Intersection Capacity Utilization: Intersection Capacity Utilization (ICU) values for the existing plus project traffic conditions have been calculated and are



4U 4 Lanes Undivided

4D 4 Lanes Divided

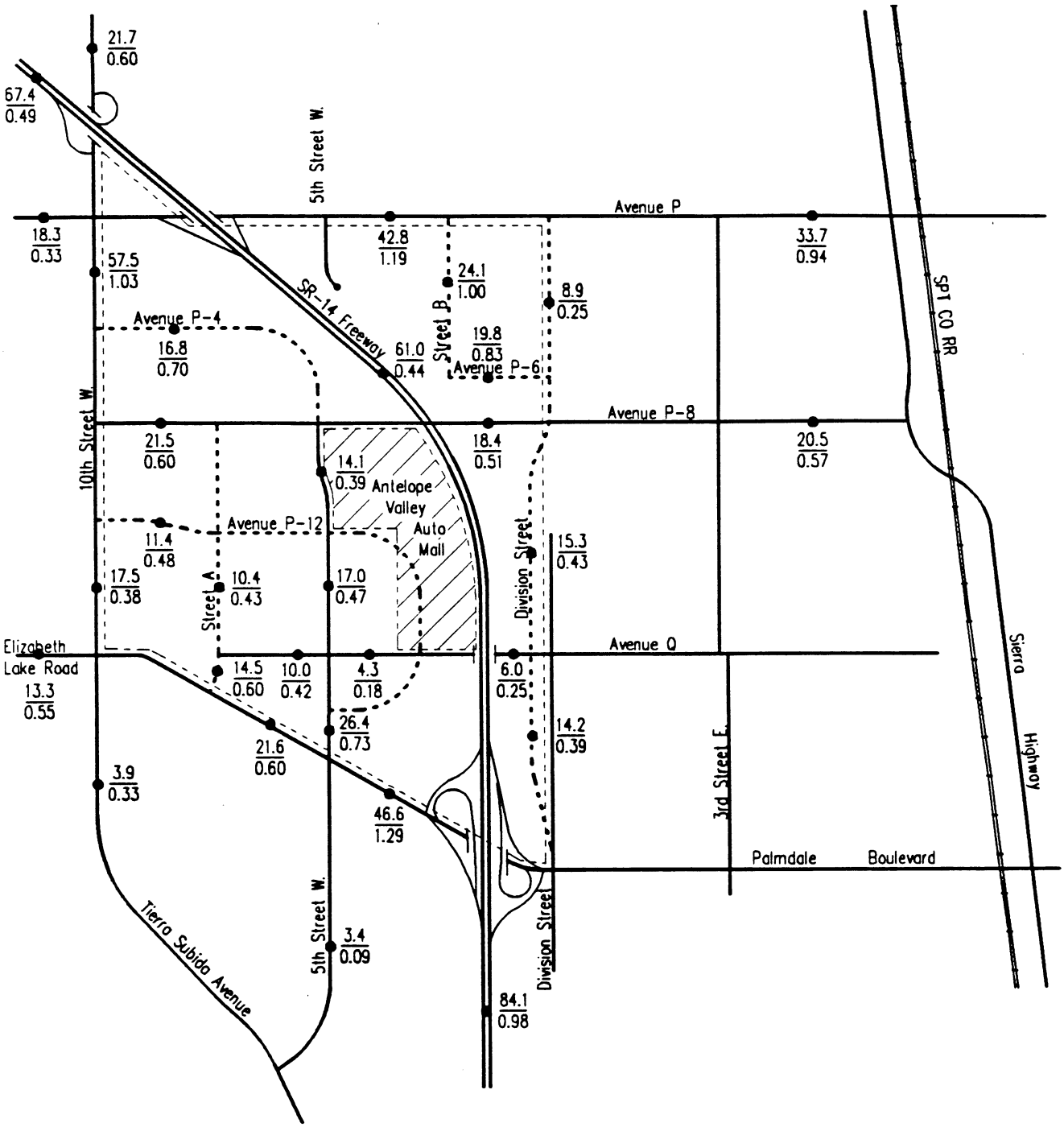
Source: Kunzman Associates
Note: Refer to Exhibit 5 for current collector configurations

PALMDALE TRADE AND COMMERCE CENTER

Proposed Circulation System

Robert Bein, William Frost & Associates
3-90 JN 25957-2898

Exhibit 10



Source: Kunzman Associates

21.7 / 0.60	Vehicles Per Day (1000's) / Volume to Capacity Ratio

PALMDALE TRADE AND COMMERCE CENTER

Existing Plus Project Daily Traffic Volumes and Volume to Capacity Ratios

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 11

shown in Table 9. Several intersections would operate at Level of Service E or worse, including:

- 10th Street West/Avenue P (p.m.= F)
- Avenue P/SR 14 northbound offramp (a.m. = E, p.m.= F)
- 5th Street West/Avenue P-8 (a.m. = E, p.m.= F)
- Palmdale Boulevard/5th Street West (p.m.= F)
- Palmdale Boulevard/SR 14 southbound offramp (p.m.= F)

The assumed geometrics at improved/new intersections are also listed on Table 9 and are based on the following relationships:

Street Section	Intersection Approach Lanes
6 lanes divided	3 through 1 left
4 lanes divided	2 through 1 left
4 lanes undivided	2 through 1 left

Roadway improvements necessary to provide Level of Service D or better are listed as Mitigation Measure #1 at the end of this section.

Traffic Signal Warrants: Traffic signal warrants have been adopted by CalTrans and are based upon the eighth highest hour volumes in a day. Rural traffic volume warrants are utilized when the 85th percentile speed of the major street traffic exceeds 40 miles per hour.

Exhibit 12, FUTURE TRAFFIC SIGNAL LOCATIONS, shows the locations where the volumes will satisfy the traffic signal warrants for existing plus project conditions. In addition, traffic signals are expected to be needed at the following freeway ramps:

SR 14 Southbound Off Ramp/10th Street West
SR 14 Northbound Off Ramp/Avenue P
SR 14 Southbound Off Ramp/Palmdale Boulevard
SR 14 Northbound Off Ramp/Palmdale Boulevard

Table 9

EXISTING PLUS PROJECT INTERSECTION CAPACITY UTILIZATION - EXISTING/PLANNED GEOMETRICS

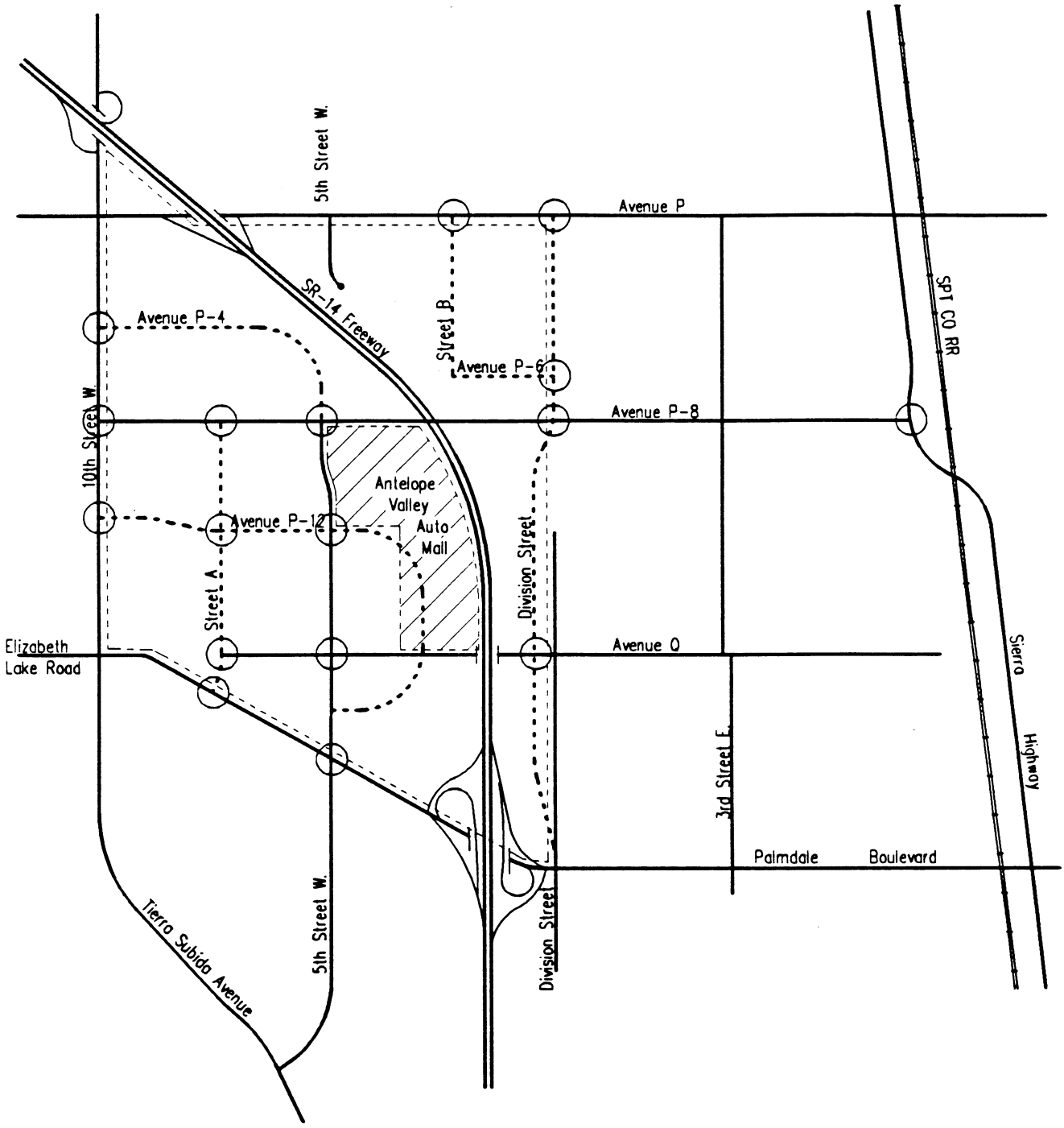
Intersection	Intersection Approach Lanes (1)												Peak Hour ICU-LOS (2)	
	North-bound			South-bound			East-bound			West-bound				
	T	R	L	T	R	L	T	R	L	T	R	L	AM	PM
10th Street West (NS) at														
SR-14 SB Off Ramp (EW)	3	*	*	2	*	*	*	1	1	*	*	*	30-A	63-B
Avenue P (EW)	3	0	2	3	0	2	3	0	2	3	0	2	82-D	128-F
Avenue P-4 (EW)	3	0	*	2	*	1	*	*	*	*	1	1	70-C	90-D
Avenue P-8 (EW)	3	0	*	2	*	1	*	*	*	*	1	1	76-C	79-C
Avenue P-12 (EW)	3	0	*	2	*	1	*	*	*	*	1	1	38-A	50-A
Palmdale Boulevard (EW) (3)	2	1	1	2	1	1	2	1	1	2	1	1	48-A	57-A
SR-14 NB Off Ramp (NS) at Avenue P (EW)	*	1	1	*	*	*	2	*	*	2	*	*	94-E	123-F
Street A (NS) at														
Avenue P-8 (EW)	*	1	1	*	*	*	2	0	*	2	*	1	46-A	44-A
Avenue Q (EW)	2	0	*	2	*	1	*	*	*	*	1	1	22-A	28-A
Palmdale Boulevard (EW) (3)	*	*	*	*	1	2	2	*	1	2	1	*	26-A	41-A
5th Street West (NS) at														
Avenue P-8 (EW)	2	0	1	2	0	1	2	0	1	2	0	1	99-E	116-F
Avenue P-12 (EW)	2	0	1	2	0	1	2	0	1	2	0	1	43-A	46-A
Avenue Q (EW)	2	0	1	2	0	1	2	0	1	2	0	1	46-A	67-B
Palmdale Boulevard (EW)	1	1	1	2	0	1	2	1	1	2	1	1	48-A	139-F
Street B (NS) at Avenue P (EW)	*	1	1	*	*	*	2	0	*	2	*	1	74-C	137-F
SR-14 SB Off Ramp (NS) at Palmdale Boulevard (EW) (3)	*	*	*	*	1	1	2	*	*	2	*	*	62-B	110-F
SR-14 NB Off Ramps (NS) at Palmdale Boulevard (EW) (3)	*	1	1	*	*	*	2	*	*	2	*	*	78-C	118-F
Division Street (NS) at														
Avenue P (EW)	*	1	1	*	*	*	2	0	*	2	*	1	52-A	69-B
Avenue P-6 (EW)	2	*	1	2	0	*	*	1	1	*	*	*	28-A	67-B
Avenue P-8 (EW)	2	0	1	2	0	1	2	0	1	2	0	1	53-A	71-C
Avenue Q (EW)	2	0	1	2	0	1	2	0	1	2	0	1	40-A	53-A
Sierra Highway (NS) at														
Avenue P (EW) (3)	2	1	1	2	0	2	2	1	1	2	1	1	68-B	110-F
Avenue P-8 (EW)	2	*	1	2	0	*	*	1	1	*	*	*	68-B	103-F

(1) When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

(2) Intersection Capacity Utilization (ICU) - Level of Service (LOS)

(3) Existing Geometrics

T = Through
R = Right
L = Left
NB = Northbound
SB = Southbound
* = Movement not possible



Source: Kunzman Associates

Future Traffic Signals

PALMDALE TRADE AND COMMERCE CENTER

Future Traffic Signal Locations

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 12

Existing + Project + Auto Mall Traffic Conditions

The Antelope Valley Auto Mall has been previously approved. The traffic information in the EIR[1] prepared for this development was the basis for estimating the traffic on the streets in the vicinity of the Palmdale Trade and Commerce Center.

The following adjustments and assumptions were made:

1. The EIR addressed a project which encompassed the entire area between Avenues P-8 and Q and between 5th Street West and the SR 14 Freeway. The approved project boundaries are approximately 75 percent of this original area. Therefore the 1988 traffic volumes were reduced by 25 percent. Table 10 lists the estimated peak hour and daily traffic volumes generated by the Antelope Valley Auto Mall.

2. Figure 22 of Appendix B shows the traffic distribution for this project. The distributions were extrapolated from the project traffic volumes at the intersections of 10th Street West/Avenue P, 10th Street West/SR 14 ramps, Avenue Q/Palmdale Boulevard and Palmdale Boulevard/SR 14 ramps as shown in the EIR.

3. The analysis assumes prior implementation of mitigation measures suggested for existing plus project traffic volumes.

Existing Plus Project Plus Auto Mall Daily Traffic Volumes: Table 10, ESTIMATED ANTELOPE VALLEY AUTO MALL TRAFFIC GENERATION, shows the morning and evening peak hour traffic volumes anticipated to be generated by the Antelope Valley Auto Mall. Exhibit 13, EXISTING PLUS PROJECT PLUS AUTO MALL TRAFFIC VOLUMES, AND VOLUME TO CAPACITY RATIOS, displays the traffic volumes when the project traffic and the Antelope Valley Auto Mall traffic are added to existing traffic volumes after implementation of suggested mitigation measures for existing plus project volumes.

Existing Plus Project Plus Auto Mall Daily Volume to Capacity Ratios: For existing plus project plus other development traffic volumes, the daily volume to capacity ratios have been calculated and are shown in Exhibit 13. The ratios are based on the daily road capacities and the street improvements required to accommodate existing plus project

[1]Environmental Impact Report #88-4, Antelope Valley Auto Center, LSA Associates, October, 1988.

Table 10

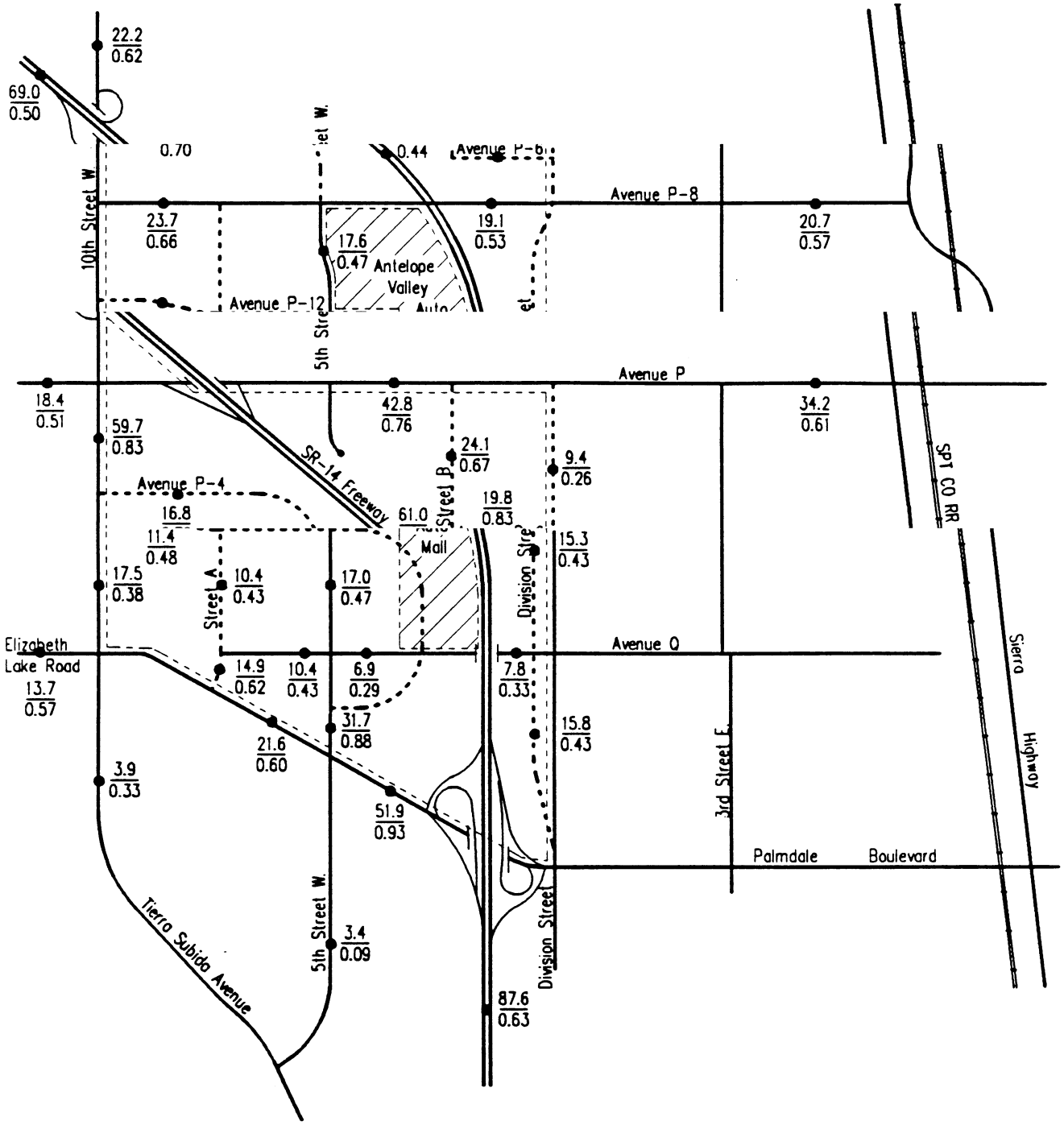
ESTIMATED ANTELOPE VALLEY AUTO MALL
TRAFFIC GENERATION

Land Use	Morning Peak Hour		Evening Peak Hour		Daily
	In	Out	In	Out	
Antelope Valley Auto Mall	530	240	440	630	10,400

Notes:

Trips generated are rounded to nearest 10 for peak hour and 100 for daily.

Volumes are approximately 75 percent of traffic stated in the EIR for this project.



Source: Kunzman Associates

22.2 / 0.62 Vehicles Per Day (1000's) / Volume to Capacity Ratio

PALMDALE TRADE AND COMMERCE CENTER

Existing Plus Project Plus Auto Mall Traffic Volumes and Volume to Capacity Ratios

traffic discussed previously. Palmdale Boulevard between 5th Street West and SR 14 is anticipated to operate at LOS E under these conditions. All other segments will operate at LOS D or better.

Existing Plus Project Plus Auto Mall Intersection Capacity Utilization: In order to analyze future intersection operations, peak hour traffic from the project and from the Antelope Valley Auto Mall is added to existing traffic volumes. Intersection Capacity Utilization values for cumulative conditions for intersections in the vicinity of the site are shown in Table 11, EXISTING PLUS PROJECT PLUS AUTO MALL INTERSECTION CAPACITY UTILIZATION. The ICU calculations are based on the intersection geometrics required to accommodate existing plus project traffic.

The following intersections exceed LOS D:

10th Street West/Avenue P (p.m.= E)
10th Street West/Avenue P-4 (p.m.= E)
5th Street West/Palmdale Boulevard (p.m.= E)
Sierra Highway/Avenue P (p.m.= E)

Additional improvements needed to accommodate existing plus project plus Auto Mall traffic volumes are listed as mitigation measures at the end of this section.

Future Traffic Conditions

In this section, future traffic conditions in the Year 2010 are discussed. The traffic projections for 2010 were obtained from the circulation study prepared for the City of Palmdale by DKS Associates.

Future Daily Traffic Volumes: Exhibit 14, FUTURE TRAFFIC VOLUMES shows the projected daily traffic volumes for the year 2010 on streets in the vicinity of the site. In addition, year 2010 traffic volume estimates for the Antelope Valley Freeway (SR 14) indicate that future traffic between Avenue P and Palmdale Boulevard will be 363,200 ADT and the volume south of Palmdale Boulevard will be 229,200 ADT (based on CALTRANS data).

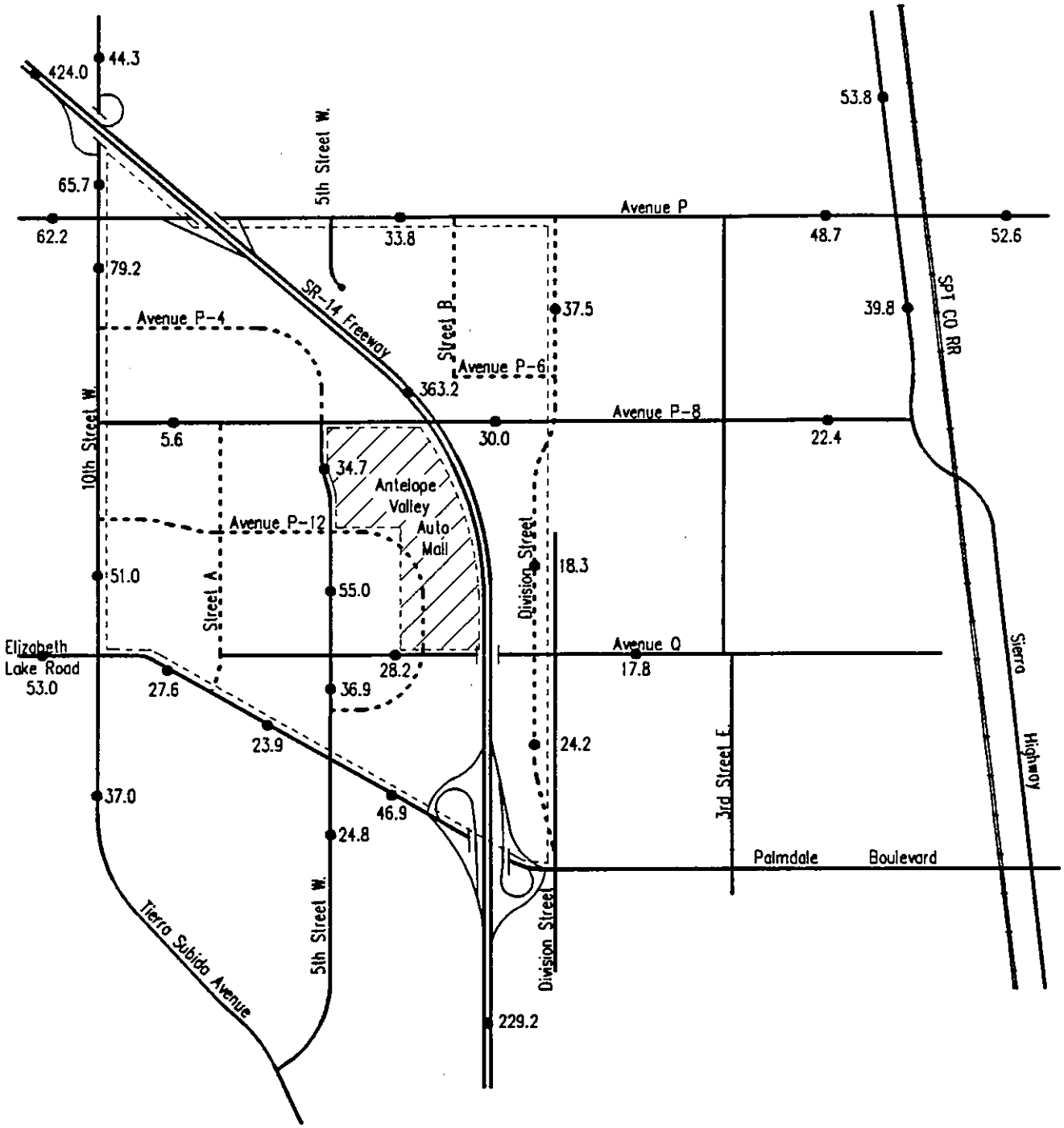
Exhibit 14 does not account for the planned extension of Highway 138 to intersect with SR 14. CALTRANS has proposed a preliminary alignment for Highway 138 along Avenue P-8. Future CALTRANS traffic projections for this alignment are 68,800 ADT on Highway

Table 11

EXISTING PLUS PROJECT PLUS AUTO MALL
INTERSECTION CAPACITY UTILIZATION -
EXISTING PLUS PROJECT GEOMETRICS

Intersection	Peak Hour ICU-LOS	
	AM	PM
10th Street West (NS) at		
SR-14 SB Off Ramp (EW)	30-A	66-B
Avenue P (EW)	68-B	91-E
Avenue P-4 (EW)	71-C	92-E
Avenue P-8 (EW)	83-D	84-D
Avenue P-12 (EW)	38-A	50-A
Palmdale Boulevard (EW)	48-A	58-A
SR-14 NB Off Ramp (NS) at		
Avenue P (EW)	54-A	74-C
Street A (NS) at		
Avenue P-8 (EW)	46-A	44-A
Avenue Q (EW)	30-A	35-A
Palmdale Boulevard (EW)	27-A	42-A
5th Street West (NS) at		
Avenue P-8 (EW)	72-C	74-C
Avenue P-12 (EW)	51-A	55-A
Avenue Q (EW)	54-A	76-C
Palmdale Boulevard (EW)	38-A	95-E
Street B (NS) at		
Avenue P (EW)	52-A	84-D
SR-14 SB Off Ramps (NS) at		
Palmdale Boulevard (EW)	52-A	87-D
SR-14 NB Off Ramps (NS) at		
Palmdale Boulevard (EW)	52-A	77-C
Division Street (NS) at		
Avenue P (EW)	54-A	69-B
Avenue P-6 (EW)	29-A	67-B
Avenue P-8 (EW)	54-A	71-C
Avenue Q (EW)	40-A	55-A
Sierra Highway (NS) at		
Avenue P (EW)	52-A	92-E
Avenue P-8 (EW)	68-B	87-D

(1) Intersection Capacity Utilization (ICU) - Level of Service (LOS)



Sources: Kunzman Associates
City of Palmdale Circulation Study

62.2 Vehicles Per Day (1000's)

PALMDALE TRADE AND COMMERCE CENTER

Future Traffic Volumes

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 14

138 east of SR 14, 193,300 ADT on SR 14 north of Highway 138, and 157,000 ADT on SR 14 south of Highway 138. This indicates that future Highway 138 construction (not part of this project) is estimated to increase traffic levels in the Avenue P-8 vicinity (east of SR 14) from 30,000 ADT to 69,000 ADT, although SR 14 traffic volumes would decrease.

Future Intersection Operation: Table 12, YEAR 2010 LEVEL OF SERVICE VALUES WITH MITIGATION lists the required geometrics to accommodate the 2010 traffic volumes and the resulting volume to capacity ratios at intersections in the vicinity of the site. It is assumed that existing plus project plus Auto Mall traffic mitigation measures have been implemented. With these improvements, the following three intersections would still operate at LOS E:

- 10th Street West/Avenue P (p.m.= E)
- SR 14 SB Off-Ramp/Palmdale Boulevard (p.m.= E)
- Sierra Highway/Avenue P (p.m.= E)

Impact of Proposed Project on Future Traffic Volumes: The 2010 daily and peak hour volumes are based on existing and future land uses in Palmdale and estimated through traffic. The area of the Palmdale Trade and Commerce Center occupies parts of 4 traffic zones (73, 74, 83, and 84) used in the traffic model to develop future volumes. Table 13, CIRCULATION ELEMENT VERSUS PROPOSED PROJECT ESTIMATED TRAFFIC VOLUMES, compares the estimated traffic from the project site used in the City-wide Circulation Study (prepared by DKS) with the project traffic volumes developed in this report. It can be seen that the proposed project is expected to generate approximately 27 percent more trips than was used in the General Plan Circulation Study prepared by DKS.

In order to analyze the impact of this reduction in traffic, the model would have to be rerun. However, two observations can be made:

1. The existing plus project plus Auto Mall daily volumes on Exhibit 13 are higher than the Year 2010 volumes on Exhibit 14 at the following locations:

    a. On Avenue P east of the SR 14 Freeway.
    b. On Palmdale Boulevard between 5th Street West and the SR 14 freeway.
    c. On Avenue P-8 between 5th Street West and 10th Street West.

Table 12

YEAR 2010 LEVEL OF SERVICE VALUES WITH MITIGATION

Intersection	Intersection Approach Lanes												Peak Hour V/C - LOS (1)	
	North-bound			South-bound			East-bound			West-bound				
	T	R	L	T	R	L	T	R	L	T	R	L	AM	PM
10th Street West (NS) at														
SR-14 SB Off Ramp (EW)	3	0	0	3	0	0	0	1	1	0	0	0	0.18-A	0.49-A
Avenue P (EW)	3	1	2	3	1	2	3	1	2	3	1	1	0.76-C	0.93-E
Avenue P-8 (EW)	3	0	0	3	0	1	0	0	0	0	1	1	0.80-C	0.89-D
Palmdale Boulevard (EW)	3	0	1	3	0	2	3	1	2	3	1	1	0.89-D	0.85-D
SR-14 NB Off Ramp (NS) at Avenue P (EW)	0	1	1	0	0	0	3	0	0	3	0	0	0.47-A	0.62-B
5th Street West (NS) at														
Avenue P-8 (EW)	0	1	2	0	0	0	2	0	0	2	0	2	0.55-A	0.77-C
Avenue Q (EW)	2	1	1	2	0	2	2	0	1	2	1	1	0.67-B	0.88-D
Palmdale Boulevard (EW)	2	0	2	2	0	2	3	0	1	3	0	1	0.72-C	0.86-D
SR-14 SB Off Ramp (NS) at Palmdale Boulevard (EW)	0	0	0	0	1	2	3	0	0	3	0	0	0.52-A	0.94-E
SR-14 NB Off Ramp (NS) at Palmdale Boulevard (EW)	0	1	1	0	0	0	3	0	0	3	0	0	0.50-A	0.70-B
Division Street (NS) at														
Avenue P (EW)	3	1	1	3	0	1	3	1	1	3	0	1	0.86-D	0.88-D
Avenue P-8 (EW)	3	0	1	3	0	1	2	0	2	2	0	1	0.66-B	0.87-D
Avenue Q (EW)	2	0	1	2	1	1	2	0	1	2	0	1	0.64-B	0.85-D
Sierra Highway (NS) at														
Avenue P (EW)	3	1	1	3	1	2	3	1	2	3	1	2	0.80-C	1.00-E
Avenue P-8 (EW)	3	0	2	3	0	0	0	1	1	0	0	0	0.86-D	0.52-A

(1) Volume to Capacity - Level of Service

Source: City of Palmdale Circulation Study

T - Through
R - Right
L - Left
NB - Northbound
SB - Southbound

Table 13

CIRCULATION ELEMENT versus PROPOSED PROJECT
ESTIMATED TRAFFIC VOLUMES

Circulation Study Traffic Zone	Daily Volumes	
	Palmdale Trade & Commerce Center Area	
	Circulation Element	Proposed Project
73	107,000 (1)	105,700 (2)
74	20,300	52,500
83	10,900	18,500
84	3,000	3,100
Total	141,200	179,800

(1) Includes 17,700 daily trips from Antelope Valley Auto Mall

(2) Includes 10,400 daily trips from Antelope Valley Auto Mall

2. Table 14, COMPARISON OF EXISTING PLUS PROJECT PLUS AUTO MALL GEOMETRICS AND 2010 GEOMETRICS, compares the intersection geometrics needed to accommodate cumulative traffic (i.e. existing plus project plus Antelope Valley Auto Mall) with the geometrics needed for 2010 traffic. The information indicates that the geometrics needed for cumulative conditions are compatible with those for 2010 conditions (i.e. cumulative geometrics can be upgraded as needed for 2010 traffic) except at 10th Street West/Avenue P and at 5th Street West/Avenue P-8.

MITIGATION MEASURES

Existing Plus Project

ii. Each project developer within the Specific Plan area will be required to submit a Transportation Management Plan for review and approval by the Planning Department prior to issuance of occupancy permits, and a focused traffic study for review and approval by the City Engineer and/or City Traffic Engineer, to determine the necessary improvements for impacts generated by that project. On the basis of this and other studies, the developer will improve or fund a pro rata share of improvements and/or the City will undertake improvements through a capital improvement program.

1. The following improvements will be required to provide Level of Service D or better operation (individual applicants will be required to dedicate right-of-way for full ultimate half-width improvements, where roads border their property, full ultimate right-of-way for roads through their property, and/or fund a pro rata share of these improvements, as determined necessary by the City Engineer and/or the City Traffic Engineer):

a. Widen the SR 14 Freeway to 6 lanes south of Palmdale Boulevard to be funded by CalTrans and/or other sources.

b. Widen Avenue P to 6 lanes between the SR 14 Freeway and Sierra Highway.

c. Provide 8 through lanes on 10th Street West between Avenue P and Avenue P-8.

~~d. Upgrade Street B to a 4 lane divided street.~~

e. Widen Palmdale Boulevard to 6 lanes from west of 5th Street West to Division Street.

Table 14

COMPARISON OF EXISTING PLUS PROJECT PLUS AUTO MALL GEOMETRICS AND 2010 GEOMETRICS

Intersection	Intersection Approach Lanes												
	North-bound			South-bound			East-bound			West-bound			
	T	R	L	T	R	L	T	R	L	T	R	L	
10th Street West/SR-14 SB Off Ramp	3 3	0 0	0 0	2 3	0 0	0 0	0 0	1 1	1 1	0 0	0 0	0 0	E + P + AM 2010
10th Street West/Avenue P	4 3	1 1	2 2	3 3	0 1	2 2	3 3	1 1	2 2	3 3	1 1	2 2	E + P + AM 2010
10th Street West/Avenue P-8	3 3	0 0	0 0	2 3	0 0	1 1	0 0	0 0	0 0	0 0	1 1	1 1	E + P + AM 2010
10th Street West/Elizabeth Lake	2 3	1 0	1 1	2 3	1 0	1 2	2 3	1 1	1 2	2 3	1 1	1 2	E + P + AM 2010
SR-14 Off Ramp/Avenue P	0 0	1 1	2 1	0 0	0 0	0 0	3 3	0 0	0 0	3 3	0 0	0 0	E + P + AM 2010
5th Street West/Avenue P-8	2 0	0 2	1 1	2 0	1 0	2 0	2 2	0 0	2 0	2 2	0 0	1 2	E + P + AM 2010
5th Street West/Avenue Q	2 2	0 1	1 1	2 2	1 0	0 2	2 2	0 0	1 1	2 2	0 1	1 1	E + P + AM 2010
SR-14 SB Off Ramp/Palmdale Boulevard	0 0	0 0	0 0	0 0	1 1	1 2	3 3	0 0	0 0	3 3	0 0	0 0	E + P + AM 2010
SR-14 NB Off Ramp/Palmdale Boulevard	0 0	1 1	2 1	0 0	0 0	0 0	3 3	0 0	0 0	3 3	0 0	0 0	E + P + AM 2010
Division Street/Avenue P	0 3	1 1	1 1	0 3	0 0	0 1	3 3	0 1	0 1	3 3	0 0	1 1	E + P + AM 2010
Division Street/Avenue P-8	2 3	0 0	1 1	2 3	0 0	1 1	2 2	0 0	1 2	2 2	0 0	1 1	E + P + AM 2010
Division Street/Avenue Q	2 2	0 0	1 1	2 2	0 1	1 1	2 2	0 0	1 1	2 2	0 0	1 1	E + P + AM 2010
Sierra Highway/Avenue P	2 3	1 1	1 1	2 3	1 1	2 2	3 3	1 1	2 2	3 3	1 1	1 2	E + P + AM 2010
Sierra Highway/Avenue P-8	2 3	0 0	1 2	2 3	0 0	0 0	0 0	1 1	2 1	0 0	0 0	0 0	E + P + AM 2010

T - Through
R - Right
L - Left
NB - Northbound
SB - Southbound
E + P + AM = Existing Plus Project Plus Auto Mall

f. Provide separate right turn lanes on the northbound, eastbound, and westbound approaches at 10th Street West/Avenue P.

g. Widen the northbound SR 14 off-ramp at Avenue P to provide two left and one right turn lane.

h. Widen the northbound SR 14 off-ramp at Palmdale Boulevard to provide two left and 1 right turn lane.

i. At the future intersection of 5th Street West/Avenue P-8, provide two through, two left and one right turn lane on the southbound 5th Street West approach and two through and two left turn lanes on the eastbound Avenue P-8 approach.

~~j. On the northbound Street B approach at Avenue P, provide two left and one right turn lane.~~

k. Provide a second southbound left turn lane on 5th Street West at Palmdale Boulevard.

l. Provide a southbound right turn lane on Sierra Highway at Avenue P.

m. Provide two left and one right turn lane on Avenue P-8 at Sierra Highway.

n. Provide two left and one right turn lane on southbound Street A at Palmdale Boulevard (needed to minimize the possibility of the vehicle queue blocking the intersection at Street A/Avenue Q).

o. Provide traffic signals at the following intersections:

- Street A & P-8, Street A & P-12, Street A & Avenue Q, Street A & Palmdale Boulevard, and Avenue P-12 & 5th Street West.

p. A transit center should be placed at or near the southeast corner of Avenue P and 10th Street West to be funded an a pro rata share by the Specific Plan developers as determined by the City Engineer and/or City Traffic Engineer. The center would allow for buses from several routes to have an off-street transfer point with patron facilities.

2. All road improvements shall be provided in accordance with City design standards to the satisfaction of the City Engineer, prior to issuing occupancy permits.

3. Each applicant shall be required to submit a Traffic Control Plan for review and approval by the City Traffic Engineer, prior to issuance of grading permits to minimize construction-related traffic impacts.

Existing Plus Project Plus Auto Mall

4. The improvements required for existing plus project traffic volumes will be able to accommodate the traffic generated by the Antelope Valley Auto Mall, except at ~~Sierra Highway/Avenue P~~ the following, where ~~this~~ additional improvements will be needed (to be funded on a pro rata basis by project applicants):

a. Provide a second eastbound left turn lane on Avenue P at Sierra Highway.

b. Provide a fourth northbound through lane on 10th Street West ~~at~~ between Avenue P and SR14.

c. Provide a second southbound left turn lane on 10th Street West at Avenue P-4.

~~d. Provide a second westbound left turn lane on Palmdale Boulevard at 5th Street West.~~

e. Widen Palmdale Boulevard to eight lanes between 5th Street West and the SR 14 Freeway.

UNAVOIDABLE ADVERSE IMPACTS

Future (year 2010) traffic would result in three intersections operating at Level of Service E after implementation of recommended mitigation measures.

B. HYDROLOGY

Information in this section is based on a hydrology report prepared by registered Civil Engineers of Robert Bein, William Frost & Associates. The report identifies flood control and storm drain facilities required for development of the Palmdale Trade and Commerce Center project site. The report also identifies existing storm drain facilities for the study area and provides a discussion of potential impacts and mitigation measures relating to drainage and flood control of the project. The review and analysis is based on Federal and State guidelines for flood protection levels. The methods of analysis are taken from the Los Angeles County Hydrology Manual, revised 1988, and the City of Palmdale Master Plan of Drainage.

EXISTING CONDITIONS

The project site is located within the City of Palmdale's jurisdictional boundaries, bordering the City of Lancaster to the north and unincorporated areas of Los Angeles County in all other directions. The site is approximately 756 acres of open land with some existing structures, such as a public storage facility located in the northern portion, and retail stores along Palmdale Boulevard.

Precipitation in the area is relatively sparse and ranges from 6 inches in Palmdale to over 19 inches in the mountains to the south. The direction of drainage for the project site is northeasterly. The northwestern portion of the site contains a major drainage source, Amargosa Creek, which originates from the San Gabriel Mountains and flows northeasterly. The remainder of drainage for the site is in the form of sheet flow which runs in a northeasterly direction towards the Antelope Valley Freeway and continues off the site. Both the Los Angeles County Department of Public Works and the City of Palmdale maintain regional and local flood control facilities. However, Los Angeles County currently does not have any flood control facilities to mitigate the incoming tributary drainage for the site, nor does it have any immediate drainage facilities to intercept the generated flow. The only onsite drainage facilities are three culverts, each 36 inches in diameter, located beneath the Antelope Valley Freeway. The culverts are approximately 300 feet apart and are located between the Avenue P-8 and the Palmdale Boulevard intersections. According to preliminary calculations, these culverts are undersized and are not adequate for the drainage of runoff to an offsite location. Runoff which flows on site from a westerly and southerly direction is considered by Los Angeles County to pose a flood hazard. Floods in the Antelope Valley occur primarily as a result of general winter storms occurring between the months of November and April, with the greatest frequency and intensity normally occurring between December and March.

The general terrain of the project site is classified as alluvial fan. Alluvial fans are now included in the National Flood Insurance Act of 1988. Due to the high velocity and unpredictable change in directions of flow, this extension is a key element in flood loss protection and to the enforcement of the necessary mitigation measures.

Existing Floodplain Mapping

The existing flood hazard zones within the project site or its vicinity are established by the Federal Emergency Management Agency (FEMA) and adopted by the Flood Data Systems, Inc. (see Exhibit 15, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD HAZARD ZONES). The majority of the site falls within the unshaded "Zone X", which has been zoned as a flood hazard area. The second most predominant flood hazard area is designated by the shaded "Zone X". The northwestern boundary within the Amargosa Creek floodplain, the southeastern boundary and a northern portion of the site are located within the Zone AO (depth 1) Flood Hazard Zone. The following is a description of the flood hazard zones and some of the regulations pertaining to development within their boundaries.

Zone X (unshaded) is defined as areas determined to be outside the 500-year floodplain. Zone X (unshaded) is used on new and revised maps in place of the previous Zone C. These unshaded areas have been identified in the community flood insurance studies as areas of moderate or minimal hazard from the principal source of flood in the area. Portions of the City which fall within this zone could be flooded due to the inadequate local stormwater drainage systems. Flood insurance is available, but is not required by regulation for this zone. In addition, there are no present regulations for development within an unshaded Zone X.

The shaded Zone X is defined as areas between 100 and 500-year flooding of less than one foot depth. This area is considered in the community flood insurance study as an area of moderate or minimal hazard from the principal source of flooding. However, buildings within this area are at risk of flooding, due to the inadequate local drainage systems. Again, flood insurance is available, but is not required by regulation for this zone. Presently, there are no regulations for development within a shaded Zone X.

Zone AO (depth 1) is the Flood Insurance Rate zone that corresponds to the areas of 100-year shallow flooding (average depth 1 foot), usually in the form of sheet flow on sloping terrain. Alluvial flooding areas within this zone are analyzed for velocities as well. This zone requires mandatory flood insurance purchase. In addition to the insurance, this zone requires that all buildings raise their base pads by one foot above the base flood elevations.

Existing Flow Rates

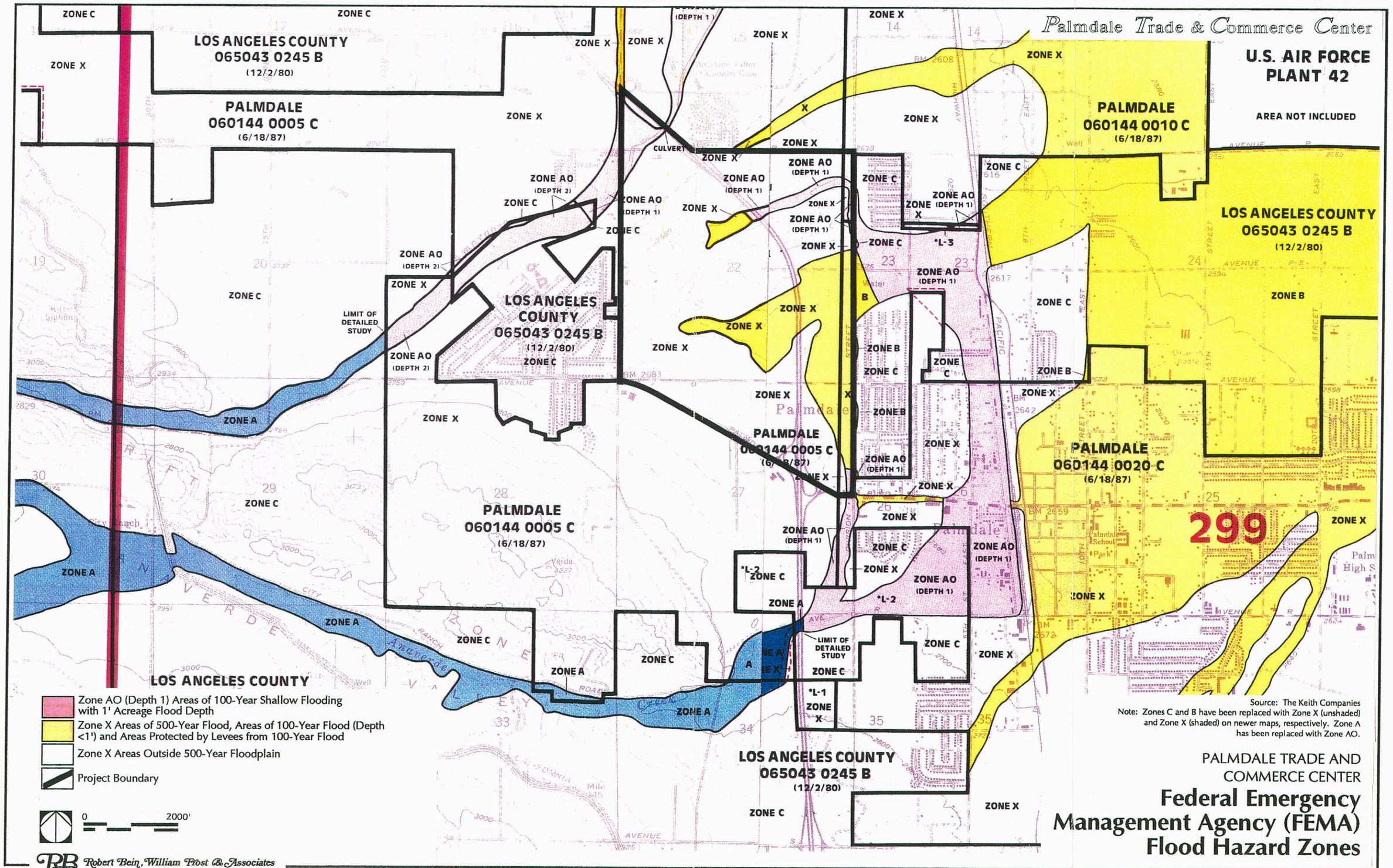
The existing 50-year flow rates within the area tributary to the area project site have been generated for the project site by The Keith Companies (1990) (see Exhibit 16, DRAINAGE MASTER PLAN). An existing storm runoff hydrograph has been generated by The Keith Companies to analyze the conditions prior to development. The results, assuming that there is no development in the subareas which could affect the site, indicate that for the 1,671 acre tributary area, a peak storm runoff of 429 cfs (cubic feet per second) could be generated from a 50-year frequency four-day storm.

IMPACTS

Flood Control

Development of the Palmdale Trade and Commerce Center will include Mixed Use, Mixed Use - AICUZ restricted, and Planned Development (office, commercial, and public administrative land uses). Project implementation will convert the area to impervious surfaces, with the exception of landscaped areas. The City of Palmdale Master Plan of Drainage estimates the 10-year and 50-year flow rates for the project area (see Exhibit 17, CITY OF PALMDALE MASTER PLAN OF DRAINAGE AND HYDROLOGY). These flow rates have been generated for the local and regional facilities. The proposed regional facilities are similar to those identified in the Los Angeles County Comprehensive Flood Control Plan. However, due to refinements in hydrology and additional retarding of the basins, adjustments were made to these facilities and the adopted City of Palmdale Drainage Master Plan. However, these changes are minor and are not anticipated to affect the overall plan.

Exhibit 16, DRAINAGE MASTER PLAN, contains the tributary drainage basins and the 50-year capital storm flow rates for the project site. Assuming total development within subareas, a storm runoff hydrograph has been generated in order to analyze the conditions upon completion of development. The hydrograph flow rate considers the peak 50-year four-day storm frequency for the 1,671 acre tributary area, and the results were computed to be 1,592 cfs. In accordance with the drainage ordinance for Palmdale, the difference in runoff volume for existing and developed conditions must be retained onsite. The anticipated flow rates and the necessary improvements for the proposed storm drains are shown in Table 15, PROPOSED STORM DRAIN SIZES.



Zone AO (Depth 1) Areas of 100-Year Shallow Flooding with 1' Acreage Flood Depth

Zone X Areas of 500-Year Flood, Areas of 100-Year Flood (Depth <1') and Areas Protected by Levees from 100-Year Flood

Zone X Areas Outside 500-Year Floodplain

Project Boundary

Source: The Keith Companies

Note: Zones C and B have been replaced with Zone X (unshaded) and Zone X (shaded) on newer maps, respectively. Zone A has been replaced with Zone AO.

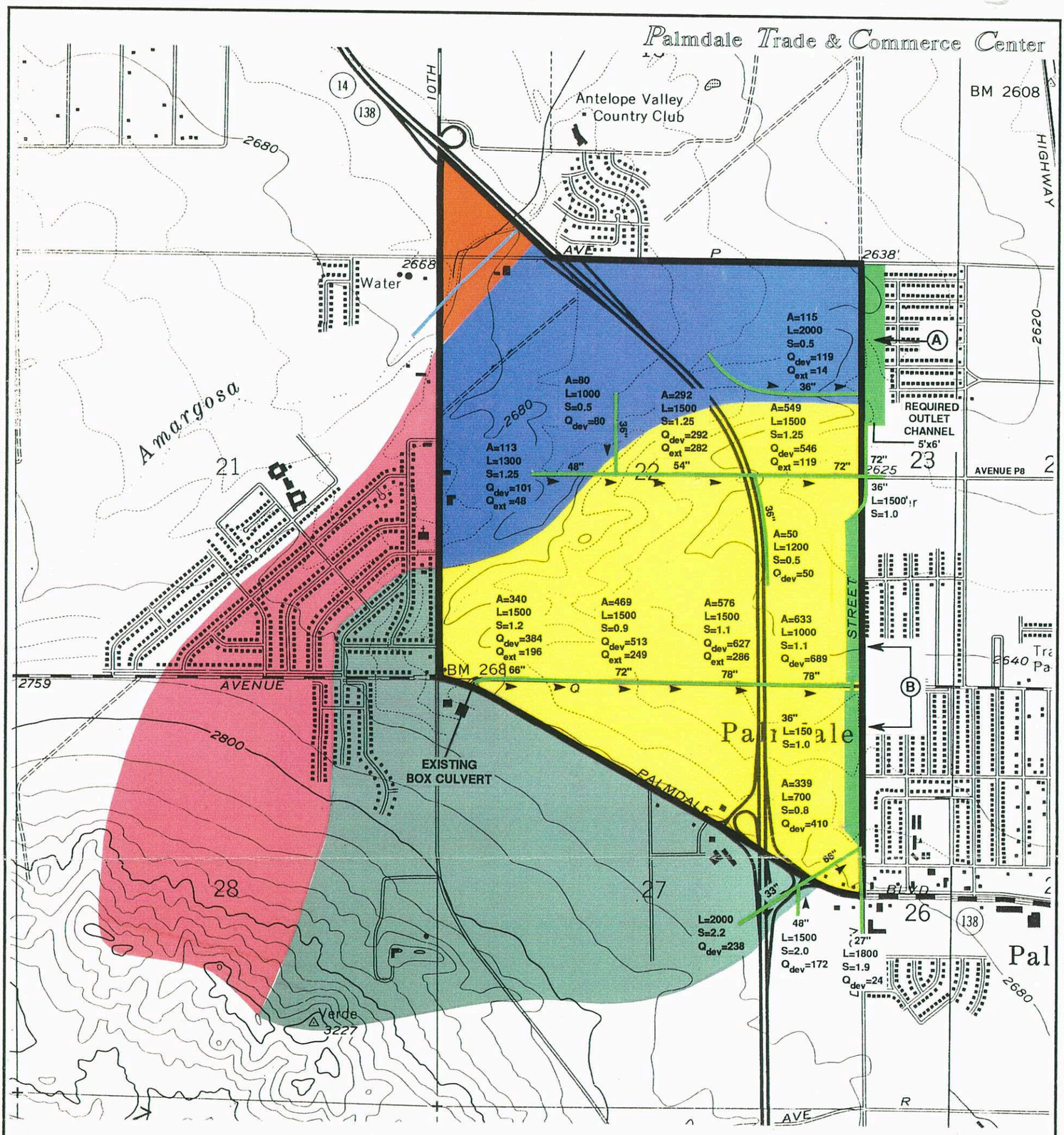
PALMDALE TRADE AND COMMERCE CENTER

Federal Emergency Management Agency (FEMA) Flood Hazard Zones

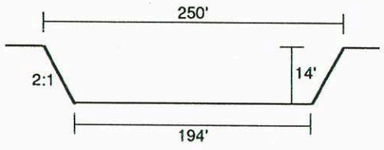
Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 15

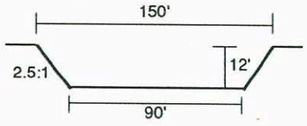


Detention Basin Volumes = 157 AF
Typical Section:



Section A

Detention Basin Volumes = 145 AF
Typical Section:



Section B

- Project Boundary
- Proposed Detention Area
- Proposed Storm Drain
- Tributary Basin Area = +33 Acre
- Tributary Basin Area = +306 Acre
- Tributary Basin Area = +349 Acre
- Tributary Basin Area = +475 Acre
- Tributary Basin Area = +506 Acre
- Proposed Amargosa Creek Channel (By Ass. Dist. 88-1)

0 — 1500'

- ► Drainage Direction
- 33" Reinforced Concrete Pipe Size
- A Area (acres)
- L Length (feet)
- S Slope (%)
- Q_{dev} 50-Year Peak Flow Rate for Developed Conditions (cfs)
- Q_{ext} 50-Year Peak Flow Rate for Existing Conditions (cfs)

Source: The Keith Companies

PALMDALE TRADE AND COMMERCE CENTER

Drainage Master Plan

Robert Bein, William Frost & Associates
3-90 JN 25957-2898

Exhibit 16

TABLE 15
PROPOSED STORM DRAIN SIZES*

LOCATION/STREET	Q50 (cfs)**	AREA (acres)	LENGTH (feet)	SLOPE (%)	SIZE*** (inch)
In Between Ave. "P" & Ave. "P8"	119	115	2000	0.5	36
Avenue "P8"	101	113	1300	1.25	48
Avenue "P8"	282	292	1500	1.25	54
Avenue "P8"	546	549	1500	1.25	72
St. Xing Avenue "P8"	80	80	1000	0.5	36
Avenue "Q"	384	340	1500	1.2	66
Avenue "Q"	513	469	1500	0.9	72
Avenue "Q"	627	576	1500	1.1	78
Avenue "Q"	689	633	1000	1.1	78
Antelope Valley Freeway	50	50	1200	0.5	36
Division St.	24	---	1800	1.9	27
Division St.	---	---	150	1.0	36
Division St.	---	---	1500	1.0	36
System Xing Palmdale Blvd.	410	339	700	0.8	66
System Xing Palmdale Blvd.	172	---	1500	2.0	48
System Xing Antelope Valley Fwy.	238	---	2000	2.2	33

* Source: The Keith Companies

** Developed Condition Flowrates

*** Reinforced Concrete Pipes

Peak Attenuation and Storage

The proposed detention facilities will be designed to retain the difference between the post development storm runoff and the pre-development storm runoff from the upstream subareas. The resulting retention of runoff completely mitigates the runoff impacts of the project on downstream facilities. The increased storm flows resulting from the increase in impervious surfaces would be retained in the basins and released at a later time at pre-project rates of flow.

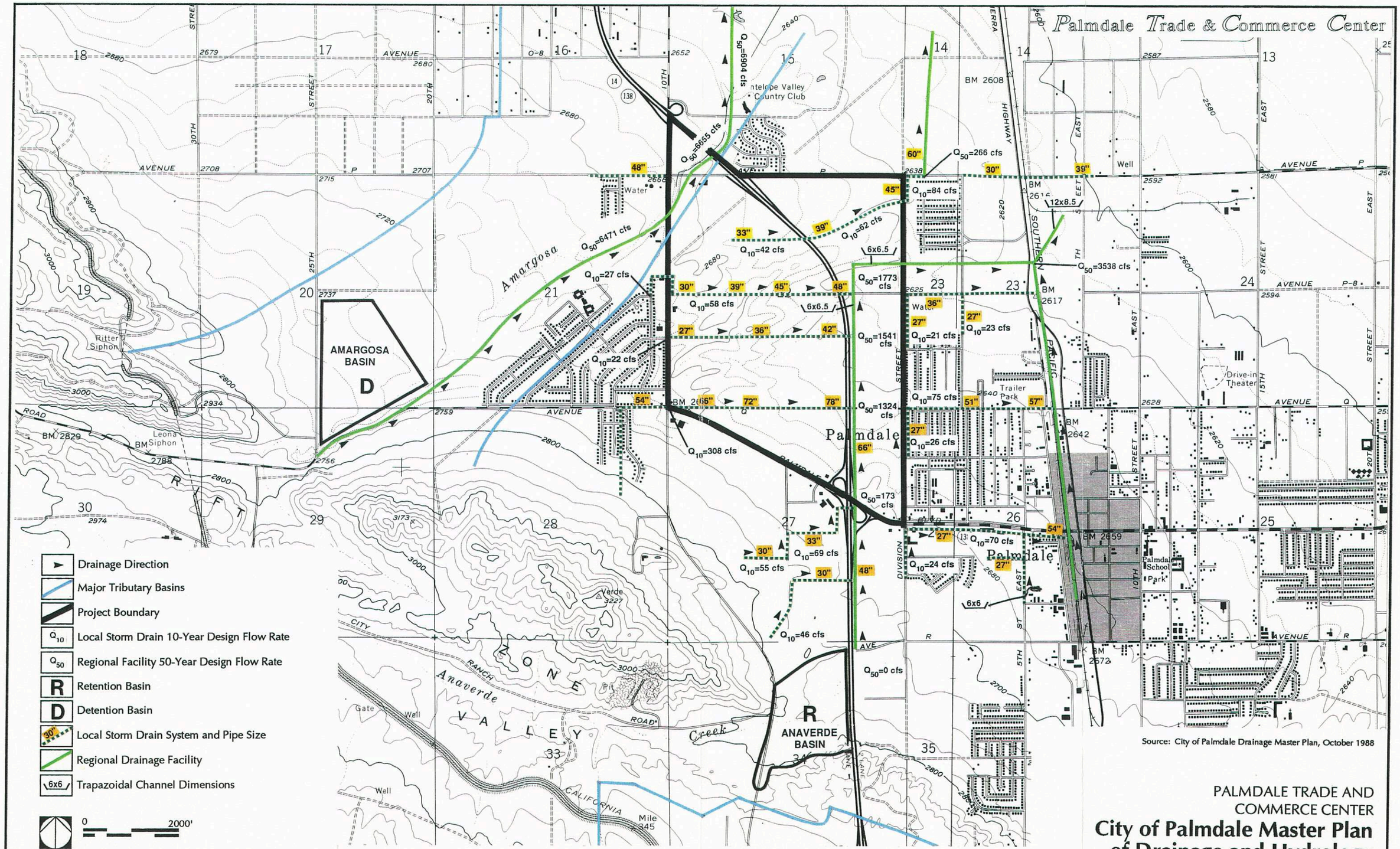
For the same reason, no significant cumulative downstream drainage impacts are anticipated. The unretained runoff from the basins will be discharged into the proposed City of Palmdale regional 6' x 6.5' trapezoidal channel shown on Exhibit 17, CITY OF PALMDALE MASTER PLAN OF DRAINAGE AND HYDROLOGY.

The three retention basins are located on the west and east of the existing Division Street between Palmdale Boulevard and Avenue "P", and are intended to reduce the peak flood discharge and sediment. The required storage volume for these basins is 300 acre-feet, and they are connected with bypass systems. Detention facilities may pose potential offsite hazards and are subject to semi-annual and post major storm inspections. These inspections will determine the degree and frequency of repair. The basins will be landscaped and used as combined flood control and recreational facilities.

Alluvial fans pose potential flood hazards due to the high velocity rates and the large quantity of eroded sediments which are carried within the runoff. Deposition or flooding occurs when there is an obstruction or decrease in slope terrain, which also results in damage due to undermining of structural foundations and loss of topsoil or pavement.

Water Quality

Implementation of the proposed Specific Plan will result in an increase in the quantities of urban pollutants that enter the local drainages. The automobile traffic associated with the proposed commercial office, light industrial and retail land uses will produce pollutants such as hydrocarbon fuels, lubricants, and rubber. The proposed land uses will generate more traffic, and consequently result in more automobile related pollutants than the surrounding residential uses. Light industrial uses also introduce the possibility of accidental contamination by industrial pollutants. Improper maintenance of landscaping can introduce fertilizers and pesticides into drainages. These impacts can be reduced through transportation management, proper safety design and regulation of light industry, and proper landscaping design and maintenance.



Source: City of Palmdale Drainage Master Plan, October 1988

PALMDALE TRADE AND COMMERCE CENTER

City of Palmdale Master Plan of Drainage and Hydrology

Robert Bein, William Frost & Associates

3-90

JN 25957-2898

Exhibit 17

The potential for groundwater contamination as a result of project implementation will be substantially reduced if runoff contamination is kept at acceptable levels, as defined by state and local agencies. The required hazardous materials assessment and cleanup prior to development of any parcel within the Specific Plan area will also help reduce the potential for groundwater contamination to less than significant levels.

The construction phases of the various components of the Specific Plan could result in increased erosion onsite, increased sediment load in runoff and resultant sedimentation and siltation downstream. These impacts can be reduced to less than significant levels with implementation of proper mitigation measures and the required Erosion Control Plan. The increase in impermeable surface areas on the project site following construction will result in greater runoff volumes. The increased volumes will result in higher flow velocities which are anticipated to increase erosion and siltation in unlined channels downstream from the project. Implementation of the Erosion Control Plan and construction of the detention ponds are anticipated to reduce project related water quality impacts due to sedimentation to less than significant levels.

The proposed project will result in increased wastewater production. However, with proper transport, processing and disposal of project generated wastewater, no significant impacts upon local or regional water quality are anticipated. Reclaimed wastewater is used in the Antelope Valley for irrigation and groundwater recharge. The California State Water Quality Control Plan Report for the South Lahontan Basin, which includes the Antelope Valley, reported no significant impact upon groundwater quality as a result of reclaimed wastewater usage. Therefore, reclamation of project generated wastewater would be environmentally sound and should be considered.

MITIGATION MEASURES

Stormwater Runoff

5. All facilities shall be designed and constructed in accordance with the City of Palmdale Drainage ~~Management~~ Master Plan and LACFCD Hydrology Manual to the satisfaction of the City engineer. Local facilities will be installed by individual applicants prior to issuing building permits. Regional facilities (Amargosa Creek improvements and the three detention basins) shall be constructed for portions onsite a given parcel and/or funded on a pro rata basis by each applicant, and shall be completed prior to Specific Plan buildout (site specific studies for each applicant will determine the need for interim measures).

6. According to the City of Palmdale's Master Drainage Plan, the project site shall include local storm drain facilities ranging in size from 30 inches to 78 inches. The

site shall also include regional storm drain facilities ranging in size from 66 inches to a 6 foot by 6.5 foot concrete trapezoidal channel.

7. The construction of a concrete trapezoidal channel with a 15 foot base and 1.5:1 side slopes will be required for Amargosa Creek improvements. The channel will have culvert crossings for upstream and downstream transitions.

8. Three detention basins at the eastern boundary of the project site are required for collection of runoff from the west and south, and are intended to replace the City's regional system. One detention basin north of Avenue P-8 will have a volume of 157 acre-feet. This offsite detention basin will require an agreement with the affected property owner(s) prior to final design approval. Two basins south of Avenue P-8 will have a combined total volume of 145 acre-feet.

Peak Attenuation and Storage (Detention Basins)

9. An emergency spillway adequately sized and armored to pass at least the 50-year recurrence flood flow shall be provided.

#10. An emergency flow path shall be provided in the case of spillway overflows.

#11. Seepage collars on supplemental piping outlets shall be installed.

#12. Installation of a cutoff trench beneath the outlet works shall be provided.

#13. An energy dissipator or other protection device shall be installed on the outlet pipes at the end of the detention facility in order to reduce erosion.

#14. Sloped embankment faces shall be provided for structural stability.

#15. Grates, cages, hoods and other devices shall be provided over detention outlet works to prevent objects and debris from blocking openings.

Onsite Safety Provisions

#16. Removable safety cages or grates shall be provided on the entrances to storm drains which flow into or out of the detention facilities. Installation of safety cages or grates shall be provided on "non-culvert" type pipes which are connected to long or extensive underground pipe systems. Cages or grates shall be sloped so that water moving through the grate will exert an upward force on a person or object trapped

against the grate. The total grate area shall be large enough to reduce drag forces to safe levels.

#17. Guardrails and/or fences shall be installed near the edge of vertical walls or slopes where inlet or outlet structures are located.

#18. Steps and handrails shall be installed on the periphery of a detention facility where access may be difficult to and from lower detention facilities.

#19. Signs shall be placed around the perimeter of a facility notifying the public of occasional water storage and related safety hazards.

#20. Mild slopes shall be used around the periphery of a retention facility.

#21. To prevent possible falling or slipping, maximum lateral and longitudinal slopes on concrete cunnettes or trickle channels shall be 4 percent (4%).

Water Quality

#22. Each applicant shall submit a Water Quality/Erosion Control Plan for City review and approval, prior to issuing grading permits. The Plan shall indicate specific means of reducing urban pollutants and sedimentation including but not limited to the following:

a. Surplus or waste material shall not be placed in drainage ways or within the 100-year floodplain of surface waters.

b. All loose piles of soil, silt, clay, sand, debris, or other earthen materials shall be protected in a reasonable manner to eliminate any discharge to waters of the State.

c. Dewatering shall be done in a manner so as to eliminate the discharge of earthen material from the site.

d. All disturbed areas shall be stabilized by appropriate soil stabilization measures by October 15th of each year.

e. All work performed between October 15th and May 1st of each year shall be conducted in such a manner that the project can be winterized within 48 hours.

f. All nonconstruction areas shall be protected by fencing or other means to prevent unnecessary disturbance.

g. During construction, temporary gravel or sandbag dikes shall be used as necessary to prevent discharge of earthen materials from the site during periods of precipitation or runoff.

h. Stabilizing agents such as straw and wood chips shall be used during the interim period after grading in order to strengthen slopes while ground cover takes hold.

i. Impervious areas shall be constructed with infiltration trenches along the downhill edges to dispose of all drainage emanating from them.

j. Infiltration trenches shall be constructed on the downgradient side of all structural drip lines.

k. Revegetated areas shall be continually maintained in order to assure adequate growth and root development.

l. Physical erosion control facilities shall be placed on a routine maintenance and inspection program to provide continued erosion control integrity.

m. Where construction activities involve the crossing and/or alteration of a stream channel, such activities shall be timed to occur during the period in which streamflow is expected to be lowest for the year.

n. Periodic cleaning of paved areas shall be performed to remove sediments and absorbed pollutants.

o. Routine cleaning of manholes and catch basins shall be performed to remove sediment and debris.

p. Surveys shall be conducted of all facilities involved in the storage or handling of hazardous or toxic chemicals which might contribute to stormwater pollution.

q. Control of washdown drainage from industrial facilities shall be enforced.

r. Information regarding the disposal of waste oil/grease and pesticide containers shall be provided to new business owners.

s. Controlled use of pesticides and fertilizers shall be enforced.

UNAVOIDABLE ADVERSE IMPACTS

With implementation of the above mitigation measures, no unavoidable adverse impacts are anticipated.

C. PUBLIC SERVICES AND UTILITIES

Information in this section is based on correspondence received from Public Service and Utility agencies (refer to Appendix J, CORRESPONDENCE).

POLICE SERVICE

EXISTING CONDITIONS

General law and traffic enforcement for the City of Palmdale is provided by the Los Angeles County Sheriff's Department (Antelope Valley Station) approximately 7 miles from the project site. The Antelope Valley Station is located at 1010 West Avenue J, in Lancaster, CA, and services a population of 220,000 within a 1,368 square mile area. The average emergency response time to the project area is approximately three (3) minutes, and the immediate response time is approximately seven (7) minutes. Currently, the project area is served by one (1) Captain, four (4) Lieutenants, four (4) Sergeants, thirty-nine (39) Deputies, and four (4) Community Service Officers (non-sworn).

IMPACTS

According to the Sheriff's Department, the proposed development will have a significant impact on the department's ability to provide law enforcement services. The project development is expected to result in some increases in calls for service to the project site. Both general law and traffic related incidents are expected to increase as a result of this project. Manpower increases may be necessary to accommodate the proposed Specific Plan. These project impacts are not expected to be significant with implementation of recommended mitigation measures and revenue generated by the project. However, the cumulative impacts of this project, with existing and other developing properties, is not immediately predictable.

MITIGATION MEASURES

#273. The following mitigation measures will reduce impacts of the proposed Specific Plan, and shall be implemented by each applicant prior to occupancy permits for future site-specific development submittals.

a. Adequate emergency access and circulation throughout and around the project shall be provided to the satisfaction of the Los Angeles County Sheriff's Department.

b. Adequate lighting shall be provided to enhance crime prevention and law enforcement efforts.

c. Proper address signs shall be provided for easy identification of locations during emergencies.

d. Landscape feature standards which do not conceal potential criminal activity around buildings and in parking areas shall be provided.

PARKS AND RECREATION

EXISTING CONDITIONS

The project area is currently served by two park facilities. Manzanita Park is a 5-acre facility located approximately 1/2 mile south of Palmdale Boulevard at the northeast corner of Mesa Verde and 5th Street West. Desert Sands Park is a 20-acre park at the southwest corner of Avenue P-8 and 3rd Street East, approximately 1/8 mile east of Division Street.

IMPACTS

The City of Palmdale's Parks and Recreation Department anticipates project-related impacts to the above mentioned park facilities to be less than significant. Compliance with the City of Palmdale's Ordinance No. 789 (collection of parkland fees) and the City of Palmdale's Resolution No. 88-195 (establishing the parkland development fee), or their respective successors will mitigate potential impacts on parks and recreational facilities. In addition, the development of drainage basins for compatible park and recreation purposes will further reduce impacts. Should significant impacts occur at a later time, the City may increase the park fee requirements. Applicants will pay the prevailing fee at the time of building permit issuance.

MITIGATION MEASURES

None are required.

LIBRARY SERVICES

EXISTING CONDITIONS

The Palmdale City Library is a 12,000 square foot facility, located on the corner of Palmdale Boulevard and Sierra Highway. This facility is not adequate for the existing population. At present, negotiations are underway to relocate the library into a larger site

as an interim measure until the City is able to construct a facility capable of servicing the population needs of the Palmdale area for the next 20 years. It is anticipated that the interim site will be centrally located in Palmdale and will be able to provide adequate services for the next few years.

IMPACTS

The proposed project will not significantly affect library operations.

MITIGATION MEASURES

No mitigation measures are required.

TELEPHONE

EXISTING CONDITIONS

At the present time, there are no telephone lines within the immediate project areas (lines are being installed as part of Avenue P-8 and Auto Mall construction). There are Pacific Bell main conduit lines located on Palmdale Boulevard and 10th Street West. Pacific Bell is presently working with the City of Palmdale to place a backbone line up 5th Street West which will eventually serve the proposed project area.

AT&T has a telecommunications easement across the northwesterly quarter of the project site. The easement runs from Avenue P to 10th Street West and is approximately 3,000 feet in length. Property owners will require written agreements with AT&T before any disturbance of the easement.

IMPACTS

Although the possibility exists of having to extend and/or relocate existing facilities, no significant impacts to telephone service are anticipated at the present time.

MITIGATION MEASURES

#24. Developers of individual properties within the Specific Plan area will be responsible for payment of assessment fees and installation of required conduits prior to issuance of occupancy permits.

ELECTRICITY

EXISTING CONDITIONS

Southern California Edison (SCE) currently provides electrical services to the project area. Existing electrical facilities are located along the south side of Avenue P, the west side of 10th Street West, the north side of Avenue Q, the east side of Division Street, and the east side of 5th Street West. All existing facilities are overhead 12 KV (Kilovolt) lines.

IMPACTS

The proposed project is expected to utilize approximately 75.1 million Kilowatt hours (KWh) per year. This electrical consumption figure was obtained by using an Annual Electrical Energy formula found in the April 1987 Air Quality Handbook (South Coast Air Quality Management District). SCE has indicated they have the capability to service the proposed project area, and SCE expects no significant impacts concerning electrical service for the proposed project.

MITIGATION MEASURES

#25. All overhead lines below 32 KV (Kilovolt) shall be placed underground by applicants prior to issuance of occupancy permits.

#26. The individual project applicants shall coordinate with SCE to ensure that adequate electrical service is provided to the proposed development and that service connection activities will be performed in cooperation with SCE to minimize any short term impacts.

GAS

EXISTING CONDITIONS

Natural gas service is provided by the Southern California Gas Company (SCG). At present, the project will be served from an existing 4-inch main on Avenue P and an existing 6-inch main on 10th Street West.

IMPACTS

Based on SCG consumption factors obtained from the April 1987 Air Quality Handbook (SCAQMD), the proposed project is expected to utilize approximately 17.9 million cubic feet per month of natural gas. Although the proposed project will increase gas usage,

potential impacts to system capacity, existing customers, and the environment are expected to be less than significant.

MITIGATION MEASURES

No significant impacts have been identified, therefore, no mitigation measures are required at this time.

SEWER

EXISTING CONDITIONS

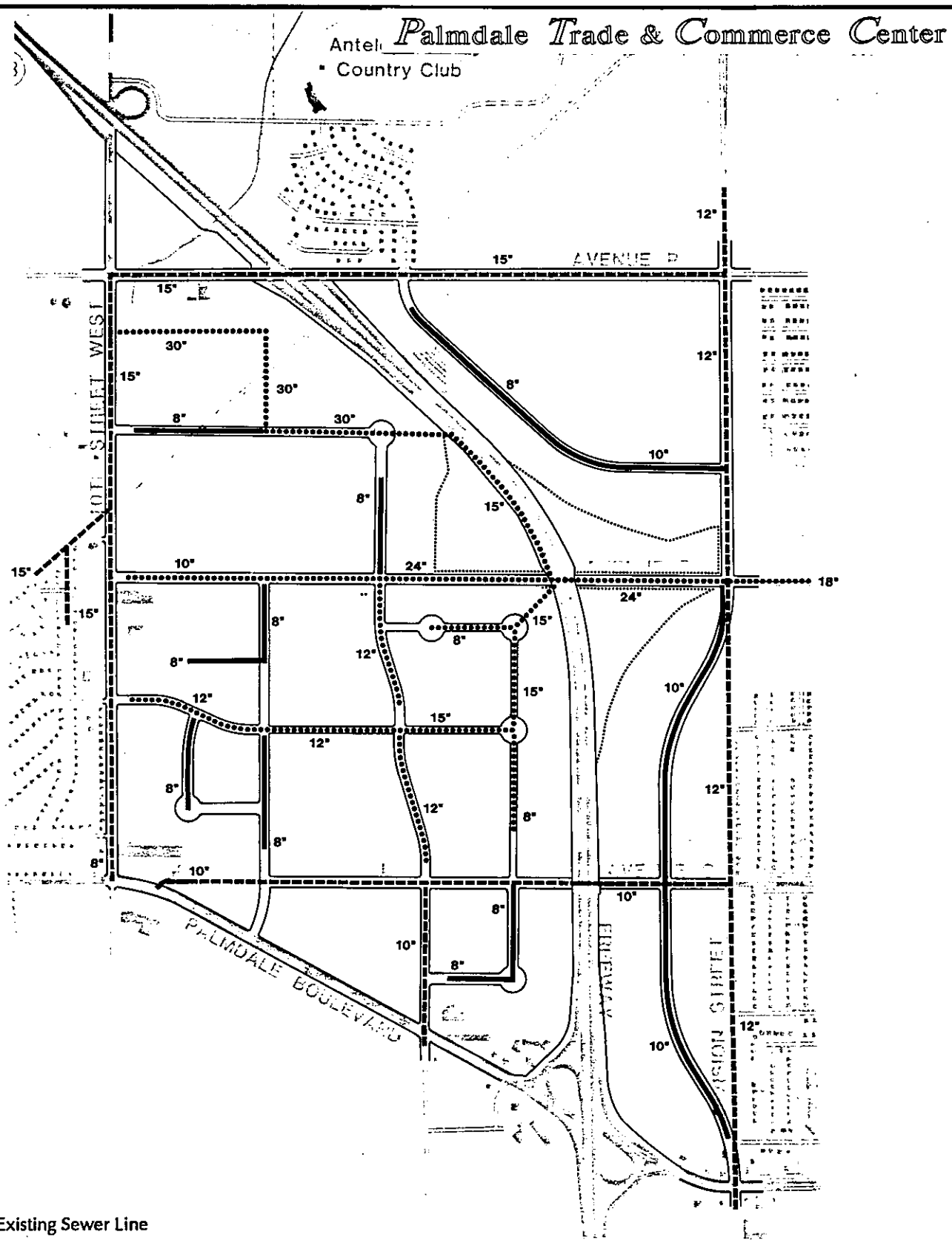
The project site will be serviced by the Los Angeles County Sanitation District. Existing trunk lines are located in the following areas: Trunk "C" is a 12 to 15-inch line, and is located on Avenue P and Division Street; Trunk "D" is a 10 to 12-inch line, and is located on Avenue Q and Division Street. Portions of the Specific Plan area lie within the Amargosa Creek Assessment District No. 88-1 and will be subject to the appropriate fees. The rest of the site is within the Anaverde basin.

IMPACTS

All wastewater generated within the Specific Plan area will be collected and routed to a proposed 18-inch line in Avenue P-8 (see Exhibit 18, EXISTING AND PROPOSED SEWAGE SYSTEM). From that point, sewage flows east to the Palmdale Wastewater Reclamation Plant located at Avenue P-8 and 30th Street West (which the District has plans to expand). Proposed sewer lines within the plan area range from 8 inches to 24 inches. All lines will utilize gravity flow. The implementation of the project will represent a significant increase in service demand; however, the L.A. County Sanitation District is capable of serving the proposed project area at the present time.

MITIGATION MEASURES

#27. The project developer will be required to pay prevailing sewer assessment fees, provide adequate onsite wastewater conveyance facilities, and will conform with City Public Works Department and County Sanitation District No. 20 development standards pertaining to wastewater.



Existing Sewer Line

Proposed Sewer Line

Proposed Sewer Line (Assessment District 88-1)

0 1000'

Source: The Keith Companies

Proposed Sewage Plan is from the Draft Specific Plan.
Changes in the Circulation Plan will result in modification of the Sewage Plan

PALMDALE TRADE AND COMMERCE CENTER

Existing and Proposed Sewer System

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 18

WATER

EXISTING CONDITIONS

Water availability in the Antelope Valley, as well as throughout central and southern California, is a significant concern with respect to cumulative impacts of regional growth. The current state-wide drought condition (in its fourth consecutive year) has highlighted the increasing demands on limited water resources. In the Antelope Valley, water supply is provided by the California Aqueduct and local groundwater sources. California Aqueduct water is delivered from central/northern California, which is also in a drought condition. Local groundwater levels have been dropping due to increased pumping to serve the Antelope Valley's rapid growth over recent years.

The proposed Palmdale Trade and Commerce Center Specific Plan area will be serviced by the Palmdale Water District and Los Angeles County Water District No. 34. The Palmdale Water District serves the area generally east of the Antelope Valley Freeway. Los Angeles County Water District No. 34 services the rest of the project area, including the northeastern portion of the development.

IMPACTS

The proposed project is anticipated to represent a significant increase in water demands. Service availability for the ultimate project buildout (year 2010) will likely be dependent on developing additional water supplies and improving water conservation methods. Proposed water lines have been located so that any tract within the Specific Plan area can receive service without offsite improvements (although additional storage capacity will be required to meet cumulative peak and emergency demands within the Palmdale Water District). All the proposed lines are 12 inches or 16 inches, and have been sized to provide adequate fire flows (see Exhibit 19, WATER SERVICE PLAN).

MITIGATION MEASURES

#28. Provision of water service to the proposed project will be required as a part of project development and will occur to the satisfaction of the City of Palmdale prior to approval of each site-specific development plan. Previous studies have identified several alternatives to mitigate water impacts for projects in the immediate area. These alternatives include the provision of an onsite water supply system, participation in an existing water agreement established by another developer within the area, and/or the payment of Capital Improvement Charges. Project implementation will require mitigation in coordination with the City of Palmdale, Los

Angeles County Waterworks District No. 34, Palmdale Water District and the Los Angeles County Fire Department.

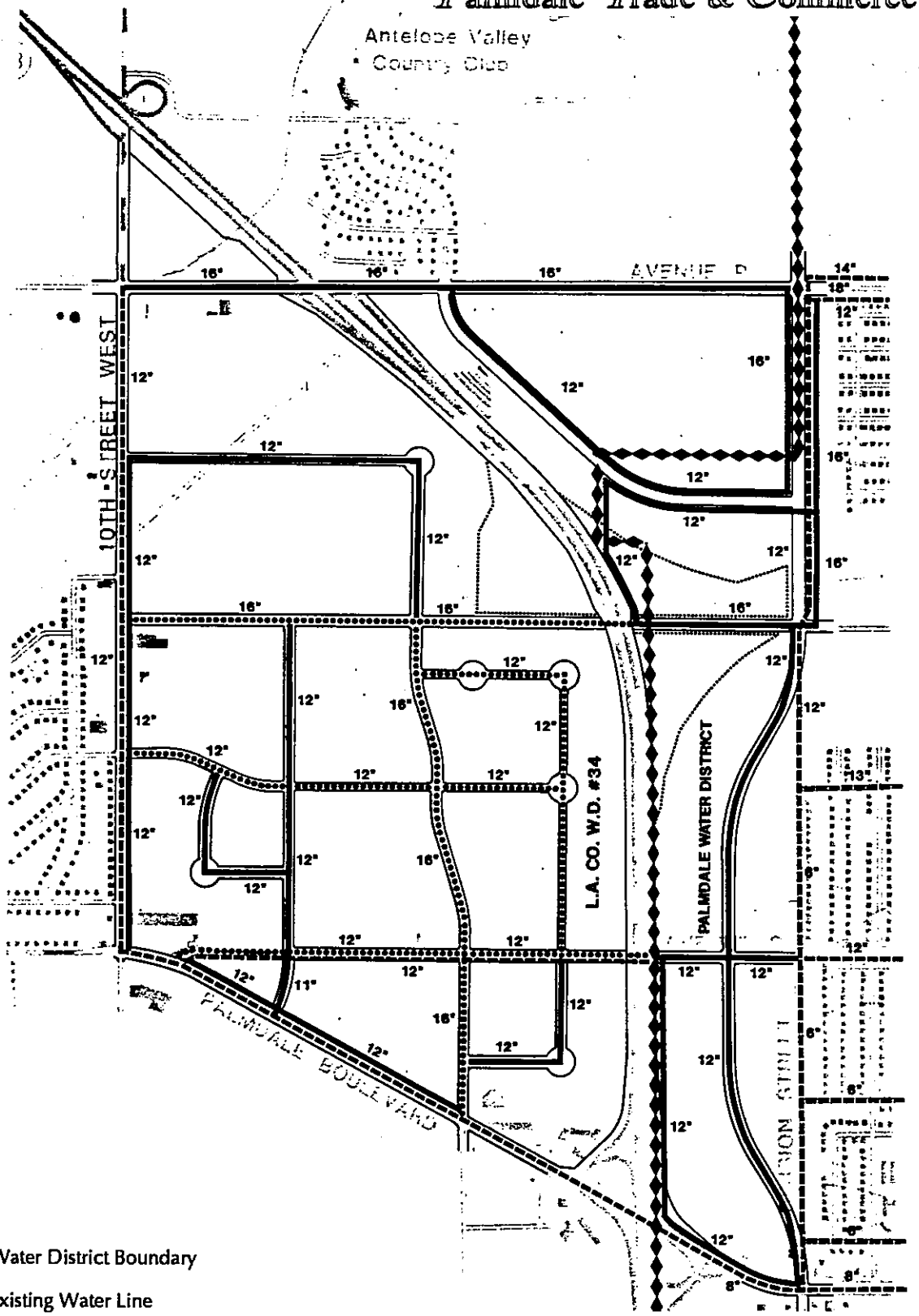
#29. **The following State laws require water-efficient plumbing fixtures in structures:**

- Low-flush toilets and urinals are required in virtually all buildings (as required in Health and Safety Code Section 17921.3).
- Efficiency standards must be met that give the maximum flow rate of all new showerheads, lavatory faucets and sink faucets, as specified in the standard approved by the American National Standards Institute on November 16, 1979 (pursuant to Title 20, California Administrative Code Section 1604(f) (Appliance Efficiency Standards)).
- No new appliance may be sold or offered for sale in California that is not certified by its manufacturer to be in compliance with the provisions of the regulations establishing applicable efficiency standards (Title 20, California Administrative Code Section 1606(b) (Appliance Efficiency Standards)).
- Installation of fixtures is prohibited unless the manufacturer has certified to the CEC compliance with the flow rate standards (Title 24 of the California Administrative Code Section 2-5307(b)).
- Pipe insulation is required to reduce water used before hot water reaches equipment or fixtures. Insulation of water heating systems is also required (Title 24, California Administrative Code Section 2-5352(i) and (j).
- Installation of residential water softening or conditioning appliances is prohibited unless certain conditions are satisfied. Included is the requirement that, in most instances, the installation of the appliance must be accompanied by water conservation devices on fixtures using softened or conditioned water (Health and Safety Code Section 4047).
- Government Code Section 7800 specifies that lavatories in all public facilities constructed after January 1, 1985, be equipped with self-closing faucets that limit flow of hot water.

#30. **Recommended measures to be implemented where applicable:**

Interior:

a. Supply line pressure: Reduce water pressure greater than 50 pounds per square inch (psi) to 50 psi or less by means of a pressure-reducing valve.
b. Laundry facilities: Use water-conserving models of washers.
c. Ultra-low-flush toilets: Install 1-1/2-gallons per flush toilets in all new construction.
d. Drinking fountains: Drinking fountains be equipped with self-closing valves.



Water District Boundary

Existing Water Line

Proposed Water Line (by Ass. Dist. 88-1)

Proposed Water Line

0 1000'

Source: The Keith Companies

PALMDALE TRADE AND COMMERCE CENTER

Water Service Plan

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 19

e. Hotel rooms: Conservation reminders be posted in rooms and restrooms*. Thermostatically controlled mixing valve be installed for bath/shower.

f. Restaurants: Water-conserving models of dishwashers be used for spray emitters that have been retrofitted for reduced flow. Drinking water be served upon request only.*

*The Department of Water Resources or local water district may aid in developing these materials or providing other information.

Exterior:

a. Landscape with low water-using plants wherever feasible.

b. Minimize use of lawn by limiting it to lawn-dependent uses, such as playing fields. When lawn is used, require warm season grasses.

c. Group plants of similar water use to reduce over-irrigation of low-water-using plants.

d. Provide information to occupants regarding benefits of low-water-using landscaping and sources of additional assistance.

e. Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.

f. Install efficient irrigation systems that minimize runoff and evaporation and maximize the water that will reach the plant roots. Drip irrigation, soil moisture sensors and automatic irrigation systems are a few methods of increasing irrigation efficiency.

g. Use pervious paving materials whenever feasible to reduce surface water runoff and to aid in groundwater recharge.

h. Grade slopes so that runoff of surface water is minimized.

i. Investigate the feasibility of using reclaimed wastewater, stored rainwater, or grey water for irrigation.

j. Encourage cluster development, which can reduce the amount of land being converted to urban use. This will reduce the amount of impervious paving created and thereby aid in ground water recharge.

k. Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new developments. This aids ground water recharge.

l. To aid in ground water recharge, preserve flood plains and aquifer recharge areas as open space.

SOLID WASTE

EXISTING CONDITIONS

Solid waste disposal for the proposed Palmdale Trade and Commerce Center will be served by the Palmdale Disposal Company. Solid waste is disposed of at the Antelope Valley Landfill, located at 1200 W. City Ranch Road.[1] The County of Los Angeles Department of Public Works has indicated that the County may experience a shortfall in solid waste disposal capacity as early as 1991. The County has also indicated that existing facilities are inadequate to handle hazardous materials being generated (see letter dated October 12, 1989 in Appendix A).

IMPACTS

The project will result in a significant cumulative increase in solid waste generation, and may generate hazardous materials that would require disposal at one of the relatively few remaining Class I landfills. This is a cumulatively significant impact.

MITIGATION MEASURES

#31. Information shall be provided to new business owners concerning the recycling services in the development area. Said information shall identify nearby recycling centers, identify possible markets for recyclables in the area, and suggest to the business owners that they recycle glass, metal, paper, cardboard, and other materials to the maximum extent feasible.

#32. Source separation facilities shall be incorporated into building design to insure that materials such as metals, glass, paper, plastics and composting matter are recyled.

#33. Insulation and other products made of recycled materials may be used in the construction of homes and commercial buildings.

#34. The Specific Plan landscape design guidelines for developments and streetscapes should be developed to include drought resistant plant materials (xeroscape concepts) which will have minimal maintenance needs generating less yard wastes for disposal at County landfills.

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[1]Conversation with Palmdale Disposal Company, February 20, 1990.

#35. Prior to issuance of occupancy permits, subsequent project applicants shall comply with the City Waste Reduction and Recycling section of the Solid Waste Management Plan.

#36. Trash receptacle design guidelines/standards for the commercial/industrial developments shall include siting of recycling facilities within trash receptacle enclosures.

#37. Prior to issuance of occupancy permits, trash compactors shall also be required for large waste generators to reduce waste volumes and to minimize impacts to County landfill capacities. Identification of "large" waste generators is at the discretion of the City Planning Department.

FIRE SERVICE

EXISTING CONDITIONS

The Los Angeles County Fire Department will service the proposed project area. The nearest fire station is located approximately one mile east of the site on Avenue Q-8.

IMPACTS

It is expected that the proposed project will generate an increase in area service calls. However, provision of City revenue through property taxes and other means is expected to adequately fund future manpower and equipment increases.

MITIGATION MEASURES

#38. Site-specific development plans shall require review and approval by the City Fire Department with respect to adequate fire flows, emergency access and building construction standards.

SCHOOL

EXISTING CONDITIONS

The proposed project area is serviced by two elementary schools, Summerwind and Juniper. The Summerwind school is a K-5 facility and is located at 39360 Summerwind Drive, in the City of Palmdale. The Juniper school serves grades 6-8 and is located at 39066 Palmtree Way in the City of Palmdale. Each of these facilities is functioning at capacity. The current enrollment at the Summerwind school is 391 students, and the current enrollment at the Juniper school is 831. Both of these schools are within two (2) miles of the project site. Future project employees would also be served by Palmdale High School and Antelope Valley College.

IMPACTS

Future project applicants will pay prevailing school impact assessment fees to mitigate impacts from increased demand from project employees. No significant impacts are anticipated.

MITIGATION MEASURES

Other than mandatory developer fees, no mitigation measures are required at the present.

UNAVOIDABLE ADVERSE IMPACTS

The project represents a significant increase in local water and sewer service demand, and a significant cumulative increase in solid waste generation.

D. GEOLOGY AND SOILS

Information in this section is based on the Preliminary Geotechnical Investigation prepared by Schaefer Dixon Associates in February, 1990. The complete report is included in Appendix D of this EIR.

EXISTING CONDITIONS

Topography

Topographically, the northern portion of the project area is characterized by low, northeasterly trending ridges with plateaus separated by broad, shallow drainage courses. A segment of the northeasterly draining Amargosa Creek transects the northwestern tip of the area. The southern half is characterized by a broad, gently northeasterly sloping surface.

Elevation across the site ranges from a maximum of about 2,690 feet Mean Sea Level (MSL) along the southern margin to about 2,630 feet MSL along the northeast margin. The surface gradient slopes down northeasterly although a southwest/northeast trending low ridge exists in the central portion of the site.

Man-made modifications to the natural topography include numerous unimproved dirt roads, end-dumped dirt piles, accumulations of household debris (furniture, water heaters, refrigerators, etc) and car frames. Currently, ongoing excavation and grading for a City sewer main is occurring within the northwestern portion of the project area (Avenue P-8).

Geology

The natural earth material exposed within the project area predominantly consists of alluvial materials ranging in age from modern stream channel alluvium to alluvial deposits on the order of 140,000 ± 40,000 years old. The alluvial materials exposed within the study area are divided into five units herein referred to from youngest to oldest as units (Geologic Map Symbols) Qc, Qd, Qoc, Qoa1, and Qoa2. Also within the area are piles of end-dumped dirt, and debris composed of asphalt, concrete, car frames and various household furniture and appliances.

The youngest alluvial unit (Qc) occupies the active stream channel of Amargosa Creek located within the northwest corner of the project area. These materials typically consist of a loose mixture of silt, sand and gravel with occasional cobble-sized clasts.

"Eolian "(wind blown) dunes (Qd), are present within the northwestern corner of the project area. Data obtained from exploratory boring B-6 penetrated approximately three feet of these materials, indicating a composition of drifting, fine-to medium-grained sand.

Older channel deposits (Qoc) associated with Amargosa Creek occupy an area of approximately 60 acres within the northwest corner of the project area. Based on subsurface data obtained from exploratory boring B-6, and visual observations made within a currently excavated sewer pipeline trench, these materials consist of crudely stratified layers and lenses of porous, fine-to coarse-grain sand.

The oldest alluvial units (from youngest to oldest), Qoa1 and Qoa2, underlie the majority of the project area. The youngest of the two oldest alluvial units (Qoa1) underlies the majority of the study area south of Avenue P-8. The physical character of these materials based on data obtained from the borings varies from predominantly silty sand and sandy silt within the southeastern one-quarter of the project area, to sandy clay and silty sand north of this area to the contact with the older alluvial unit (Qoa2).

Hydroconsolidation. The older channel deposits associated with the Amargosa Creek and the oldest alluvial units (Qoa1 and Qoa2), have a moderate to high potential for hydroconsolidation (the experience of significant loss in volume upon wetting with or without additional loading). The potential for hydroconsolidation due to infiltrating surface irrigation water and rainfall is considered to be moderate to high in these areas where there is the presence of interbedded impermeable units (such as clays) within Qoa1 and Qoa2. The potential for hydroconsolidation to occur within the older channel deposits (Qoc) located in the northwestern corner of the site is considered to be moderate due to the well draining character of these deposits.

Subsidence. During the period 1915 and 1972, land subsidence occurred within the Antelope Valley area due to overdrafting of the groundwater basin. There is no documented evidence suggesting that the project area was affected by subsidence.

Landslides. The potential for mud/debris flows which could affect the project area is considered to be low as the result of drainage control structures within Amargosa Creek and limited topographic relief upgradient of the site. In addition, there are no known landslides within or adjacent to the project area.

Sand and Gravel Resources. The potential sand and gravel resources from the older channel deposits (Qoc) is considered to be high, based on direct visual observations of these materials within a 40-foot deep excavation for a sewer line. However, the potential sand and gravel resource from the oldest alluvial units (Qoa1 and Qoa2) is considered to be low, due to the amount of fine-grained material associated with these deposits.

Soils

According to the Soil Conservation Service (SCS), surface soils within the project area have been identified as belonging to three soil series, Adelanto, Greenfield, and Ramona. The Adelanto and Greenfield series of soils overlie most of the older alluvial unit Qoa2. Ramona series soils overlie all of older alluvial unit Qoa2, and a portion of older alluvial unit Qoa1, generally south of Palmdale Boulevard.

Adelanto soils are present within a approximately one-quarter mile wide, east-west trending band south of Avenue Q. These soils are classified as a coarse sandy loam which are relatively non-expansive (low shrink-swell potential), with moderate strength and low corrosive potential.

Greenfield soils occupy the southwestern portion of the site, north of Avenue Q. These soils are classified as a coarse sandy loam which is relatively non-expansive, with moderate strength and low corrosive potential.

Ramona soils are present in an approximately 1,500 - to 3,000 - foot wide, northeasterly trending band within the central portion of the site. These soils are classified as coarse, sandy to clayey loams which are relatively non-expansive, with moderate strength and low corrosivity potential. Based upon visual observations and laboratory testing, in their natural state these soils are subject to collapse due to placement of structural loads (i.e. foundations). These soils are also subject to hydroconsolidation upon saturation by water and placement of structural loads.

The economic potential of the three soil series described above is considered to be low.

Groundwater Conditions

The project area lies within the Lancaster subunit of the Antelope Valley groundwater basin. The Lancaster subunit is the largest in both water use and size, and the most economically significant in terms of population and agriculture.

The principal aquifers of the basin are formed by the older alluvium of the Pliocene and Pleistocene age which underlies the valley floor at depth. Depth to groundwater beneath the study area within the principal aquifer is approximately 425 feet below the lowest ground surface elevation within the site area (a deep aquifer also exists). The direction of groundwater flow beneath the site and its vicinity is to the northeast. Recharge to the basin is supplied mainly by precipitation, surface water runoff from the surrounding mountains, and from reclaimed water applied for irrigation. Currently, groundwater extraction

constitutes the majority of discharge from the basin. Under natural conditions, groundwater discharges into the various lakes in the valley.

In most of the Antelope Valley, groundwater from the principal aquifer is suitable for domestic irrigation, and most industrial uses.

Seismicity

The project area lies within the highly seismic southern California region, however, there are no known active faults that trend toward or through the project area. The closest major fault to the site is the active San Andreas Fault (zone), which passes approximately one mile southwesterly of the southern margin of the site though the Leona Valley.

Other major faults that may influence seismicity in the site area include the Garlock fault, Big Pine fault, White Wolf fault, Sierra Madre/Cucamonga fault and San Jacinto fault. These faults are believed to be capable of producing maximum magnitude earthquakes in the range of M6.5 to M7.5 (indicating expected energy released, equivalent to Modified Mercali scale "intensity" VIII to X). The maximum magnitude earthquake on the San Andreas fault in the vicinity of the project site is commonly reported to be M8.25 (a severe earthquake capable of substantial structural damage and ground rupture).

A northwest trending photolineament (the appearance of a line from an aerial view) was observed on recent (1987) aerial photographs of the site and vicinity, and approximately coincides with a buried fault trace shown by the U.S. Geological Survey (USGS). The photolineament transects the central eastern portion of the project area (Parcel No. 65 as shown in the Draft Specific Plan, Exhibit 3). Based on interpreted data from nine Cone Penetrometer Soundings (CPT) performed for this study, there appears to be subsurface, lithologic discontinuity within this area. This discontinuity could reflect the presence of the buried fault mapped by the USGS or simply a natural variation in subsurface conditions. However, subsequent exploratory trenching performed by Schaefer Dixon Associates in February, 1990, determined the photolineament does not represent active faulting (see Appendix D).

IMPACTS

Topography

Modifications of the existing topography will occur during grading for the proposed developments. These modifications will consist of earthwork excavation involving removal of unsuitable soils and replacing with compacted fill to establish new graded surfaces. The elevation of the ground may be raised in some areas and lowered in others due to cut and

fill slopes associated with grading. Due to relatively flat terrain, no significant impacts are expected.

Natural surface water drainage would be altered and/or eliminated with construction of the proposed developments. This is an unavoidable significant impact.

Geology

The relatively dry, coarser grained older channel (Qoc) and older alluvial units (Qoa1 and Qoa2) are considered to be subject to hydroconsolidation and could significantly impact the proposed development. Hydroconsolidation, if left untreated, may cause unacceptable total and differential settlement of foundations supported by the collapsable soil layers.

Sand and gravel resources would be lost within the northwestern corner of the site, which is an unavoidable impact, but not considered significant in context of regional resources.

Land subsidence within the project area may occur if significant groundwater extractions are made from the principal or deep aquifer underlying the project site, causing the water table to drop below historically low levels. In addition, the proposed development could be impacted by ground fracturing and differential changes in elevation associated with subsidence.

Soils

All surficial soil materials within the project area are considered to be subject to collapse and hydroconsolidation upon placement of structural loads and/or saturation. If these soil materials were to be left in place, the structural integrity of the proposed development would be significantly impacted.

Based on data compiled by the Soil Conservation Service, the potential impacts due to expansivity and corrosivity of the onsite soils is considered to be low.

Groundwater

Project development is expected to result in increased groundwater recharge in the areas where irrigation of landscaping would occur. However, it is unlikely that groundwater levels within the principal aquifer beneath the project area would be significantly impacted.

Over-irrigation of landscaping could produce "perched" groundwater conditions beneath the site where permeable sand layers close to the surface are underlain by laterally extensive and relatively impermeable clayey layers. The development of perched groundwater is likely to promote hydroconsolidation of certain soils beneath the project site.

No impacts to the chemical quality of groundwater within the principal aquifer are expected with construction of the proposed development (see Section IV.J, PUBLIC HEALTH AND SAFETY).

Seismicity

It is anticipated that the project site will be affected by moderate to strong ground shaking due to earthquakes on one or more active faults in the region. Due to the close proximity of the project site to the San Andreas fault, a major earthquake occurring nearby on the fault can be expected to produce extreme ground shaking and lurching within the vicinity of the project area. Other secondary seismic hazards that are the direct result of the vibratory motion of crustal deformation associated with faulting include, but are not necessarily limited to, settlement and regional crustal deformation.

Due to the depth of groundwater (425 feet below ground surface), soil liquefaction is not considered to have a potential impact. Based on the relatively dense nature of the underlying sandy, older alluvial units (Qoa1 and Qoa2), seismically induced liquefaction within these materials, which could contain perched groundwater, is not anticipated to occur.

Seismically induced landsliding is not expected to occur as the property is not situated on or in the path of any known or potential landslides.

Hazards due to a seiche and/or a tsunami are considered remote due to the large distance between the site and the ocean or large inland bodies of water.

MITIGATION MEASURES

The following mitigation measures shall be implemented by each project applicant, prior to issuance of grading or building permits, as appropriate or determined by the City Engineer and/or Director of Building and Safety.

Topography

#39. All grading and landform modifications shall be conducted in conformance with state-of-the-practice construction and design parameters set forth in Chapter 70 of the Uniform Building Code.

#40. All graded slopes shall be constructed to be grossly and surficially stable.

#41. To decrease the hydroconsolidation potential and its potential effects to lightly loaded structures, remedial grading shall be performed which could include the following (to the satisfaction of the City engineer, prior to building permit issuance):

- Overexcavation of building pads and adjacent areas in amounts that would be appropriate for the local site conditions and structure type.
- Overexcavated materials replaced with relatively impermeable soils compacted to at least 90 percent relative compaction.
- Use of post-tension concrete slabs.
- Construction of relatively impermeable surfaces adjacent to the proposed structures, such as paved driveways and walkways, and provision of suitable surface drainage to convey runoff onto streets and gutters.
- Impermeable liners for planters, if they are used, to prevent irrigation water from infiltrating into native materials.
- Prevention of over-irrigation of landscaping.
- Provision of adequate landscaping/surface drainage to prevent ponding of water.
- Implementation of measures to prevent offsite surface water runoff from collecting and/or ponding within or around the periphery of the project area.
- Grading carried out under the guidelines set forth in Chapter 70 of the Uniform Building Code.

#42. To decrease the potential for hydroconsolidation and its potential effects on heavily loaded structures, deep foundations shall be used.

Soils

#43. Prior to site development, remedial grading shall be performed within the site to remove collapsible surficial soils.

#44. Additional laboratory testing of clayey soils shall be performed where they are encountered during subsequent geotechnical investigations.

Groundwater

#45. Adequate moisture barriers and positive drainage control shall be employed to mitigate the creation of perched groundwater beneath portions of the site.

Seismicity

#46. The applicant(s) shall adhere to seismic design requirements of the Uniform Building Code which will reduce the likelihood of structural failure and minimize potential impacts resulting from seismic activity.

UNAVOIDABLE ADVERSE IMPACTS

~~Development of the proposed Specific Plan will modify existing onsite topography and alter and/or eliminate existing natural drainages.~~ With implementation of mitigation measures, no unavoidable adverse impacts are anticipated.

E. LAND USE

The City of Palmdale, and the Antelope Valley region, is one of the fastest growing areas in California. The regional population has increased rapidly following dramatic increases in available and developing residential uses. However, industrial and commercial development has generally not kept pace with residential development, resulting in an employment/housing imbalance and a lack of support services. The proposed Palmdale Trade and Commerce Center Specific Plan is flexible, and geared toward commercial and industrial development, allowing a wide range of uses in each of the land use zones.

The following discussion is based on a site survey conducted by Robert Bein, William Frost & Associates (RBF) in October, 1989. In addition, RBF utilized aerial and ground photographs as well as Thomas Brothers Map Guides and the U.S.G.S. Ritter Ridge Quadrangle Map for the existing conditions discussion. This section examines existing conditions and potential impacts with regard to land use and project implementation, and provides mitigation measures intended to reduce land use impacts to less than significant levels. For a discussion of cumulative land use impacts, refer to Section V, LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT.

EXISTING CONDITIONS

Onsite Land Use

The approximately 756-acre site is located in the western portion of the City of Palmdale on the floor of the Antelope Valley. The site is generally bounded by Avenue P to the northeast, the Antelope Valley Freeway (SR 14) to the northwest, Palmdale Boulevard to the south, Division Street to the east and 10th Street West to the west (see Exhibit 2, SITE VICINITY MAP). The present zoning designation of the site is Regional Commercial.[1] The Specific Plan site is composed of 68 separate parcels, ranging in size from 0.5 acres to 100 acres.

The topography is relatively flat with some gentle slopes. None of the slopes are steeper than a 15% grade. Three U.S.G.S. "blue-line" drainages cross the site diagonally from southwest to northeast (including Amargosa Creek, a regional drainage facility). The vegetative communities onsite consist primarily of disturbed areas, Rabbitbrush scrub, and introduced annual grassland. There are a few acres of Joshua Tree/Juniper woodland located on the northwest portion of the site.

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[1]The Keith Companies, Palmdale Trade and Commerce Center Specific Plan of Development, First Screencheck, January 1990, pg. 16.

The Specific Plan Area is currently partly developed with travel related services along both sides of Palmdale Boulevard including several hotels, restaurants, an auto dealership and gasoline service stations. The west side of the Specific Plan site (west of SR 14) includes Faith Community Church and School, and Golden State Electronics along 10th Street West, and a Volkswagen/Mazda auto dealer on Avenue P. There are presently no residential uses onsite. The Antelope Valley Freeway (SR-14) bisects the site north to south (see Exhibit 3, AERIAL PHOTO).

Establishments located on the north side of Palmdale Boulevard (onsite) include a Del Taco fast-food restaurant, Arco Am/Pm Minimart, Motel 6, Denny's Restaurant, Days Inn Motel, and various retail establishments in the Palmdale Westside Business Center and Pasada West Plaza (at the northeast corner of Palmdale Boulevard and 10th Street West). A 68-acre auto mall (the Antelope Valley Auto Center), is currently under construction on the west side of the freeway north of Avenue Q (in the central portion of the site, and anticipated to open late 1990). Development of the auto mall site is controlled by the Antelope Valley Auto Mall Specific Plan (previously approved by the City of Palmdale on February 9, 1987) and is not included as part of the Palmdale Trade and Commerce Center Specific Plan. Portions of the project site adjacent to the auto mall have been graded (between the Auto Mall and 10th Street West); however, there are currently no approvals for development of those areas. Laborer's Union Local 300 is located in the south central portion of the site near the corner of Avenue Q and 5th Street West. The temporary Auto Mall office is located in a trailer west of this intersection. Avenue P-8 was under construction at the time of the site visit.

The site is mostly vacant on the east side of the freeway, although a public storage facility is located on the northern portion of the site near the southeast corner of Avenue P and the Antelope Valley Freeway. A Chevron service station, Shell service station, realty office and a bank are located at the northwest corner of Palmdale Boulevard and Division Street. Isolated areas of unauthorized dumping have accumulated across the site, mostly near an unpaved road in the vicinity of the future Division Street extension.

Surrounding Land Uses

Land uses surrounding the project site include single-family residential use on the west, north and east project boundaries. A U.S. Gas Station, the Lucky Star Restaurant, and an apartment building are located along Division Street at the southeastern project boundary. The south side of Palmdale Boulevard has land uses similar to the north side including the Ramada Village Inn, Exxon service station and the Liquor Junior Mart and Deli. Multi-family residential uses are located on the gentle slopes south of Palmdale Boulevard. Mixed commercial, multi-and single-family residential and church uses are located to the

west fronting 10th Street West. To the northwest of the project site, on the corner of 10th Street West and Avenue P, the Antelope Valley Mall is currently being developed. This is an approximately 100-acre project which will have 1,436,000 square feet of commercial floor area upon completion. The Antelope Valley Country Club is located along Avenue P east of the freeway. The Palmdale Hospital and Medical Center is planned for the northeast corner of Avenue P and Division Street. The east side of the site is generally bordered by single-family residential units and open space.

Surrounding land uses not directly adjacent to the site include U.S. Air Force Plant 42, approximately 2.5 miles northeast of the project area. The Palmdale International Airport and related aerospace operations are planned to be located to the east of the project site adjacent to existing USAF Plant 42. Airforce operations presently affect the site, in terms of noise and crash hazard potential (see Exhibit 20, USAF PLANT 42 DEVELOPMENT CONSTRAINTS and Section IV.G, NOISE).

The City of Palmdale General Plan and Zoning Map land use designations surrounding the Specific Plan site include:

- Light Industrial: this land use designation is found north of Avenue P-8 and east of Division Street.

- Community Commercial/Commercial: lands designated for commercial uses include two vacant parcels to the north, and the areas adjacent to Palmdale Boulevard to the south.

- Residential: residential designations are shown for the Antelope Valley Country Club (urban-low density), the area immediately west of 10th Street West (urban-medium to high density), and east of Division Street.

IMPACTS

Onsite

The City chose a business/industrial park with retail uses as the preferred alternative for the Specific Plan ("Alternative Scenario No. 2", although the proposed Specific Plan reflects staff anticipation of reduced demand onsite for industrial uses). No residential uses are permitted within the Specific Plan area. Land uses are based on anticipated market demand and would be absorbed throughout the Specific Plan where permitted (refer to Section III.D, PROJECT CHARACTERISTICS for a detailed project description).

As discussed in Section III.D, PROJECT CHARACTERISTICS, the Specific Plan area has been divided into seven Planning Areas, each with one of four land use designations. The land use designations are as follows:

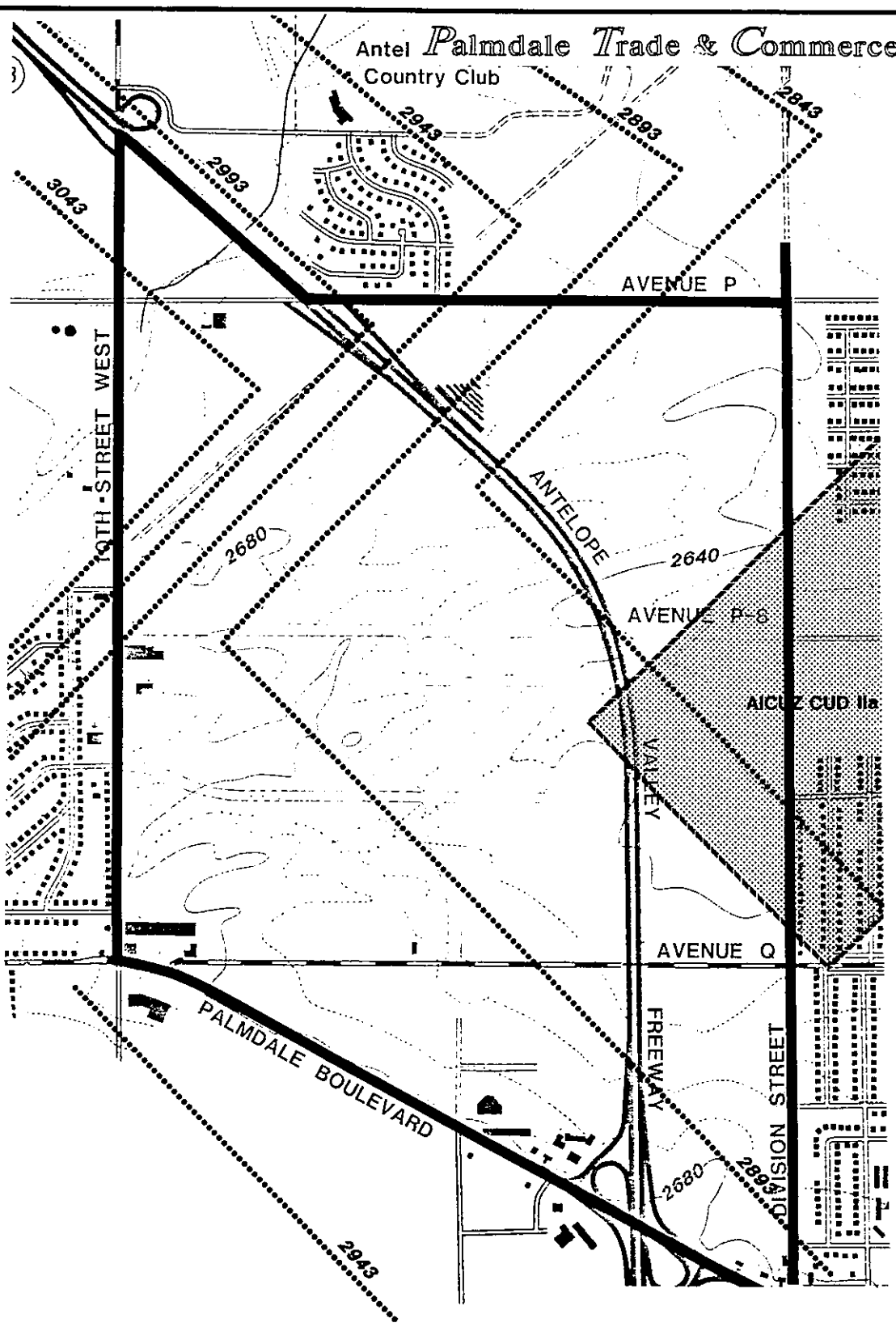
- MX - Mixed Use (Planning Areas 4 and 6)
- MX-A - Mixed Use - AICUZ Restricted (Planning Area 2)
- PD - Planned Development (Planning Areas 1, 5 and 7)
- FC - Flood Control (Planning Area 3)

Due to the flexible nature of the Specific Plan, it is difficult to anticipate specific land use impacts. However, a general discussion of anticipated impacts is possible using the Land Use Plan and Table 1, ULTIMATE DEVELOPMENT PROFILE.

As the project is a Specific Plan intended to direct development on the site over the next twenty years, short-term impacts will occur for individual or neighboring groups of parcels as they are developed. These impacts include construction-related erosional, noise, dust, aesthetic, and traffic impacts. These impacts and associated mitigation measures are discussed in Sections IV.B, HYDROLOGY, IV.G, NOISE, IV.K, AIR QUALITY, IV.H, AESTHETICS/LIGHT AND GLARE, and IV.A, TRAFFIC AND CIRCULATION, respectively.

Implementation of the Specific Plan will result in replacement of existing open space with urban uses and infrastructure. This will permanently commit the land to urban expansion. Adherence to landscaping and architectural guidelines within the Specific Plan document will substantially reduce aesthetic and land use compatibility impacts, although significant impacts will remain after implementing mitigation measures. Amargosa Creek will be channelized, two flood control ponds will be constructed onsite, and one flood control pond will be constructed offsite. The three flood control ponds will be landscaped to serve as recreational and drainage facilities, and will be located to serve as buffers to off-site residential uses east of the project.

The location of the project site near USAF Plant 42 poses constraints on the Specific Plan. These constraints include limits on building heights related to the aircraft approach-departure zone (due to crash hazards), and restricted uses within Planning Area 2, which is entirely within Air Installation Compatibility Use Zone (AICUZ) IIa. AICUZ Zone IIA indicates a severe crash hazard potential and therefore permits only low-intensity uses to minimize potential loss of life (see Exhibit 20, USAF PLANT 42 DEVELOPMENT CONSTRAINTS). Table 3, PALMDALE TRADE AND COMMERCE CENTER LAND USE MATRIX, indicates which land uses are permitted in AICUZ Zone IIa (Specific Plan land use category MX-A).



2943 Vertical Obstruction Limit Contours

Compatible Use District IIa (Crash Hazard Zone)

Source: The Keith Companies

0 1000'

PALMDALE TRADE AND COMMERCE CENTER

USAF Plant 42 Development Constraints

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 20

Surrounding Land Uses

Special care must be taken to buffer adjacent residential land uses from higher intensity uses within the Specific Plan area. This is achieved, in part, via realignment (where feasible) of arterials away from existing residential uses (Division Street), by landscaping and setbacks along major peripheral arteries, by the location of the flood control ponds along the eastern site boundary, and by designating those lands adjacent to residential uses as planned developments which prohibit manufacturing uses and have more restrictive development standards (including building height and setbacks).

Development of commercial and industrial land uses within the project site will result in increased traffic and related noise and air quality impacts in the immediate site vicinity. However, the new availability of local support services and employment opportunities is anticipated to result in long-term reductions in regional traffic and air quality impacts due to decreased vehicle miles travelled. The demand for local employment and support services within the City of Palmdale necessitates that commercial and industrial development occurs within the City. The proposed project provides a location for these land uses. The highly visible position of the Specific Plan area coupled with excellent freeway access and proximity to downtown Palmdale make the project site a prime location for this development. This assessment is supported by onsite, surrounding and nearby land uses which include the Antelope Valley Mall, the Antelope Valley Auto Center, the existing hotels, restaurants and other development on Palmdale Boulevard, and the future International Airport and related aerospace operations. The intent of the project is to facilitate positive development within the Specific Plan and surrounding areas (also see Section V.C, GROWTH-INDUCING IMPACTS).

MITIGATION MEASURES

Measures to mitigate traffic, hydrological, noise, aesthetic, and air quality impacts associated with implementation of the proposed Specific Plan are addressed in their respective sections of this EIR.

#47. The three flood control detention basins shall be landscaped to serve as combined recreational and drainage facilities and to buffer offsite residential uses from incompatibility impacts.

#48. Measures to mitigate short-term impacts due to project construction will be implemented by the applicant as required and monitored by the City Planning Department and will include:

a. Limiting the hours of construction activity to the hours of ~~7:00~~ 6:30 am to ~~6:00~~ 8:00 pm Monday through Saturday, with no construction on Sundays or nationally observed holidays.

b. Construction of temporary opaque fencing to screen onsite construction operations, materials and equipment from adjacent property owners and to protect the safety of pedestrian traffic.

#49. Land uses within each of the Planning Areas will be governed by Table 3, PALMDALE TRADE AND COMMERCE CENTER LAND USE MATRIX, of the Specific Plan which indicates permitted, prohibited and conditionally permitted land uses within each category.

#50. Adherence to all design regulations and guidelines from the Palmdale Trade and Commerce Center Specific Plan is required. Individual project compliance with these guidelines shall be monitored by the City of Palmdale Planning Department and/or their agents. Said monitoring and verification of compliance with adopted Specific Plan development standards shall be performed prior to individual project Site Plan approval.

#51. Applicants for future development within the Specific Plan area shall incorporate all feasible measures to reduce project impacts upon USAF Plant 42. Where necessary, these measures shall include minimizing airborne substances and light or glare that may impair visibility in flight paths; providing design features to reduce electromagnetic radiation that may affect aircraft or ground-based electronic instrumentation; and where possible, avoiding land uses and designs which may attract birds that produce safety hazards during flight operations.

UNAVOIDABLE ADVERSE IMPACTS

Implementation of the proposed Palmdale Trade and Commerce Center Specific Plan will result in loss of existing open space areas, and will result in land use incompatibilities due to development of office, commercial and public administrative uses adjacent to existing offsite residential uses along Avenue P, 10th Street West and Division Street.

F. BIOLOGICAL RESOURCES

Information in this section is based on a report prepared by Pacific Southwest Biological Services, Inc. Their report is included in its entirety in Appendix E, BIOLOGICAL RESOURCES ASSESSMENT. The botanical portion of the survey was conducted by R. Mitchel Beauchamp on December 18, 1989 and on January 27, 1990. The on-foot survey involved the field compilation of a floral checklist and delineation of boundaries between the various vegetation and land cover categories. The zoological portion of the survey was conducted by Eric R. Lichtwardt on December 18, 1989 from 9:30 a.m. to 12:00 p.m. Wildlife identifications were aided by binoculars (10 x 40 power). Unobserved species were identified through indirect signs (i.e., scat, tracks, calls, nests and burrows, etc). The following section summarizes the result of these surveys.

EXISTING CONDITIONS

Vegetation

The site has been disturbed by a variety of land uses which, along with other human activity, have eliminated native plant cover in many parts of the site. Although the observed flora (39 native and 20 non-native plants) is generally representative of the surrounding area, the flora observed poorly represents the full range of species expected to occur on the site, due to the fact that the survey was made in a dormant season following a very poor rainfall year. Please refer to Exhibit 21, EXISTING VEGETATION, which indicates approximate locations of vegetation communities discussed below.

Disturbed Areas (213.9 acres). These areas include buildings, paved areas and recently graded sites, and are absent of significant vegetation.

Annual Grassland (228.6 acres). These open, disturbed areas have been largely dominated by cheatgrass (*Bromus tectorum*) and filaree (*Erodium cicutarium*). These and other introduced annuals have taken over these open areas and generally out-compete the more specialized native annuals. The present study, done during a dormant season, was not able to determine the level of native annuals present in these areas.

Rabbitbrush Shrub (241.6 acres). Rabbitbrush (*Chrysothamnus nauseosus*) is the dominant plant of this shrubland. Shrub diversity of this vegetation type is very low in the study area. Only Sand Aster (*Coreythrogyne*) and Chaparral-Star (*Haplopapous cooperi*) were of any note. The open areas among are dominated by cheatgrass and filaree.

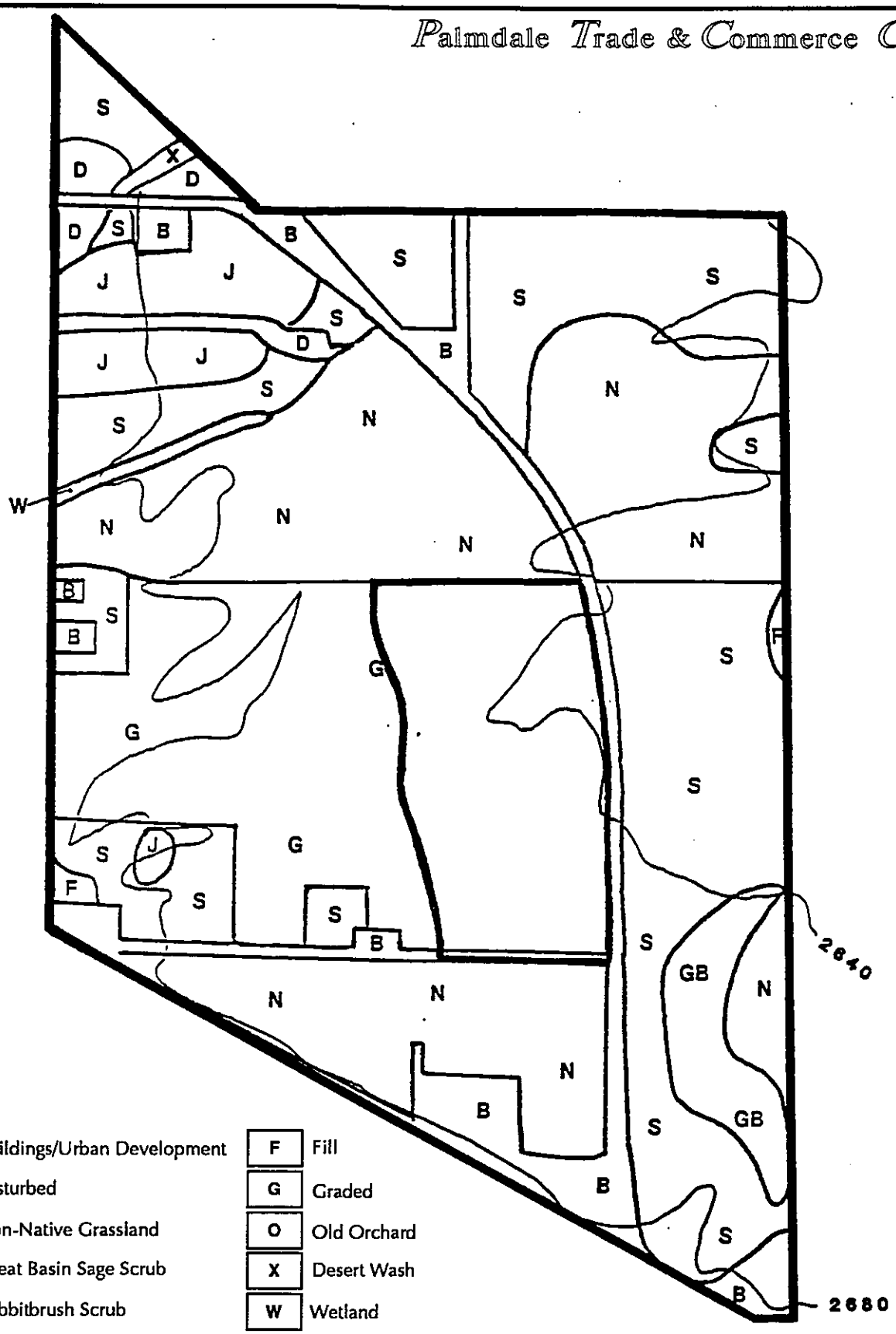
Great Basin Sage Scrub (23.9 acres). One small area along Division Street at Avenue Q contains a pure stand of Great Basin Sagebrush (*Artemisia tridentata*). The vegetation is usually associated with specific deep, well-drained alluvial soils (in the Mottsville soil series).

Joshua Tree Woodland (42.5 acres). A small stand of Joshua Tree clusters lies north of a motel on the north side of Palmdale Boulevard. This grove is very degraded and lacks practically all of the associate shrubs. To the east of this grove, fire has claimed ten plants. Another stand of plant clusters lies in the northwestern corner, but has been damaged by excavation for a pipe system. The remaining population of Joshua Trees is 80 plants, none of which have trunks over 12 inches in diameter. Associated shrubs here include California Juniper (*Juniperus californica*), Mexican Sage (*Salazaria mexicana*), Mormon-tea (*Ephedra sp.*), Goldenheads (*Acamptopappus sphaerocephalus*), Cotton-thorn (*Tetradymia sp.*), Flat-top Buckwheat (*Eriogonum fasciculatum*) and Yucca Buckwheat (*Erigonum plumattelum*). The typically widespread Creosote Bush (*Larrea divaricata*) occurs at the site only at this location.

Freshwater Marsh (5.4 acres). A drainage swale runs just to the south of the northern Joshua Tree Woodland. The water source is urban run-off emanating from a storm drain outlet under 10th Street West. The vegetation consists of a variety of wetland plants, including Cat-tails (*Typha dominguensis*), Rabbits-foot grass (*Polyogon monspeliensis*), Sprangle-top (*Diplachne uninervia*), Spikerush (*Elecharis palustris*), Bulrush (*Scirpus robustus*), Mulefat (*Baccharis salicifolia*) and Curly Dock (*Rumex crispus*). Another run-off accumulation site lies along the southern border of the site, next to an apartment area but this is unmapped due to its small extent.

Sensitive Plant Species

No sensitive plants were noted on this site, however, sensitive plants found in the region could occur on site. Sensitive plants known from the area include Mariposa Lily (*Calochortus striatus*), Spine-Flower (*Chorizanthe spinosa*), and Woolly-Stan (*Eriastrum sherman-hoytae*). Development would result in loss of habitat for these species. The surviving Joshua Tree Woodland at the northwestern portion of the site represents a sensitive botanical resource due to its size and diversity of associated shrubs, and presumably, annuals. Wetland habitats are rare features in desert environments. The wetlands involved on the site, however, are artificial features whose water supply is undependable and short-term. Although no wetland vegetation was observed, the Amargosa Creek channel (in the northwestern corner of the site) is considered a wetland under the California Department of Fish and Game 1600 series code.



B	Buildings/Urban Development	F	Fill
D	Disturbed	G	Graded
N	Non-Native Grassland	O	Old Orchard
GB	Great Basin Sage Scrub	X	Desert Wash
S	Rabbitbrush Scrub	W	Wetland
J	Joshua Tree Woodland		

Source: Pacific Southwest Biological Services

0 1050'

PALMDALE TRADE AND COMMERCE CENTER

Existing Vegetation

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 21

Zoology

Amphibians. No amphibians inhabit Mojave Desert Scrub in the area of the project site.

Reptiles. Up to nineteen species of lizards and snakes are known to inhabit Mojave Desert Scrub in the western Mojave Desert. Some of the typical species include the Western Banded Gecko (*Coleonyx variegatus*), Desert Night Lizard (*Xantusia vigilis*), Zebra-tailed Lizard (*Callisaurus draconoides*), Side-blotched Lizard (*Uta stansburiana*), Desert Horned Lizard (*Phrynosoma playrhinos*), Western Whiptail (*Cnemidophorus tigris*), Coachwhip (*Masticophis flagellum*), Gopher Snake (*Pituophis melanoleucus*), Glossy Snake (*Arizona elegans*), Long-nosed Snake (*Rhinocheilus lecontei*), Sidewinder (*Crotalus cerastes*) and Mojave Rattlesnake (*C. scutulatus*). Many of these species, especially the larger snakes, have probably been removed from the site due to it being surrounded by well-travelled roads and developments bisected by a freeway, and the disturbed nature of the habitats. Only one reptile, the Desert Night Lizard, was found during the survey work. Several of these lizards were discovered under a fallen Joshua Tree log.

Birds. Seven species of birds were observed. The overgrazed and disturbed habitat probably contributed to this low diversity. Several species which were seen are winter visitors to this area. These include the Yellow-rumped Warbler (*Dendroica coronata*), Savahnah Sparrow (*Passerculus sandwichensis*) and White-crowned Sparrow (*Zonotrichia leucophrys*). One Western Meadowlark (*Sturnella neglecta*) was seen and six House Finches (*Carpodacus mexicanus*) were seen in brushy thickets. Common Ravens (*Corvus corax*) were the most abundant bird on the site with fifteen individuals being seen.

Mammals. The only mammal observed on the site was the Black-tail Jackrabbit (*Lepus californicus*). This large lagomorph is common in open arid lands throughout southern California and is often found in disturbed areas. Kangaroo Rat (*Dipodomys*) burrows and diggings were found at scattered sites on the property. The Merriam's Kangaroo Rat (*D. merriami*) is probably the most common species present; however, the larger Panamint Kangaroo Rat (*D. panamintinus*) may be present in the Joshua Tree woodland. The burrows of the widespread California Ground Squirrel (*Spermophilus beecheyi*) were also found on the site. This large diurnal rodent is one of the most abundant mammalian species in California. The Mojave Ground Squirrel (*S. mohavensis*) has been historically reported from the Antelope Valley area, however, this rodent which is considered threatened by the California Department of Fish and Game, is not expected to occur on the site due to the lack of proper habitat and proximity to urban development and roads. Although searched for, no carnivore scat was found, indicating the probable absence of those mammals from the site.

IMPACTS

The proposed modification of land uses allowed on the site will result in the removal of existing native vegetation (see Exhibit 21, EXISTING VEGETATION).

The only significant impact expected will be the loss of the Joshua Tree Woodland.

MITIGATION MEASURES

The Joshua Tree Woodland area should be protected by *in situ* preservation of the habitat or acquisition of equivalent, offsite habitat within the Sphere of Influence of the City of Palmdale. Preservation is considered to include fencing of the site and dedication of an open space easement to the City of Palmdale. Areas adjacent to the woodland should have a 50-foot setback from the Joshua Tree plants.

~~#52. Where possible, project development within the Specific Plan area should be designed to avoid displacement or destruction of Joshua Tree habitat. Areas adjacent to the woodland shall have a 50 foot setback from the Joshua Tree plants. Within that setback, native plant cover should be restored to natural habitat values to serve as a buffer if such plant cover is not present.~~

#53. Upon implementation of the project, any Joshua Tree plants that are removed will be transplanted to onsite landscaped areas and/or offsite in accordance with the City's Draft Joshua Tree Preservation ordinance. Such transplantation will be on a project-by-project basis. Preservation Plans shall be submitted to the Department of Planning prior to Issuance of grading permits.

#54. A Joshua Tree Preservation and Transplantation Plan will be developed and submitted to the City of Palmdale Planning Department prior to grading permit issuance.

#55. Prior to issuance of a grading permit for work within the Amargosa Creek Channel, the applicant shall obtain a 1603 Agreement from the California Department of Fish and Game.

UNAVOIDABLE ADVERSE IMPACTS

~~Ultimate buildout of the Palmdale Trade and Commerce Center Specific Plan area will result in the loss of desert habitat, including Joshua Tree Woodland.~~ With implementation of the mitigation measures, no unavoidable adverse impacts are anticipated.

G. NOISE

This section addresses potential noise impacts of the proposed project. Information in this section is based on the Noise Assessment prepared by Mestre Greve Associates and the Palmdale Trade and Commercial Center Traffic Study, by Kunzman Associates, Inc., which are included in Appendix F and Appendix B, respectively. "Existing plus project" noise increases in Table 2 of Appendix F have been revised in this section to reflect a more recent "worst-case" traffic analysis (see Appendix F, NOISE ASSESSMENT).

The highway noise levels projected in this report were computed using the methodology described in the FHWA Highway Noise Prediction Model RD-77-108.

For additional information on potential noise impacts of the proposed project, please refer to Section V, LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT.

EXISTING CONDITIONS

Community noise levels are measured in terms of the "A-weighted decibel" (abbreviated "dBA"). A-weighing is a frequency correction that correlates over-all sound pressure levels with the frequency response of the human ear. Examples of various noises and their typical A-weighted noise level are provided in Exhibit 22, TYPICAL A-WEIGHTED SOUND LEVELS.

The "equivalent noise level" or Leq is the average noise level on an energy basis for any specified time period. The equivalent noise level has the units of dBA, therefore, a sound measured for one hour can be expressed as a one hour Leq of 57 dBA.

The predominant noise rating scale now in use in California for land use compatibility assessment is the Community Noise Equivalent Level (CNEL), which penalizes evening and night noise levels. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel (roughly equivalent to the Day-Night Average Sound Level (Ldn). The CNEL and Ldn are approximately equivalent within $\pm$ 1 dBA. There is no significant difference between the two noise measurement methods. Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 23, TYPICAL OUTDOOR NOISE LEVELS.

The criteria used to assess the acceptability of community noise levels varies with the municipality. The City of Palmdale uses 65 CNEL as the critical criterion for assessing the compatibility of residential land uses with noise sources. In general, the exterior living areas (yards and patios) for residential land uses should not exceed 65 CNEL. In addition,

for multi-family residential projects, the California Noise Insulation Standard (California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4) requires that the indoor noise levels in a multi-family residential development do not exceed a CNEL of 45 dB. The City of Palmdale indoor noise standard is consistent with the state standards (the City of Palmdale requires that both single family and multi-family development achieve an indoor noise standard of 45 CNEL).

The proposed project includes commercial, office, industrial and hotel land uses. The California Department of Health Services has published guidelines for determining the compatibility of various land uses with noise levels, which are used to assess the compatibility of the proposed project with the noise environment. Exhibit 24, CALIFORNIA LAND USE/NOISE GUIDELINES, summarizes these guidelines for various land use categories. The standards used for the noise assessment are shown in Exhibit 25, TYPICAL NOISE STANDARDS. The City of Palmdale General Plan contains noise standards applicable to land uses of the proposed project. Commercial parcels should not exceed 65 CNEL during the day and 60 CNEL at night measured at the property line. Industrial parcels should not exceed 70 dBA during day or night measured at the property line.

The highway noise levels projected in the Noise Analysis were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978). THe FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level". For the roadway analysis, worst-case assumptions about future motor vehicle traffic and noise levels have been made and were incorporated in the modeling effort. Specifically, no reductions in motor vehicle noise have been assumed in spite of legislation requiring quieter vehicles at the time of manufacture.

Existing traffic volumes and estimated speeds were used with the FHWA Model to estimate existing noise levels in terms of CNEL. Traffic volumes were obtained from the Palmdale Trade and Commerce Center Traffic Study prepared by Kunzman Associates, Inc. (in Appendix B).

SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS
(A-Scale Weighted Sound Levels)

dB(A)	OVER-ALL LEVEL Sound Pressure Level Approx. 0.0002 Microbar	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
130	UNCOMFORTABLY	Military Jet Aircraft Take-Off With After-burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
120 110	LOUD	Turbo-Fan Aircraft @ Take Off Power @ 200 Ft. (90)	Riveting Machine (110) Rock-N-Roll Band (108-114)	110 dB(A) 16 Times as Loud
100	VERY	Jet Flyover @ 1000 Ft. (103) Boeing 707. DC-8 @ 6080 Ft. Before Landing (106) Bell J-2A Helicopter @ 100 Ft. (100)		100 dB(A) 8 Times as Loud
90	LOUD	Power Mower (96) Boeing 737, DC-9 @ 6080 Ft. Before Landing (97) Motorcycle @25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times as Loud
80		Car Wash @ 20 Ft. (89) Prop. Airplane Flyover @ 1000 Ft. (88) Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times as Loud
70	MODERATELY LOUD	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 +or- 6)	Living Room Music (76) TV-Audio, Vacuum Cleaner	70 dB(A)
60		Air Conditioning Unit @ 100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	60 dB(A) 1/2 as Loud
50	QUIET	Large Transformers @ 100 Ft. (50)		50 dB(A) 1/4 as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		40 dB(A) 1/8 as Loud
	JUST AUDIBLE	(dB[A] Scale Interrupted)		
10	THRESHOLD OF HEARING			

SOURCE: Reproduced from Melville C. Branch and R. Dale Beland, Outdoor Noise in the Metropolitan Environment. Published by the City of Los Angeles, 1970, p.2.

Source: Mestre Greve Associates

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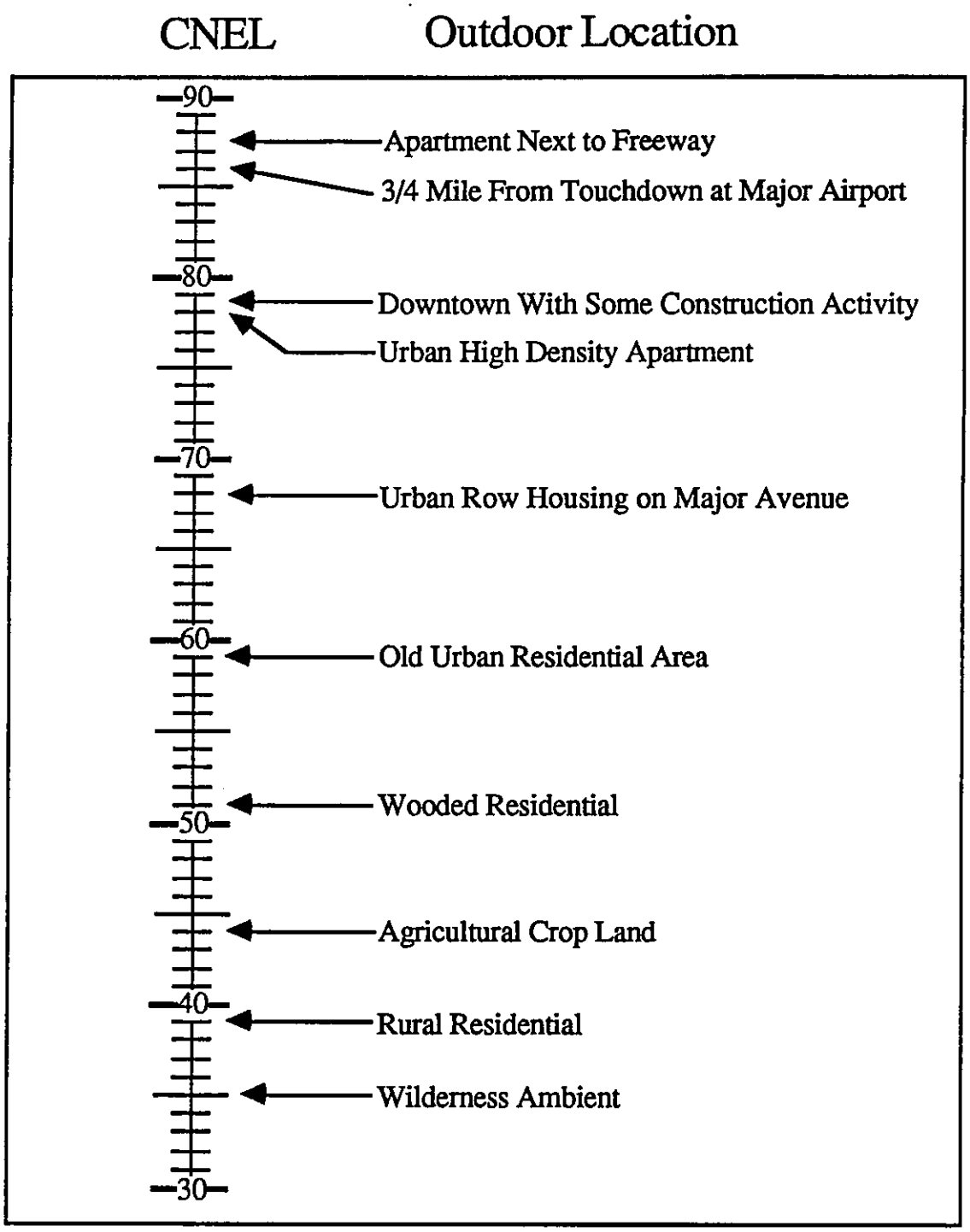
Typical A-Weighted Sound Levels



Source: Mestre Greve Associates

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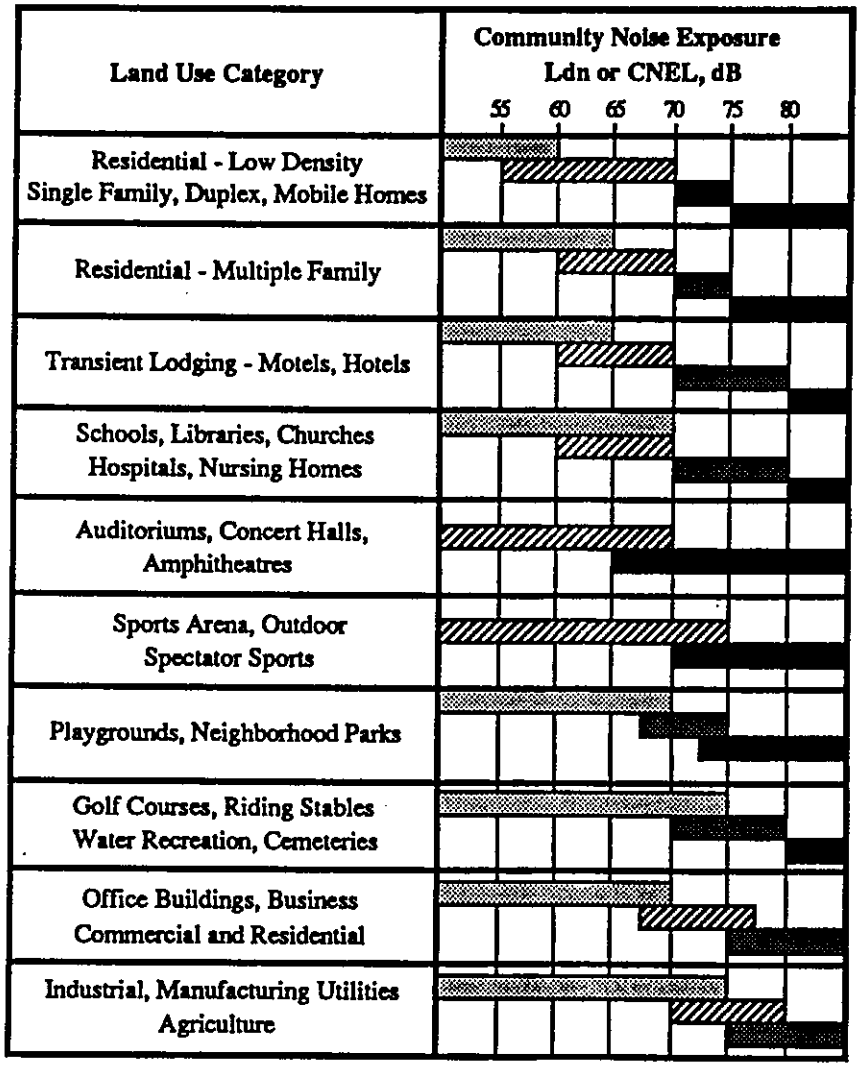
Typical Outdoor Noise Levels



Interpretation

Normally Acceptable

Specified Land Use is Satisfactory, Based Upon the Assumption that Any Buildings Involved are of Normal Conventional Construction, Without Any Special Noise Insulation Requirements.

Conditionally Acceptable

New Construction or Development Should be Undertaken Only After a Detailed Analysis of the Noise Reduction Requirement is Made and Needed Noise Insulation Features Included in the Design. Conventional Construction, but with Closed Windows and Fresh Air Supply Systems or Air Conditioning, Will Normally Suffice.

Normally Unacceptable

New Construction or Development Should Generally be Discouraged. If New Construction or Development Does Proceed, a Detailed Analysis of the Noise Reduction Requirements Must be Made and Needed Noise Insulation Features Included in the Design.

Clearly Unacceptable

New Construction or Development Should Generally not be Undertaken.

Source: Mestre Greve Associates

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California Land Use/Noise Guidelines

LAND USE CATEGORIES		ENERGY AVERAGE CNEL	
CATEGORIES	USES	INTERIOR[1]	EXTERIOR[2]
RESIDENTIAL	Single Family, Duplex, Multiple Family	45[3] 55[4]	65
	Mobile Home	----	65[5]
COMMERCIAL INDUSTRIAL INSTITUTIONAL	Hotel, Motel, Transient Lodging	45	65[6]
	Commercial Retail, Bank Restaurant	55	----
	Office Building, Research and Development, Professional Offices, City Office Building	50	----
	Amphitheatre, Concert Hall Auditorium, Meeting Hall	45	----
	Gymnasium (Multipurpose)	50	----
	Sports Club	55	----
	Manufacturing, Warehousing, Wholesale, Utilities	65	----
	Movie Theatres	45	----
INSTITUTIONAL	Hospital, Schools' classroom	45	65
	Church, Library	45	----
OPEN SPACE	Parks	----	65

INTERPRETATION

1. Indoor environment excluding: Bathrooms, toilets, closets, corridors.
2. Outdoor environment limited to: Private yard of single family
   Multi-family private patio or balcony which is served by a means of exit from inside.
   Mobile home Park
   Hospital patio
   Park's picnic area
   School's playground
   Hotel and motel recreation area
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
4. Noise level requirement with open windows, if they are used to meet natural ventilation requirement.
5. Exterior noise level should be such that interior noise level will not exceed 45 CNEL.
6. Except those areas affected by aircraft noise.

Source: Mestre Greve Associates

PALMDALE TRADE AND COMMERCE CENTER

Typical Noise Standards

The current distances to CNEL contours for roadways in the vicinity of the project site are given in Table 16, EXISTING NOISE LEVELS. These represent the distance from the centerline of the road to the contour value shown. Note that the values given in Table 16 do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. A major noise corridor exists along the Antelope Valley Freeway. Noise levels directly adjacent to the interstate exceed 70 CNEL. Avenue P, Palmdale Boulevard, 10th Street West, and Sierra Highway have noise levels greater than 65 CNEL. Other roadways in the project vicinity have lower levels of traffic and correspondingly lower levels of noise.

Measurements of the noise levels onsite and on residential properties adjacent to the site were made during the morning and afternoon hours of January 24, 1990 at six different locations which are shown in Exhibit 26, FUTURE ONSITE CNEL NOISE LEVELS. The measurement results were averaged and are listed in Table 17, NOISE MEASUREMENT RESULTS. They are presented in terms of the equivalent noise level (Leq), peak noise level (Lmax), minimum noise level (Lmin), and noise levels exceeded for a percentage of time (L%). The L10 percentile level, for example, represents the noise levels exceeding 10 percent of the time. The data in Table 17, show that land uses directly adjacent to the Antelope Valley Freeway, 10th Street West, and Avenue P on the project site as well as adjacent residences offsite are currently being impacted with significant noise levels. The Lmax noise levels on these locations are usually caused by truck pass-bys in the nearest lane.

The project site is located approximately 2.5 miles southwest of Air Force Plant 42, a training base which operates military aircrafts such as air carriers and jets. The site is impacted by aircraft following the primary approach pattern directly north of the project site.

The 1978 CNEL noise contours were obtained from the Department of the Air Force, AICUZ report (January, 1978). The project site is located approximately 1.5 miles from the nearest 65 dBA CNEL contour and therefore experiences aircraft noise levels below the 65 CNEL (see Appendix F, NOISE ASSESSMENT).

IMPACTS

Short-term

Short-term noise impacts to onsite and surrounding land uses which would occur as a result of the proposed project include noise generated by construction activities. Construction

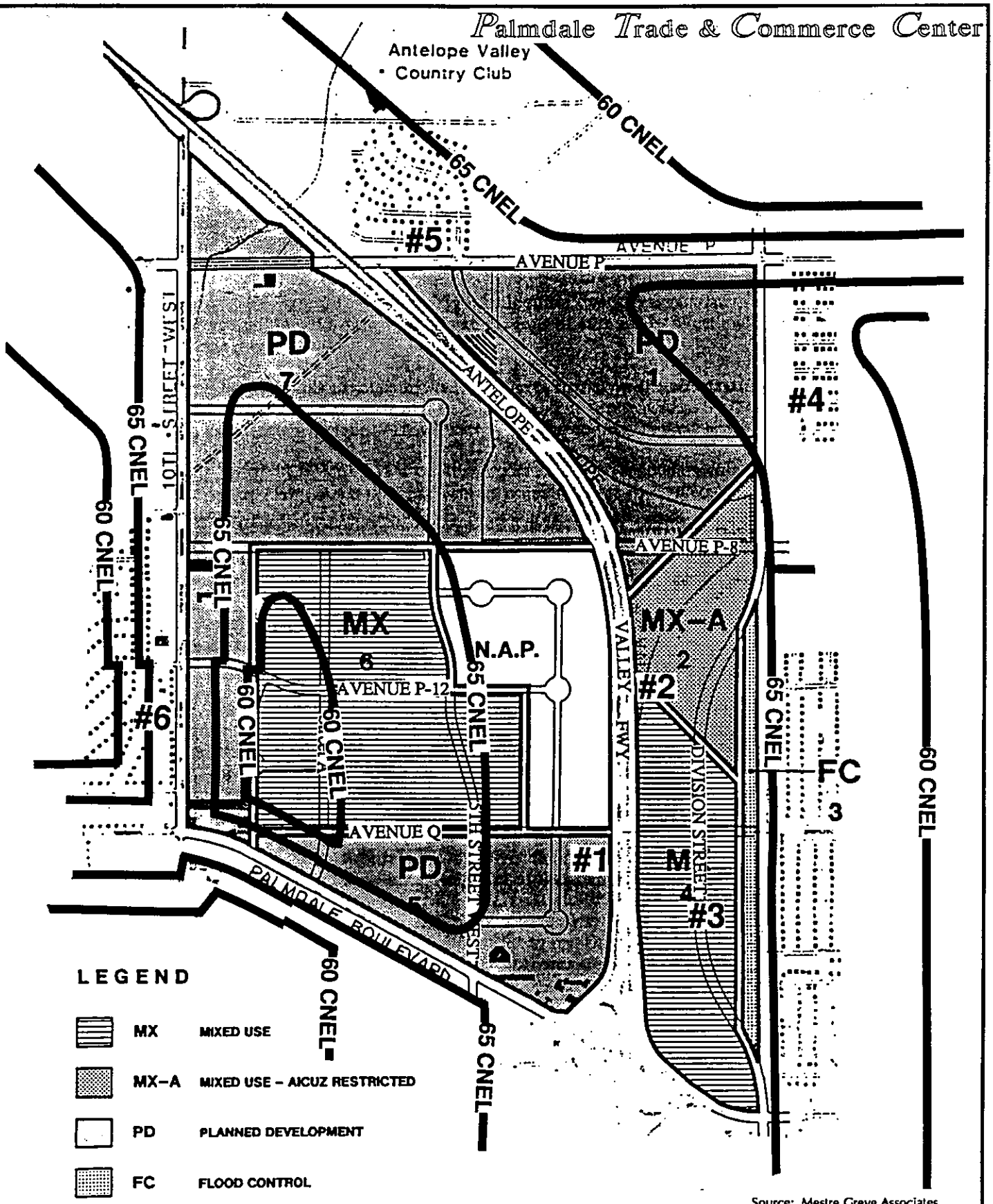
Table 16
EXISTING NOISE LEVELS

Roadway	Link	Distance to CNEL Contour from Centerline of Roadway (Feet) 70 CNEL	65 CNEL	60 CNEL
AVENUE P				
	W. of 10th Street West	RW	RW	87
	5th St. West to 3rd St.	RW	85	183
	E. of Sierra Hwy	RW	80	173
AVENUE P-8				
	3rd St. to Sierra Hwy	RW	RW	RW
AVENUE Q				
	5th St. to Division St.	RW	RW	RW
ELIZABETH LAKE ROAD				
	W. of 10th St. West	RW	RW	109
PALMDALE BOULEVARD				
	10th St. West to Street A	RW	70	150
	Street A to 5th St. W.	RW	70	150
	5th St. W. to Antelope Valley Fwy	RW	70	150
10TH STREET WEST				
	N. of Antelope Valley Fwy	RW	58	126
	S. of Avenue P	RW	66	142
	N. of Elizabeth Lake	RW	66	142
	S. of Elizabeth Lake	RW	RW	63
ANTELOPE VALLEY FWY				
	W. of 10th St. W.	143	309	666
	Avenue P to Palmdale Blvd.	141	304	655
	S. of Palmdale Blvd.	139	299	644
5TH STREET WEST				
	S. of Elizabeth Lake	RW	RW	RW
DIVISION STREET				
	S. of Palmdale Blvd.	RW	RW	84
SIERRA HIGHWAY				
	N. of Avenue P	64	138	298
	Avenue P-8 to Palmdale Blvd.	52	112	241

RW - Contour falls on roadway.

Table 17
NOISE MEASUREMENT RESULTS (dBA)

Location	Leq	Lmax	Lmin	L1	L10	L50	L90	L99
1 (on site)	64.9	79.4	54.5	72.3	66.8	63.3	60.1	56.3
2 (on site)	71.0	81.6	56.8	77.6	73.8	69.8	65.3	61.3
3 (on site)	54.3	66.1	49.1	61.3	55.8	53.6	51.8	50.3
4 (adjacent residential)	52.4	65.6	44.5	60.3	54.3	47.3	46.1	45.1
5 (adjacent residential)	70.4	83.0	48.4	78.8	74.1	67.6	55.6	50.1
6 (adjacent residential)	69.6	84.1	-	76.1	72.3	68.1	62.6	56.3



Source: Mestre Greve Associates

#1 Noise measurements made at location 1

PALMDALE TRADE AND COMMERCE CENTER

Future On-Site CNEL Noise Levels

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 26

equipment, including trucks, graders, bulldozers, concrete mixers and portable generators generate noise that can reach high levels. Grading activities typically represent one of the highest potentials for noise impacts. Most of the grading should occur away from existing residential land uses, however, in some areas, grading will occur adjacent to newly-developed residential areas. With local control of construction hours, these impacts can be reduced to less than significant levels.

Onsite

Onsite noise levels greater than 65 CNEL could be experienced as a result of future traffic levels with the proposed project. The data in Table 18, FUTURE NOISE LEVELS, indicate that future land uses along the Antelope Valley Freeway (SR-14), Palmdale Boulevard, Avenue P, Avenue P-8, 10th Street West, 5th Street West, Avenue Q, and Division Street may experience traffic noise levels greater than 65 CNEL without some form of mitigation. If commercial, office, industrial and hotel land uses are to be built adjacent to the above roadways, they could be exposed to noise levels exceeding 70 CNEL. Exhibit 26, FUTURE ONSITE CNEL NOISE LEVELS, shows the 60 and 65 CNEL noise contours for the project site.

According to the California Land Use/Noise Compatibility guidelines (see Exhibit 24), commercial and office land uses inside the 70 CNEL zone are "conditionally acceptable". The City of Palmdale General Plan requires that noise levels at a commercial parcel's property line do not exceed 65 CNEL during the day and 60 CNEL at night. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. For hotel land use inside the 70 CNEL zone, the guidelines specified the condition as "normally unacceptable", meaning new construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Two hotel land uses existing onsite, the Days Inn and Motel 6, will be located within the 65 CNEL. This will exceed the 65 CNEL typical exterior noise standard for hotels and therefore is considered a significant impact (as a result of project and cumulative traffic levels).

According to the 1978 AICUZ noise contours for Air Force Plant 42, the project site will experience noise levels outside the 65 CNEL contour, and therefore, the noise impact on the project is less than significant. In the future, the air base is expected to take on some

Table 18
FUTURE NOISE LEVELS (dBA)

Roadway		Distance to CNEL Contour from Centerline of Roadway (Feet) 70 CNEL	65 CNEL	60 CNEL
AVENUE P				
	W. of 10th Street West	105	227	490
	5th St. West to 3rd St.	70	174	326
	3rd St. to Sierra Hwy	90	193	416
	E. of Sierra Hwy	94	203	438
AVENUE P-8				
	10th St. W. to Street A	RW	RW	98
	5th St. W. to Division St.	65	140	301
	3rd St. to Sierra Hwy	53	115	248
AVENUE Q				
	5th St. to Division St.	62	134	289
	Division St. to 3rd St.	RW	99	213
ELIZABETH LAKE ROAD				
	W. of 10th St. West	95	204	440
PALMDALE BOULEVARD				
	10th St. West to Street A	61	132	285
	Street A to 5th St. W.	56	120	259
	5th St. W. to Antelope Valley Fwy	87	200	406
10TH STREET WEST				
	N. of Antelope Valley Fwy	84	181	390
	S. of Antelope Valley Fwy	109	236	508
	S. of Avenue P	124	267	575
	N. of Elizabeth Lake	92	199	429
	S. of Elizabeth Lake	75	161	346
ANTELOPE VALLEY FWY				
	Avenue P to Palmdale Blvd.	604	1302	2806
	S. of Palmdale Blvd.	445	958	2064
5TH STREET WEST				
	Avenue P-8 to Avenue P-12	71	154	332
	Avenue P-12 to Avenue Q	97	209	451
	S. of Avenue Q	74	160	346
	S. of Elizabeth Lake	57	123	265
DIVISION STREET				
	Avenue P to Avenue P-8	75	162	349
	Avenue P-8 to Avenue Q	47	100	217
	Avenue Q to Palmdale Blvd.	56	121	261
SIERRA HIGHWAY				
	N. of Avenue P	114	245	528
	Avenue P to Avenue P-8	93	200	432

RW - Contour falls on roadway.

commercial and quieter military aircrafts, and as a result, the future noise levels are projected to be reduced.

Surrounding Land Uses

Impacts to surrounding land uses will occur due to traffic generated by the proposed Palmdale Trade and Commerce Center. Due to additional planned developed in the area which has already been approved there will be an increase in traffic in the surrounding area with or without the Palmdale Trade and Commerce Center project. Table 19, INCREASE IN NOISE LEVELS (dBA), shows the change in noise for surrounding roads as a result of the proposed project and cumulative development in the area. Column 1 of this table shows the change in the future noise levels over existing noise levels. The future noise levels include the sum of noise levels generated from traffic due to cumulative development in the surrounding area, including the project (these estimates are based on year 2010 ADT estimates in the City Circulation Element. Column 2 indicates the change in future noise levels over future noise levels without the project, which represents the increase in noise solely attributable to the proposed project (this estimate is based on comparing year 2010 ADT estimates with year 2010 ADT estimates minus project ADT).

The data in Column 1 (future noise increase over existing) of Table 19, indicate that the future noise levels will increase substantially (greater than 3 dBA) over existing noise levels for some streets in the vicinity of the project, which will have noise sensitive land uses in the future. A maximum change of 14.5 dB is projected to occur along Avenue P-8. All other roadways shown in Table 19 will have existing to future noise increases greater than 3 dB. These significant increases are due primarily to the low amount of traffic currently on these roadways. All roadways that have noise increases greater than 3 dB and future noise levels exceeding 65 CNEL may significantly impact already existing residential developments adjacent to these roadways. Noise impacts due to roadways along planned residential areas that are not yet developed can be mitigated by the developer at the time of construction. The future noise levels are likely to increase eventually over the years rather than immediately due to other developments throughout the area. This is a regional problem due to the intense development throughout this area.

The future increases due solely to the proposed project are identified in Column 2 of Table 19, and are considered to be substantial (greater than 3 dBA) in some areas. This indicates that the project by itself will contribute significantly to the noise increase problem in this region. Maximum noise increases of 4.8, 9.2, 5.2 and 4.0 dBA will occur along Avenue P, Avenue P-8, Palmdale Boulevard and 10th Street West, respectively. As a result, these roadways will have noise levels greater than 65 CNEL. Existing residences that will be

TABLE 19

INCREASE IN NOISE LEVELS (dBA)

Roadway	Link	Future noise increse over existing	Future noise increase due to project
AVENUE P			
	W. of 10th Street West	11.2	+1.0
	Antelope Valley Frwy to 3rd St.	4.8	+4.8
	3rd St. to Sierra Hwy	--	--
	East of Sierra Hwy	6.0	--
AVENUE P-8			
	10th St. W. to Street A	--	--
	Street A to 5th St. West	--	--
	5th St. Wesst to Division St.	--	--
	3rd St. to Sierra Hwy	14.5	+9.2
AVENUE P-12			
	10th St. West to Street A	--	--
AVENUE Q			
	5th St. to Division St.	12.7	+0.4
	Division St. to 3rd St.	--	--
ELIZABETH LAKE ROAD			
	W. of 10th St. West	9.1	+0.6
PALMDALE BOULEVARD			
	10th St. West to Street A	4.2	+2.2
	Street A to 5th St. W.	3.5	+2.7
	5th St. W. to Antelope Valley Fwy	7.0	+5.2
10TH STREET WEST			
	N. of Antelope Valley Fwy	7.4	+1.6
	S. of Antelope Valley Fwy	--	--
	S. of Avenue P	9.1	+4.0
	N. of Elizabeth Lake	7.2	+0.7
	S. of Elizabeth Lake	11.1	+0.1
ANTELOPE VALLEY FWY			
	W. of 10th St. West	--	--
	Avenue P to Palmdale Blvd.	9.5	+0.2
	S. of Palmdale Blvd.	7.6	+0.9
5TH STREET WEST			
	Avenue P-8 to Avenue P-12	--	--
	Avenue P-12 to Avenue Q	--	--
	S. of Avenue Q	--	--
	S. of Elizabeth Lake	13.9	+0.4
SIERRA HIGHWAY			
	N. of Avenue P	3.7	--
	Avenue P to Avenue P-8	--	--
	Avenue P-8 to Palmdale Blvd.	--	--

adversely impacted by future noise are along Avenue P, between Antelope Valley Freeway and third Street. Existing commercial land uses in the project area that are within the 65 CNEL and will be adversely impacted by future noise are located along Palmdale Boulevard, between 5th Street and Antelope Valley Freeway. These commercial land uses include the Ramada Village Inn. The exterior noise standard of 65 CNEL for hotels will be exceeded for the existing hotel due to the proposed development.

In order to mitigate noise impacts to surrounding land uses, barriers and structural upgrades may be necessary which would require project applicants to work with the City, other developers and homeowners to determine final wall heights and building upgrades needed for mitigation. This could be implemented by establishing a City-wide assessment district. If such mitigation measures are not implemented, this would be considered a significant individual and cumulative impact to existing offsite land uses.

MITIGATION MEASURES

All acoustical reports shall be submitted for review and approval by the Department of Planning prior to Site Plan review.

Project

#56. Prior to issuance of building permits, all future commercial office uses within the 65 CNEL, (indicated on Exhibit 26) shall be required to prepare acoustical reports.

#57. Prior to issuance of building permits, all hotel land uses to be built within the 60 CNEL contour (indicated on Exhibit 26) shall be required to prepare acoustical reports.

#58. Prior to issuance of building permits, all future development applications within the Specific Plan area shall be required to submit evidence to the satisfaction of the Planning Director that all proposed uses will comply with City noise standards.

Cumulative

#59. A City-wide assessment district should be established to implement offsite mitigation in the form of barriers and structural upgrades. This would require project applicants to work with the City, other developers and homeowners to determine final wall heights and building upgrades. Funding of improvements would be on a "fair share" or pro rata basis.

UNAVOIDABLE ADVERSE IMPACTS

Project implementation will result in significant individual and cumulative noise increases in the project vicinity. Onsite project impacts can be mitigated with appropriate noise attenuation measures employed on future developments. Noise impacts upon surrounding areas will be significant without establishment of a City-wide assessment district, or similar means, to mitigate project and cumulative noise impacts.

H. AESTHETICS

This section evaluates the aesthetic impacts associated with the proposed Palmdale Trade and Commerce Center Specific Plan. These impacts, due to grading activity, building construction, and vegetation removal are analyzed in relation to existing and surrounding site conditions. The following items are discussed in this section: public scenic views, introduction of new sources of light and glare, and the compatibility of the proposed project with adjacent local aesthetic resources. Mitigation measures are recommended to reduce the aesthetic impacts associated with the implementation of the proposed Specific Plan. Visual resource material used in this analysis was compiled from site photographs and a site survey conducted by RBF in late October, 1989. For additional information regarding potential impacts to area aesthetics, refer to Section V, LONG TERM IMPLICATIONS OF THE PROPOSED PROJECT.

EXISTING CONDITIONS

Onsite

The project site is bounded by Avenue P to the north, Division Street to the east, 10th Street West to the west, and Palmdale Boulevard to the south. The project site exhibits primarily flat desert conditions with concentrations of scrub brush. Refuse, e.g,. paper, bottles, etc., exists throughout much of the open space area of the proposed site, particularly along the eastern boundary. Existing structures occupy perimeter portions of the site. Additionally, barbed wire and chain link fencing, as well as several dirt roads and trails, traverse the project site (see Exhibit 27, SITE PHOTOS).

In the southeastern portion of the project, east of the Antelope Valley Freeway and on the north side of Palmdale Boulevard are a bank, real estate office and two automotive service stations. The area north of these buildings is made up of primarily desert scrub brush, and contains an unauthorized dirt racing track and scattered refuse.

In the far northeastern portion of the project, from the above mentioned dirt track to Avenue P, the view corridor running parallel along Division Street exhibits a collection of dirt roads, desert scrub brush and non-native grassland. An illegal dump site is located on the west side of the Antelope Valley Freeway and is made up of car parts, an abandoned automobile, and an assortment of household appliances. A public storage facility is located at the southeastern corner of SR14 and Avenue P.

From the Antelope Valley Freeway, a large area of Joshua and Juniper trees can be observed in the northwestern portion of the site. This area of the project is surrounded by

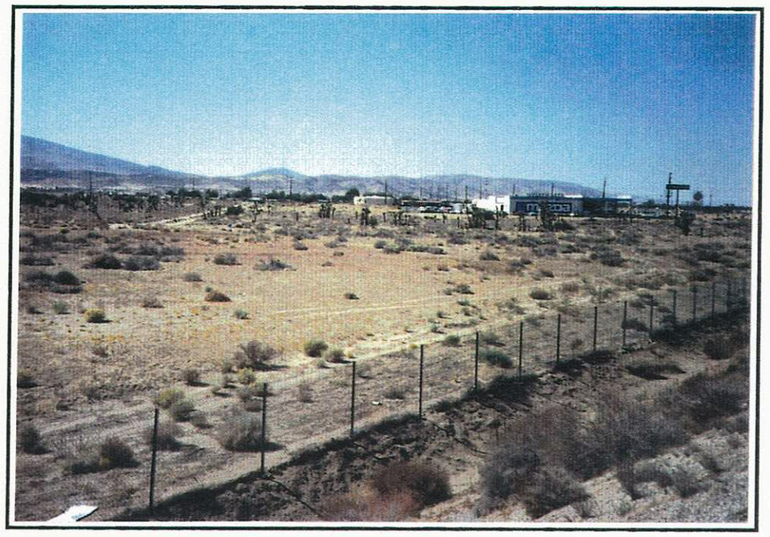
disturbed grassland and scrub brush areas. A Mazda/Volkswagen dealership is located on Avenue P to the north of the woodland area. Southwest of the Joshua and Juniper tree area is a drainage channel supporting reedy riparian vegetation. A single non-native tree is located immediately north of the channel.

On the far west side of the project, immediately adjacent to 10th Street West, is the Golden State Electrical Company and the Faith Community Church and its associated school. The view from these structures is primarily of open space to the east and southeast, and a graded open space area located in the central portion of the site. To the east of this centrally located graded area lies the Antelope Valley Auto Mall site. The auto mall site is not a part of the proposed Palmdale Trade and Commerce Center Specific Plan. The central west portion of the site is slightly elevated, which obstructs north/south views across the site.

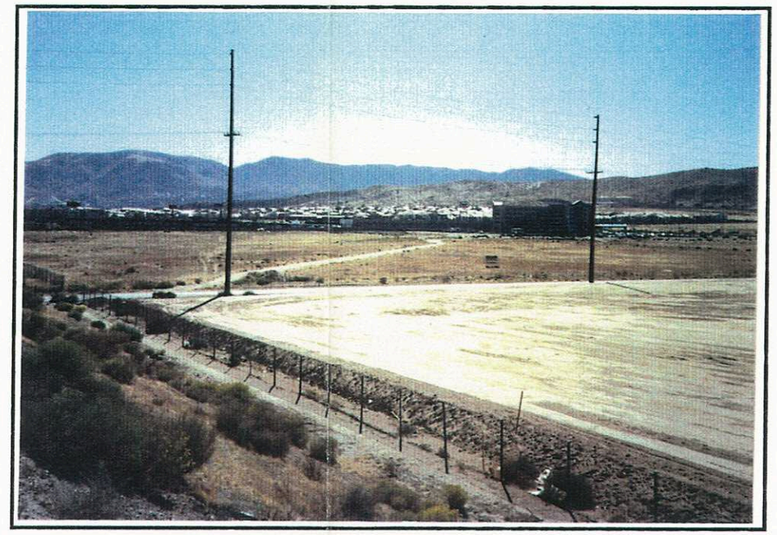
The Posada West Plaza is located on the northeast corner of Avenue Q and 10th Street West. To the east of the plaza, on Avenue Q, is the Local 300 Labor Union Hall. Both the Posada Plaza and the Labor Union Hall currently have primarily open space viewsheds, however, auto mall construction is under way, and is anticipated to obstruct these viewsheds. Within the southeastern area of the project along Palmdale Boulevard is the Palmdale Westside Business Center. A motel, service station and related commercial uses also exist along Palmdale Boulevard. The viewshed from this area is a combination of open space to the north and distant south, business and commercial buildings to the south and east, and residential units to the south, east and west.

Offsite

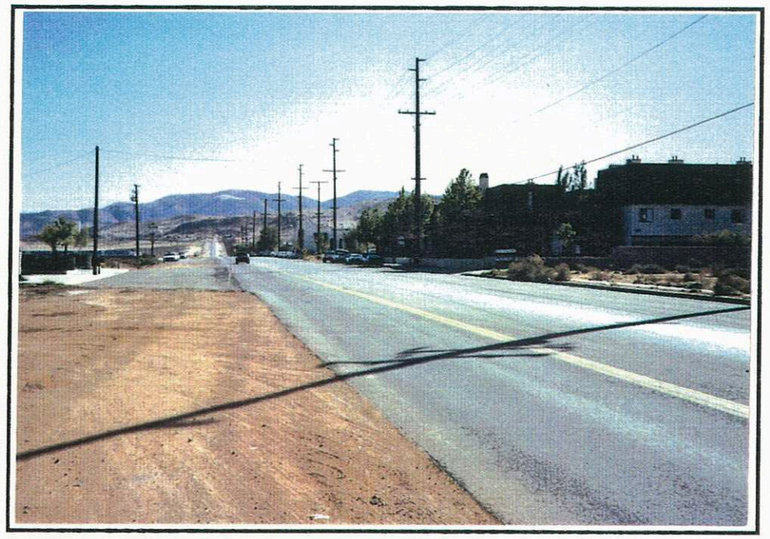
Retail, hotel and related commercial uses exist immediately south of the site along Palmdale Boulevard. The southern most portion of the offsite area is made up of single and multi-family residential development backdropped by an undeveloped 3,200-foot high ridgeline. The residential units that exist to the west of 5th Street West (south of Palmdale Boulevard), and border their respective neighborhoods, have a northerly viewshed of open space area. The residential units that are located to the east of 5th Street West, and border their respective neighborhoods, maintain a view corridor of partial open space to the north and east, with some views obstructed by existing structures. To the east of the above mentioned residential units are non-residential structures including a hotel, restaurant, and service station. To the northeast are additional residential units along 10th Street West. These residential units have extensive open space viewsheds to the west, with distant views partially obstructed by the Antelope Valley Freeway.



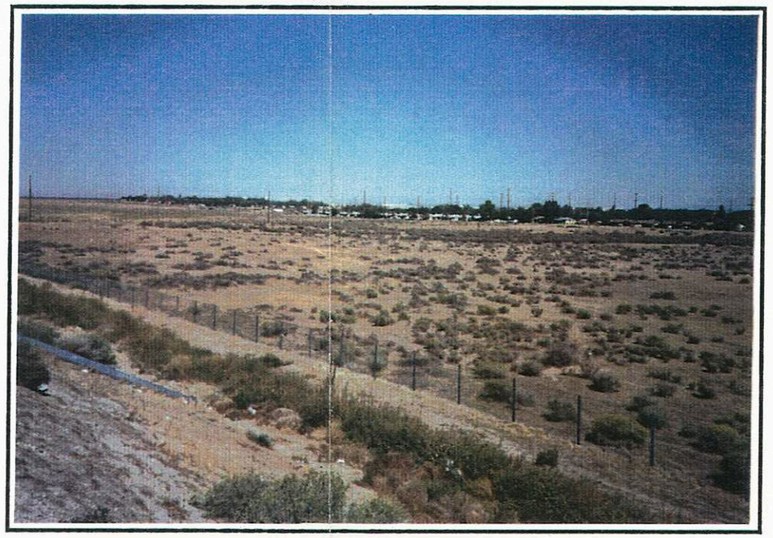
A. Westerly view towards onsite Joshua/Juniper trees and commercial land uses.



B. Looking southwest from the Antelope Valley Freeway, across the Auto Mall site under construction toward onsite commercial land uses and surrounding residential areas.



C. Southern view down 10th Street West showing existing commercial residential and religious land uses adjacent to the site.



D. Northeastern view from the Antelope Valley Freeway across the eastern portion of the site showing residential units along future Division Street extension.

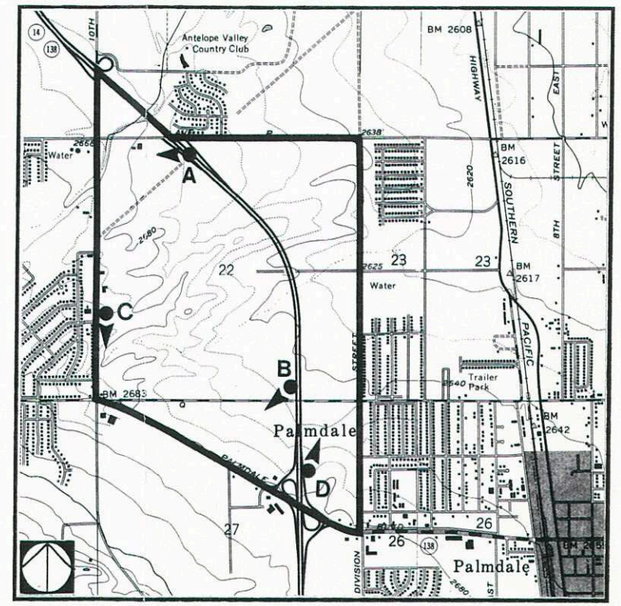


PHOTO INDEX MAP

● Location of Camera
◄ Direction of Photo

PALMDALE TRADE AND COMMERCE CENTER

Site Photos

Northwest of the project site, on the corner of Avenue P and 10th Street West, are two operating water tanks, Hart Realty, and a storage facility. This area is surrounded by a residential area to the north and west, and open space areas to the north, south, and east. The above mentioned residential units that border their development maintain an open space viewshed to the south and east. The Amargosa Creek channel is located within this viewshed.

The Antelope Valley Freeway and adjacent arterials have open space views of the site, although these are partially or entirely obstructed by existing buildings and the auto mall under construction.

Residential units along Avenue P and future Division Street presently have views of the eastern open space portion of the site.

IMPACTS

Initial construction for the proposed Palmdale Trade and Commerce Center will increase impacts to area aesthetics as a result of project grading, dust created by construction activities and equipment, and construction-related air emissions and traffic congestion. These impacts are temporary, and are anticipated to be mitigated to less than significant levels with implementation of recommended mitigation measures. Particular care will be taken in development phasing and monitoring to reduce short-term impacts in consideration of the estimated 20 years required to achieve ultimate buildout.

Onsite

With the construction and subsequent buildout of the project, existing natural desert vegetation will be removed. Juniper and Joshua tree woodland lies within the central and northwestern area of the proposed project. Removal of these trees would further reduce the natural character of this site. However, project landscaping will be designed to partially offset the loss of naturally occurring desert scrub brush (see Exhibit 28, LANDSCAPE CONCEPT PLAN).

Within the northwest corner of the project site lies Amargosa Creek. Channelization, if implemented, would significantly impact the natural character and overall aesthetic quality of this water course. In addition, initial construction for the channel would result in significant visual impacts. Use of local area rocks for channel improvement instead of a standardized concrete installation will reduce these impacts.

The aesthetic quality of existing retail, business, and recreational facilities will be decreased due to the loss of open space.

Offsite

The proposed development will impact the surrounding residential and commercial communities by further reducing natural viewshed that is now available to offsite area residents and motorists. Furthermore, increases in area traffic, construction activities and daytime population will negatively affect the aesthetic quality of the immediate area. Due to the project's proximity to adjacent residential communities, structural glare from building reflection and night lighting is expected to significantly impact the above mentioned communities and the surrounding business areas. Glare from project office structures, hotels, and other glare producing buildings (from reflective glass and other materials) may impact the project area and its inhabitants, as well as traffic travelling on adjacent arterials and the Antelope Valley Freeway. In addition, evening lights from business signs may cause significant lighting impacts in the project area. Implementation of mitigation measures is anticipated to reduce, but not eliminate, these impacts.

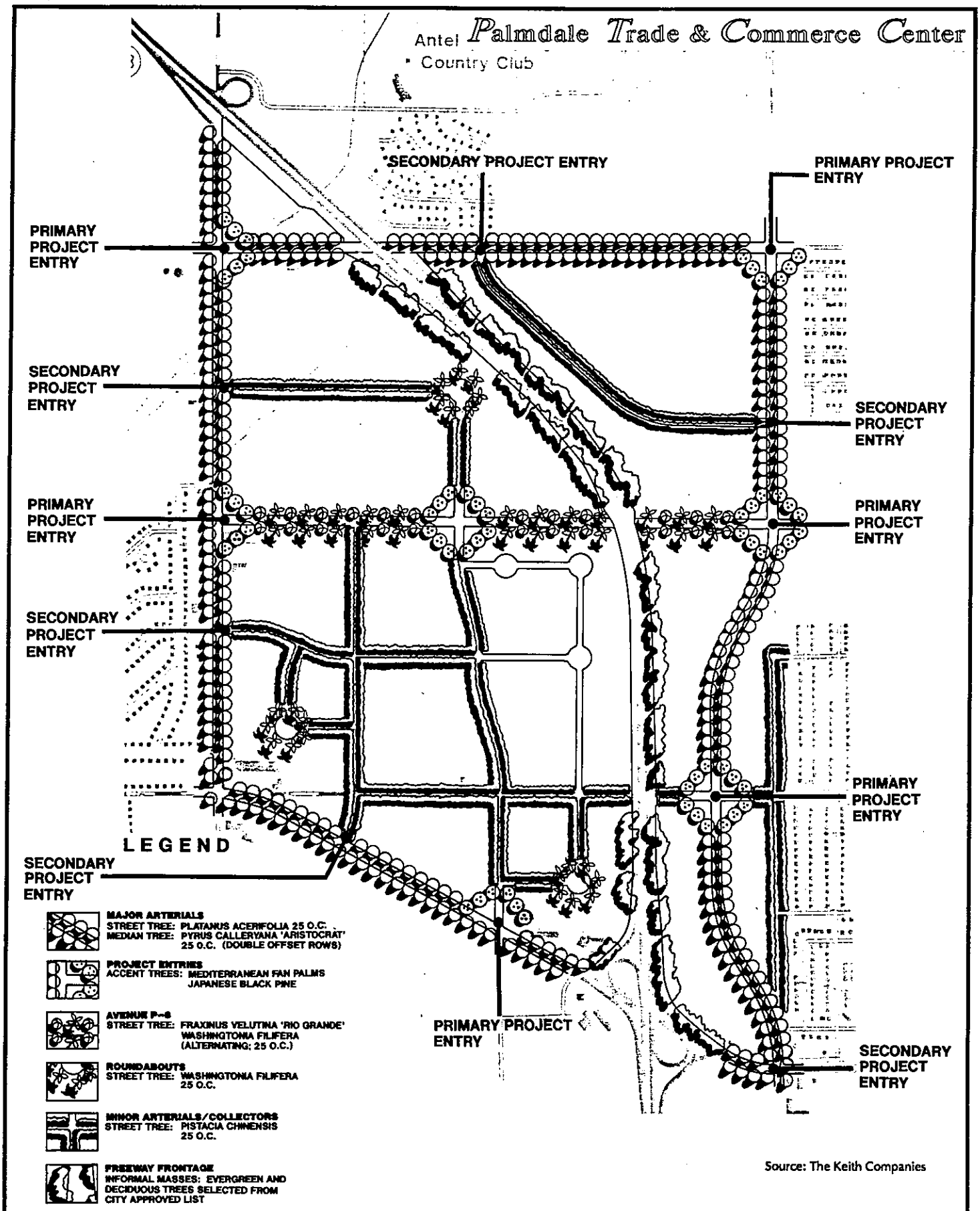
The maximum building height for the proposed project is 45 feet to 55 feet at the present. Although the proposed building heights are relatively modest, these buildings will decrease the viewshed and increase glare impacts within the project site. The maximum building setbacks for the proposed project are 30 feet at the present time. The proposed setbacks will not fully mitigate increased structural density. This will result in significant viewshed degradation for local area residents and businesses in both existing and future developments.

MITIGATION MEASURES

The following are recommended mitigation measures for the proposed project:

#60. In order to mitigate the potential cumulative short-term effect of multiple parcels being developed over a 20-year period, the City Planning Department shall endeavor to group future Specific Plan project review and approvals to minimize continuous construction in any one portion of the site.

#61. During project construction (where Site Plan Review is required) the applicant shall be required to provide appropriate screening (as with temporary fencing with opaque material), dust control (see Section IV.K, AIR QUALITY), restricted construction hours, and a traffic control plan (Section IV.A, TRAFFIC AND CIRCULATION).



Source: The Keith Companies

PALMDALE TRADE AND COMMERCE CENTER

Landscape Concept Plan

Robert Bein, William Frost & Associates

3-90 JN 25957-2898

Exhibit 28

#62. All landscaping will be installed prior to issuance of occupancy permits.

#63. Landscaping will be consistent with the Specific Plan in order to maintain a cohesive theme across the project site, and in order to reduce aesthetic impacts of structures to adjacent roadways and residential properties.

#64. Any lights used to illuminate the parking areas, driveways, and other exterior or interior areas, shall be designed and located so that direct lighting is confined to the property.

#65. In addition to directional lighting, lighting should not be of greater intensity (wattage) than otherwise necessary for public safety.

#66. During Site Plan Review, project design should incorporate additional techniques to reduce light and glare, such as use of opaque glass instead of reflective glass.

~~#67. Amargosa Creek flood control improvements shall be composed of natural materials (or simulated rock) with interspersed vegetation to maintain existing aesthetic qualities.~~

#68. Impacts upon view corridors along adjacent roadways will be minimized by means of the design standards (building setbacks, height limitations, etc.) and landscaping criteria as set forth in the Specific Plan.

UNAVOIDABLE ADVERSE IMPACTS

The Palmdale Trade and Commerce Center will result in development of existing open space areas. This will significantly affect the aesthetic character of the project site and may obstruct certain views from neighboring residences. Structures, signs and lighting may also result in significant light and glare impacts.

I. PUBLIC HEALTH AND SAFETY

Information in this section is based upon the Hazardous Materials Assessment Report, Palmdale Trade and Commerce Center, The City of Palmdale, California, December 28, 1989, prepared by Schaefer Dixon Associates. The purpose of the report was to evaluate the potential for hazardous materials in the area based upon discernable and/or documented present and historic uses of the property, and to generally characterize the expected nature of hazardous materials that may be present as a result of such use. In order to accomplish the objectives stated above, the following tasks were performed: review of published hydrologic and geologic data; review of available aerial photographs; review of the listing of hazardous waste generator sites provided by the City of Palmdale; compilation of questionnaire responses; compilation and presentation of data; and formulation of conclusions. No field exploration or laboratory testing was performed for the assessment.

EXISTING CONDITIONS

General Geology and Groundwater

The uppermost soils in the Palmdale area are composed of unconsolidated alluvial materials consisting of poorly sorted (well graded) sands and gravels, silts, and clays. These soils are part of the alluvial fan deposits present in the Antelope Valley. Depth to the groundwater in the Palmdale area has increased steadily over the past 40 years (reflecting increased groundwater withdrawals). Currently, groundwater flows to the northwest at depths greater than 30 feet below land surface.

Historic Land Uses

The historic land use of the study site was determined by reviewing aerial photographs from the Spence Photographic Collection at the University of California, Los Angeles. The collection spans a time period from 1920-1970. Additional photographs from the Schaefer Dixon Associates files were also reviewed. Based on these aerial photographs, the subject area was essentially undeveloped through 1971 with the exception of three structures west of the Antelope Valley Freeway on Palmdale Boulevard. A 1985 photo indicates a large portion of current site development had been completed by that time. Review of aerial photographs revealed no direct evidence of land use practices with the potential to result in hazardous waste contamination. Illegal dumping has occurred on the site. Dumped material could possibly contain hazardous materials and should be investigated. Since the

area has been primarily open undeveloped land in the past, it is unlikely the subject site has been significantly affected by previous site usage.

Location of Hazardous Materials

The Palmdale Trade and Commerce Center site is comprised of approximately 756 acres of principally undeveloped land divided into 66 parcels owned by 54 separate landowners. Undeveloped land comprises approximately 90% of the site and the remaining 10% consists of several gas stations, motels, shopping centers and fast food restaurants. The developed areas revealed no evidence of hazardous waste contamination. Illegal dumping of domestic trash and construction debris has occurred in undeveloped areas of the property, with the majority occurring in the southeastern portion of the property. Limited quantities of potentially hazardous materials were noted offsite in dumped materials located 400 feet south of the intersection of Palmdale Boulevard and Division Street, immediately south of the property. This waste includes buried asphalt pavement and automobile tires. Similar debris occurs in a small unauthorized dumping area west of future Division Street and north of future Avenue P-8.

Observations in the investigation were limited to what could be seen from public roadways; therefore, the surface condition in and around the various buildings in the area could not be determined. The possibility of soil contamination due to dumping of oil and other hydrocarbon materials around gas stations exists. Required hazardous materials assessments and clean-up of individual properties will mitigate this possible impact. The investigation revealed no above ground storage tanks onsite; however, two above ground water tanks were noted to exist on the southwest corner of Avenue P and 10th Street West, which is just outside the northwestern corner of the property.

Three service stations are located within the study site, two east of the Antelope Valley Freeway and one west. All underground fuel tanks located at these gas stations are reported (by station representatives) to be in compliance with State and Federal regulations concerning their use. None of the stations were State or Federal listed as violators of hazardous materials regulations.

According to a list of hazardous waste generator sites provided by the City of Palmdale, three generators are found within Palmdale. These sites include Palmdale Regional Airport, Lockheed-California Company, and Mobil Service Station #10-MNE. The only hazardous waste generator within one mile of the project site is the Mobil Service Station

#10-MNE located offsite at the intersection of Palmdale Boulevard and Division Street, near the southeastern corner of the project site. A review of file #I-9415-4A from the Los

Angeles County Department of Public Works Waste Management Division indicated an underground waste oil tank had leaked at the Mobil Station in early 1986. However, this tank was removed, along with associated contaminated residue, and replaced with a new tank. Additionally, the three remaining underground fuel tanks were also removed and replaced with new tanks. All tanks were subsequently leak tested and found to be tight.

Additional information was obtained by mailing questionnaires requesting pertinent environmental information to the 54 landowners of the site. Approximately 30% of these landowners responded to the questionnaire. Of these responses, very few indicated the existence of storage tanks on their property and none indicated dumping areas or drum storage. A response from the Palmdale Development Company indicated underground gasoline tanks at the Shell, Chevron and Arco service stations; however, interviews with Palmdale Development Company representatives indicated all underground fuel tanks to be in compliance with State and Federal regulations concerning underground tank use such as, installation procedures, tank lining requirements and inspection programs. None of the questionnaire responses suggested a significant potential for hazardous waste contamination. The public records search included review of the following: EPA National Priorities (NPL); EPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) site; State Site; and Solid Waste Information System (SWIS) Inventory of Landfills lists. No listed sites are located within one mile of the project site.

The Hazardous Waste and Substances Sites (Cortese) list, prepared by the State Office of Planning Research indicates that one site falls within the one-mile radius of the project site. This state-listed site is Southern-Pacific-Palmdale, located at 38021 Sierra Highway. According to the SWRCB, Underground Storage Tank Division, a gasoline leak was reported June 22, 1988, which caused soil contamination only. The SWRCB indicated no further action is required. According to the Solid Waste Information (SWIS) Inventory of Landfills, no County landfill sites are located in the area of the project site.

In addition to numerous existing local, state, and federal regulations, the City of Palmdale is currently developing a Hazardous Waste Management Plan to further regulate the use and storage of hazardous materials and reduce the risk of hazardous materials contamination within the City.

IMPACTS

The project site does not currently present an undue risk in terms of the potential presence of a contamination problem resulting from hazardous materials. Proper mitigation measures should be performed, however, to ensure that the existing underground storage

tanks as well as new businesses are properly monitored with regard to hazardous materials. Trash and debris encountered in certain areas of the property should be properly tested and disposed of if there is a risk of hazardous materials contamination.

Implementation of the Palmdale Trade and Commerce Center Specific Plan may result in the development of businesses that could use or store hazardous materials on their property (although present land use designations allow similar land uses). The land use plan for the Palmdale Trade and Commerce Center Specific Plan allows, in part, for Mixed Use development, which permits a wide range of commercial, office, public administration and manufacturing uses. Some manufacturing, as well as agricultural, transportation and public uses are conditionally permitted within this area. Commercial, manufacturing and agricultural uses, in particular (such as dry cleaners, medical offices, photography businesses, and auto-related uses), may use, store and/or transport hazardous materials at their property and, if not monitored properly, could present a risk of contamination on the property. However, compliance with local, state, and federal regulations regarding hazardous materials is expected to reduce this risk to a less than significant level. Future uses on the property will also be subject to the City of Palmdale Hazardous Waste Management Plan upon its completion, which will further reduce the risks associated with hazardous materials.

MITIGATION MEASURES

#69. In order to verify verbal, written and visual information obtained to date, additional information on current conditions of underground storage tanks including operating permits and reports of investigation/testing performed by owners, shall be obtained prior to issuance of grading permits.

#70. Prior to issuance of grading permits, hazardous materials assessments will be performed for individual properties.

#71. Future grading plans and specifications for individual properties within the Specific Plan area shall include a clause regarding observation, testing, and proper disposal of any hazardous materials encountered during grading and construction, particularly for the trash/debris dumping areas.

#72. Prior to issuance of grading permits for work on the property containing the previously described onsite unauthorized dumping ground west of future Division Street and north of future Avenue P-8, the area shall be inspected, tested and any hazardous materials encountered disposed of.

#73. Future project land uses involving the use, storage or transportation of hazardous materials must comply with applicable local, state and federal health and safety regulations, including the proposed City of Palmdale Hazardous Waste Management Plan, upon its completion.

#74. No uses that involve the use, storage or transportation of hazardous materials shall be permitted adjacent to residential areas.

#75. Any use involving hazardous materials will require site plan review and/or a Conditional Use Permit, to minimize land use conflict. Said review shall involve all agencies with jurisdiction such as the local Air Quality Management District and Regional Water Quality Control Board.

UNAVOIDABLE ADVERSE IMPACTS

None have been identified, after implementation of the required mitigation measures.

J. CULTURAL RESOURCES

Paleontological and cultural resources investigations were performed by RMW Paleo Associates for the proposed Palmdale Trade and Commerce Center. The Paleontological Assessment included a records search conducted at the San Bernardino County Museum and the Los Angeles County Museum of Natural History, and a field survey of the project site. The Cultural Resource Reconnaissance included review of records at the Archaeological Information Center, University of California, Los Angeles and a field inspection of the surface of the site. The investigations attempted to identify potential impacts to archaeological and paleontological resources which might be affected by the proposed development, and to suggest reasonable mitigation measures designed to preserve and protect any onsite cultural resources. Both reports are included in Appendix H, CULTURAL RESOURCES ASSESSMENT.

EXISTING CONDITIONS

Paleontological Resources

Geologic mapping shows Pleistocene alluvium (approximately 1.8 million to 10,000 years Before Present) underlying most of the project site with a thin veneer of Recent alluvium. Various geologic data indicate that the older alluvium on the project may be equivalent in age to the Tylerhorse series of soils of the Antelope Valley which are postulated to be 500,000 years B.P. (Before Present).

At the time of the field survey, a large diameter pipe was being laid along future Avenue P-8. The associated trenches were estimated to be 25 to 30 feet in depth. The primary areas where rock exposures were studied lay in the pipeline trenches, cut exposures in the graded area and in the creek drainages. Dark red soils underlain by dark grey brown sediments with characteristics indicative of older Pleistocene alluvium were exposed in the pipe trenches and further south on the graded area of the site. No fossils were observed on the field reconnaissance.

Older alluvium both in the sphere of influence of the City of Palmdale and elsewhere in the Western Mojave Desert has produced significant vertebrate and invertebrate fossils. These fossils have proven useful in (1) determining the amounts and rates of offset along faults such as the San Andreas Fault, (2) aiding in our understanding of the terrestrial environments that once existed in this part of southern California and (3) learning what animals lived, evolved and/or became extinct in the Pleistocene. The history of significant fossil finds in sediments of this age and type strongly indicates that the older Pleistocene

alluvium on the project has the potential for producing fossils. Therefore, these sediments are rated with a high paleontological sensitivity.

Recent alluvium is too young geographically to contain significant fossils in situ (in their original geologic unit). Fossils from older formations can weather out and be incorporated into recent deposits, but this is a rare occurrence. The only bone materials observed in the Recent alluvium were of modern origin. These bones were situated on the southeast corner of the property and showed evidence of butchering with steel tools. Any older fossil that was reworked into these young sediments would lack contextual stratigraphic data and therefore would be correspondingly less valuable to science. For these reasons, the Recent alluvium is rated with a low paleontological sensitivity.

The veneer of low sensitivity sediments is thin and covers most of the project site. High sensitivity sediments are exposed primarily in graded cuts, creek drainages and small patches where the veneer of low sensitivity sediments has been eroded away.

Ethno-Archaeological Background

Numerous archaeological sites are known to exist in the local region, but excavation and study of these deposits has been quite limited. Because of this, a complete and reliable local chronology has yet to be developed. The lack of archaeological detail in the region extends into ethnographic times. However, evidence suggests that trade was a major reason for human presence in the area during the Late Prehistoric era (250 B.C. to A.D. 1650). The latest detailed work purporting to describe the California Indians is Volume 8 of the Smithsonian Handbook of North American Indians. A careful review of the maps accompanying the tribal descriptions in this work reveals that the Antelope Valley is not assigned to any particular tribal group. The Kitanemuk are located to the north, the Tataviam to the south and west, and the Serrano to the east and south. If the supposition that trade was the basis for human occupation of the area during the Late Prehistoric is correct, it is probable that elements from all the above listed societies, and perhaps others, are to be found in the Antelope Valley.

There was no permanent local residence by Europeans until the Southern Pacific railway arrived in 1876. From that point, area growth was quite slow until the 1950s when the local aerospace industry began.

Archaeological/Historical Resources

Records Search. The records search revealed that the majority of the study area had been previously examined for evidence of cultural resources. At least three separate reconnaissance projects have included portions of the project site.

An archaeological records search indicated that historic archaeological site CA-LAn-1554-H lies in the northwest portion of the site. This site was recorded by Jim Pletcher and Bruce Love on April 8, 1989. The site was described as a scatter of wire, barbed wire, and several brick fragments. There was an indication that some of the brick observed in the area was a portion of a walkway. The dirt roads which cross the property appear to be wagon roads rather than automobile. It is possible that the site is a historic homestead. No prehistoric archaeological sites are known to exist on the project site.

Two archaeological sites are located in the vicinity of the project site. CA-LAn-875 is located approximately two kilometers southwest of the current project. The was described as sandy blowouts exposing bone, soapstone, agate beads and manos. Approximately 700 meters east southeast of CA-LAn-875 is archaeological site CA-LAn-876, which contains similar artifacts.

Field Investigation. The surface of the Specific Plan area was examined by the RMW Paleo field crew on December 18, 19, and 28, 1989 and January 3, 1990. The entire parcel was inspected using a traditional transect method of archaeological survey with transects spaced at approximately twenty meter intervals. Ground visibility was good. Areas currently developed and those areas previously subjected to mass grading were not examined. Archaeological site CA-LAn-1554-H was also visited during the reconnaissance.

The field crew reported concentrations of refuse, mainly cans and bottles, located throughout the property. The materials comprising these trash deposits date primarily from the late 1950s to the present and are not considered historically significant. A large pit, approximately 100 meters by 50 meters wide, is located north of Avenue P-8 just west of Division Street. The pit contains the body of a later model sedan and a motorcycle frame. A single basal bottle fragment of purple glass with a patent date of 1913 was collected from an area approximately 50 meters north of Avenue Q and 300 meters east of 10th Street West. A close inspection of the immediate area revealed nothing else of an archaeological nature. Archaeological materials are generally considered significant when there is some contextual relationship between the artifacts on a site and between a given artifact and the site as a whole. The bottle fragment is an isolated artifact and does not indicate the existence of an intact archaeological deposit.

Examination of the area designated as site CA-LAn-1554-H established that the site appears as described in the literature with two notable exceptions. First, a current trenching project has been cut across the extreme northern portion of the site. The trench itself may have missed the site, but the excavated material was piled on a portion of the site. Second, the possible brick walkway described by Pledger could not be located. Several deposits of brick were located, but they did not appear to be purposefully laid. Artifacts observed at the site during the field reconnaissance included chicken wire, broken pottery, amethyst glass fragments and hole-in-the-top cans. A variety of much more recent household refuse was observed on the site. No building foundations or evidence of a structure of any kind could be located on the site. The surface expression of the deposit seems to indicate that the materials found at CA-LAn-1554-H were utilized elsewhere and subsequently discarded at their present locations. The lack of building materials and structural foundations further increases the probability that CA-LAn-1554-H was a dump site. However, the existence of an old fence line, coupled with the reported existence of a brick pathway, could indicate a possible habitation of the site.

IMPACTS

Paleontological Resources

No known significant paleontological resources are located on the Specific Plan site. However, the Palmdale Trade and Commerce Center Specific Plan area is underlain by sediment rated with a High paleontological sensitivity. Therefore, unmitigated project grading and excavating could possibly expose and destroy unknown paleontological resources resulting in a significant impact. Adherence to required mitigation measures is anticipated to reduce impacts to less than significant levels. It should be noted that many significant paleontological finds occur during properly mitigated construction grading.

Archaeological Resources

Site CA-LAn-1554-H is a historic archaeological site of undetermined significance. Although the surface of the site does not obviously indicate the existence of a subsurface deposit, such a deposit may exist. Project related grading could possibly destroy such a deposit and/or unknown deposits of historic or archaeologic importance resulting in a significant impact. However, required mitigation measures are anticipated to reduce this impact to less than significant levels.

MITIGATION MEASURES

The following mitigation measures shall be implemented and monitored on a project by project basis following approval of the Palmdale Trade and Commerce Center Specific Plan

and certification of this EIR, and a written report shall be submitted to the Department of Planning for all phases of the project.

Paleontological Resources

#76. Prior to issuance of a grading permit, a qualified paleontologist shall be retained to formulate and carry out a mitigation program for the site. This paleontologist shall have the power to temporarily direct or divert operations to allow evaluation, and if necessary, salvage any exposed fossils.

#77. Paleontological monitoring efforts shall be based on the sensitivity of the units being excavated, the number of equipment in operation at one time, and the amount of material (in cubic yards) being moved.

a. Geologic units of "high" sensitivity shall be monitored on a full-time basis. If more than one piece of heavy equipment is being run simultaneously and/or more than 25,000 cubic yards of earth is to be graded per day, then additional monitors will be needed.

b. Geological units of "low" sensitivity require monitoring at least once every five days of grading activity.

#78. Matrix samples for microvertebrate screening shall be collected and processed during monitoring. If microvertebrates are present, up to 6,000 pounds of matrix will need to be sampled. This material can be placed to one side of the active grading so as not to delay the project. Screening may be done onsite.

#79. All fossils collected need to be prepared to the point of identification. These remains should be donated to an institution with an educational and/or research interest in the materials and a retrievable storage system, such as the Los Angeles County Museum of Natural History and the San Bernardino County Museum. This shall occur within one year of individual project completion.

#80. A final report summarizing findings, including an itemized inventory, contextual stratigraphic data, and photographs shall accompany the fossils to the designated repository with an additional copy sent to the City of Palmdale Planning Department.

Archaeological Resources

The following mitigation measures pertain to development on or within 50 meters of historic site CA-LAn-1554-H.

#81. Prior to issuance of a grading permit, site CA-LAn-1554-H, and the area within a 50 meter radius of the approximate center of the site, shall be subjected to a surface collection by a qualified archaeologist.

#82. Subsequently, the initial stages of grading shall be monitored by a qualified archaeologist. This archaeologist shall have the power to temporarily direct or divert grading operations to allow evaluation, and if necessary, salvage any exposed artifacts.

The following mitigation measures apply to all development involving grading within the Specific Plan area.

#83. During grading operations, the project Construction Manager shall be responsible for informing the City of Palmdale Planning Department within 12 hours of the discovery of any material of an archaeological nature.

#84. Should the City Planning Department determine that the uncovered material is of an archaeological nature, a professional archaeologist shall be retained to collect and document the archaeological deposit as quickly as is consistent with good archaeological practice. The archaeologist shall have the power to stop or redirect the construction in order to properly recover the artifacts.

#84A. Following the surface collection and monitoring activity, all the artifacts recovered and features found (if any) should be analyzed and described in a monitoring report. The monitoring report shall be submitted to the Planning Department for review and approval prior to any grading or construction activity on the project site. If it is determined that the site was a homestead, a title search should be performed to determine associations with any historic persons, events or themes. The report should present the kind of descriptive and interpretive information usually found in Phase II evaluation reports. An updated form DPR-422 should also be filed with the Archeological Information Center to include new data discovered as a result of mitigation.

UNAVOIDABLE ADVERSE IMPACTS

No unavoidable adverse impacts are anticipated with implementation of the recommended mitigation measures.

K. AIR QUALITY

Information in this section is based upon the Air Quality Handbook for Preparing EIRs (South Coast Air Quality Management District (SCAQMD), Revised 1987), the Summary of Air Quality in California's South Coast Air Basin (SCAQMD, 1983), Impact Assessment: Draft Baseline Projection (SCAG, updated March, 1987), Air Quality Data 1982,1983, 1984, 1985, 1986, 1987 and 1988 (SCAQMD), Final 1989 Air Quality Management Plan (SCAQMD, adopted March, 1989), The National Oceanic and Atmospheric Administration Climatological Data Annual Summary, and the Soil Survey - Antelope Valley Area, California (U.S. Department of Agriculture Soil Conservation Service). Selected sections of these references are provided in Appendix I, AIR QUALITY DATA.

EXISTING CONDITIONS

Climate

The project site lies within the northwestern portion of the Southeast Desert Air Basin (SEDAB), in the extreme southwestern extension of the Mojave Desert. The eastern edge of SEDAB is bounded by the Colorado River. The western boundary follows the ridgeline of a series of high mountain ranges, the San Gabriel, San Bernardino and San Jacinto ranges, which form both a physical and climatological barrier between the Southeast Desert and South Coast Air Basins.

The SEDAB has a desert climate characterized by low annual rainfall, low humidity, hot days and very cold nights. The mean annual precipitation in the SEDAB portion of Los Angeles County averages about 2.5 inches, most of which occurs between November and March. Temperature varies greatly between summer and winter. The average annual temperature is 60.7°, ranging from an average minimum of 41.7° in January to an average maximum of 83.9° in July. Relative humidity is generally low in summer; afternoons are particularly dry. These clean, dry conditions result in intense solar radiation that, combined with high temperatures, is highly conducive to photochemical smog formation.

Winds in the Antelope Valley are typically brisk and highly persistent, originating mainly from the west and west-southwest. The average speed of approximately 13 mph usually allows any localized pollution to be scattered. Most regional air quality problems are, therefore, due to interbasin transport from the Los Angeles area through mountain passes such as Soledad Canyon. The prevailing winds typically move polluted air from the more densely populated portions of the South Coast Air Basin toward the Southeast Desert Air Basin, with the air entering the Desert Basin from mid-afternoon to late evening.

In addition to brisk winds, the Antelope Valley rarely experiences the summer temperature inversions which frequently "cap" polluted air layers in the Los Angeles Basin area. However, inversions can form during cold nights with mild winds, but are usually removed during daytime heating. When these desert inversions form, they may trap pollutants near low-level emission sources such as freeways or parking lots.

Air Quality Management

The proposed project is located in the Southeast Desert Air Basin, and jurisdictionally, is governed by the California Air Resources Board (CARB). The South Coast Air Quality Management District (SCAQMD) provides some technical and monitoring support, as well as enforcement of District Rules and Regulations. In accordance with the State Lewis Air Quality Act (1976) and the Federal Clean Air Act Amendments (1977), the Air Quality Management Plan (AQMP) was prepared for the South Coast Air Basin (SCAB). SEDAB does not have an AQMP.

The SCAG (Southern California Association of Governments) Impact Assessment: Draft Baseline Projection indicates that stationary Reactive Organic Gas (ROG) emissions in SEDAB will be ten percent (10%) lower than under the SCAG-82M forecast. However, the drop in stationary source emissions is not enough to offset a projected 31% increase in mobile source Reactive Organic Gas (ROG) emissions brought about by high population growth and a job/housing imbalance.

The intensive development plans for the Palmdale Airport, situated in and impacting SEDAB, also contribute to the higher mobile source emission levels under the SCAG Baseline Projection 1988. The Baseline Projection is the latest growth forecast data available from SCAG, and served as the foundation for development of the SCAG-88 growth forecast policy to replace SCAG-82M (growth forecasts include the desert portions of Los Angeles and Riverside Counties). These factors result in the Baseline Projection estimating 6% higher levels of ROG emissions than did the SCAG-82M growth forecast for SEDAB, erasing the progress planned from mobile source emission reductions towards attaining air quality standards.

In addition, improving SEDAB air quality is complicated by transport from the South Coast Basin. High morning background ozone concentrations occurring in SEDAB are caused by transport of ozone (a secondary pollutant), from the Los Angeles basin. On transport days, diurnal increases in ozone levels still result from local sources, however, the background concentrations already exceed standards. These findings point to the need to effect improvements in South Coast Basin air quality, as well as to achieve tighter local controls, in order to attain standards in the Southeast Desert Basin.

The AQMP has the goal of achieving healthful levels of air quality and is governed by State and Federal laws. Included in the 1989 AQMP are: new stationary and mobile source controls, carpooling, vanpooling, and other ride-sharing programs, and energy conservation measures. The AQMP is designed to accommodate a moderate amount of new development and growth throughout the basin. The AQMP projections and mitigation are based on recent SCAG growth forecasts. The SCAQMD adopted the Final 1989 AQMP in March, 1989 to reflect 1988 growth forecasts from SCAG, which include additional control measures to attain healthful levels of air quality by 1996 for Nitrogen Dioxide, 1997 for Carbon Monoxide and 2007 for Ozone and PM10.

Within the Final 1989 AQMP is a list of strategies designed to improve air quality throughout the region. This package of measures explores the feasible limits for long range solutions to system-wide air quality concerns. Measures included in the AQMP can be divided into three classes: Tier I (present technology); Tier II (advanced technology and regulatory intervention) and Tier III (new technology). Control measures within each tier are grouped into several categories, intended to reduce emissions from specific sources or activities. Categories include stationary sources, commercial and industrial processes, residential and public sectors, agricultural processes, motor vehicles, transportation system and land use, and off-road vehicles. The land use strategies focus on land use measures that could help reduce the number and length of automobile trips made, with the underlying premise that trip making and mode choices are not only a function of the transportation system, but also of such factors as housing density, the relative location of land uses, and the way land uses relate to the transportation system. Tier I Control Measures for "Transportation System and Land Use" include alternative work schedules, telecommunications, employer rideshare and transit incentives, parking management, vanpool vehicle purchase incentives, HOV lanes, transit improvements, growth management, truck controls and traffic flow improvements. Tier I measures are presently being implemented by SCAQMD (such as Regulation XV ridesharing requirements).

Ambient Air Quality

Air quality at any site is dependent on the regional air quality and local pollutant sources. As noted above, regional air quality is primarily a function of basin topography, wind patterns and emissions. Primary pollutants under the influence of these variables react with each other in sunlight to form secondary pollutants such as Ozone. Emissions generated in the Southeast Desert Air Basin are generally well diluted by the excellent daytime vertical mixing induced by high surface temperatures, though high background levels of particulate matter result in frequent violations of Total Suspended Particulate (TSP) standards. In the Southeast Desert Air Basin, most of the TSP is of natural origin. Chemical analysis for constituents such as Lead and Sulfate show these to be present in much lesser amounts than is typical of the densely populated South Coast Air Basin.

The air monitoring station nearest to the project is operated by the SCAQMD in Lancaster, and is approximately 12.5 miles northeast of the project site (within Source Receptor Area 14). The data collected at this station is considered to be representative of the air quality experienced in the vicinity of the project area. Air quality data for 1982 through 1988 for the Lancaster Station is provided in Table 20, LOCAL AIR QUALITY LEVELS. As indicated by the Table, TSP and Ozone are the pollutants of primary concern in the area. The particulate matter originates within the Southeast Desert Air Basin. However, much of the other pollutants are a result of South Coast Air Basin pollutants spilling over into the desert area.

Vehicle emissions along major arterials currently expose land uses in the project area to increased concentrations of pollutants, particularly Carbon Monoxide. Carbon Monoxide is the pollutant of major concern along roadways, as it is directly emitted from motor vehicles. Residential areas, which are considered sensitive receptors, presently exist adjacent to the Specific Plan area along 10th Street West to the west, along Division Street to the east, and in the Antelope Valley Country Club to the north. Refer to Exhibit 2, SITE VICINITY MAP for land use information. Additional detail, including the health effects of exposure to various concentrations of ozone, is provided in Appendix I, AIR QUALITY DATA.

The following air quality information focuses on State standards, which are more stringent and therefore more accurate estimates for worst-case analysis of air quality impacts, as compared to Federal Standards. The information is based on material obtained from SCAQMD, including the Air Quality Handbook, Summary of Air Quality, and Air Quality Data. Refer to Table 20, LOCAL AIR QUALITY LEVELS for information on days exceeding Federal standards.

Carbon Monoxide (CO) is a colorless, odorless gas produced by incomplete combustion of carbon-containing fuels, such as gasoline. Approximately 80 percent of the CO in the atmosphere of the Basin is emitted directly from and slightly downwind of areas with heavy traffic (approximately 97 percent of CO in the South Coast Air Basin is from Mobile Sources).[1] CO concentrations are generally higher along roadways, especially in the early mornings, late evenings and winter. As shown in Table 20, LOCAL AIR QUALITY LEVELS, Carbon Monoxide levels did not exceed the State standard of 20 ppm (parts per million, averaged over 1 hour) between 1982 and 1988. In 1978, the State standard of 9.1 ppm averaged over 8 hours was exceeded 4 days.

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[1] Impact Assessment Data: Draft Baseline Projections. (SCAG). Updated March 1987 (Pages 14-30 and 14-6).

TABLE 20

LOCAL AIR QUALITY LEVELS
-Compared to State and Federal Standards-
As monitored at the Lancaster Ambient Air Monitoring Station

Pollutant	California Standard	Federal Preliminary Standard	Year	Maximum[1] Concentration	Days State/Fede Std. Exceed
CO (Carbon Monoxide)	20 ppm (1-hour Avg.)	35 ppm (1-hour Avg.)	1982	10	0/0
			1983	13	0/0
			1984	10	0/0
			1985	12	0/0
			1986	9	0/0
			1987	12	0/0
			1988	11	0/0
Ozone (1-hour Avg.)	0.10 ppm (1-hour Avg.)	0.12 ppm	1982	0.16	82/
			1983	0.18	94/
			1984	0.18	110/
			1985	0.19	106/
			1986	0.20	108/
			1987	0.17	105/
			1988	0.18	105/
NO_2 (Nitrogen Dioxide)[2]	0.25 ppm (1-hour Avg.)	0.0532 ppm (Annual Avg.)	1982	0.14	0/
			1983	0.09	0/
			1984	0.11	0/
			1985	0.08	0/0
			1986	0.09	0/0
			1987	0.09	0/0
			1988	0.09	0/0
SO_2 (Sulphur Dioxide)	0.05 ppm (24-hour Avg.)	0.14 ppm (24-hour Avg.)		NOT MEASURED	
Visibility Humidity less than 70%	10 miles with Humidity less than 70%	NS	1982-1986	NOT MEASURED	
			1987		1
			1988 (William J. Fox Airport)		5

Source: Air Quality Data. SCAQMD. 1982, 1983, 1984, 1985, 1986, 1987 and 1988.

[1]Maximum concentration measured over same period as California Standard, although Carbon Monoxide maximum con for one hour and Lead is over 24 hours.

[2]Less than 12 months of data for Nitrogen Dioxide in 1982. Prior to 1985, Federal standard information is not availabl

TABLE 20
(continued)
LOCAL AIR QUALITY LEVELS
-Compared to State and Federal Standards-
As monitored at the Lancaster Ambient Air Monitoring Station

Pollutant	California Standard	Federal Primary Standard	Year	Maximum Concentration	Days State/Federal Std. Exceeded
TSP	50 ug/m^3	260 ug/m^3	1982	113	1/0
'otal Suspended	(24-hour Avg.)	(24-hour Avg.)	1983	129	0/0
'articulates)[3,4]			1984	180	2/0
			1985	316	1/1
			1986	137	0/0
			1987	187	N/A
			1988	257	N/A
LEAD	1.5 ug/m^3	1.5 ug/m^3	1982	0.59	0/0
	(1 month Avg.)	(Quarterly Avg.)	1983	0.54	0/0
			1984	0.57	0/0
			1985	0.30	0/0
			1986	0.26	0/0
			1987	NOT MEASURED	
			1988	NOT MEASURED	
SO_X	25 ug/m^3	NS	1982	11.7	0/NS
(Sulphates)	(24-hour Avg.)		1983	8.1	0/NS
			1984	11.1	0/NS
			1985	7.6	0/NS
			1986	8.9	0/NS
			1987	7.3	0/NS
			1988	5.7	0/NS

NS: No standard set.

[3]Previous State standard (1982) was 100 ug/m^3 for 24-hours. The State adopted the PM10 Method in 1983 with a 24-hour standard of 50 ug/m^3. However, to allow comparison between years, the Federal Secondary Standard of 150 ug/m^3 will be used (more stringent than the primary standard of 260 ug/m^3).

[4]Based on 55 samples in 1982, 55 samples in 1983, 56 samples in 1984, 55 samples in 1985, 60 samples in 1986 and 1987, and 58 samples in 1988.

Ozone, a colorless gas with a sharp odor, is a highly reactive secondary pollutant (it is not directly emitted). Ozone is the result of complex chemical reactions of primary pollutants, specifically reactive hydrocarbons and oxides of nitrogen in the presence of bright sunlight. Hydrocarbons and nitrogen dioxides are emitted from mobile and stationary sources, with the greater contribution coming from mobile sources in the basin. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in Lancaster. Therefore, all areas of the South Coast Air Basin and portions of the Southeast Desert Air Basin contribute to the Ozone levels experienced at the project site, with the more significant areas being those directly upwind. These concentrations increase in the summer, with peak concentrations increasing from late morning through afternoon.

Because of the excellent dispersive capacity of desert air, the Ozone problem is primarily due to transport into the Antelope Valley rather than from any local pollutant contribution. Although local emissions do add incrementally to regional air quality degradation, their effects are obscured by the transport problem.

As shown in Table 20, the Ozone levels at the Lancaster Station have increased over the last 5 years, exceeding the State standard 108 days in 1986, with a maximum concentration of 0.20 ppm. Maximum concentration dropped in 1987 to 0.17 ppm. The State standard for Ozone is 0.10 ppm averaged over 1 hour.

Nitrogen Dioxide (NO_2) is a reddish-brown gas with an odor similar to that of bleach. NO_2 is formed in the atmosphere primarily by rapid oxidation of nitric oxide (NO). Some NO_2 is also emitted with NO from stationary and mobile combustion sources. These compounds, NO and NO_2, are referred to collectively as oxides of nitrogen (NO_x). The latest emissions inventory shows that 61 percent of the Basin's NO_x is emitted from mobile sources and 39 percent from stationary sources.[1] NO_2 is itself a regulated pollutant, but it also reacts with hydrocarbons in the presence of sunlight to form Ozone and other compounds that make up photochemical smog. Seasonal and diurnal patterns in NO_2 concentration vary widely between locations.

The Lancaster station has not exceeded the State standard (0.25 ppm averaged over 1 hour) since 1978, with maximum concentrations declining to 0.09 ppm in 1987 and 1988.

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[1] Impact Assessment Data: Draft Baseline Projections. (SCAG). Updated March, 1987 (Page 14-30).

Sulphur Dioxide (SO_2) is a colorless gas with a sharp, irritating odor. It is emitted directly into the atmosphere, equally by mobile sources and stationary sources such as power plants, petroleum refineries, chemical plants, and steel plants. SO_2 diurnal concentrations are complex, but typically are higher at night. This pollutant is not measured at the Lancaster station; however the SoCAB has relatively low SO_2 concentrations, as no station has exceeded the Federal standard of 0.14 ppm (24-hour average) since the mid-1960's. Therefore, it is inferred that SEDAB has low SO_x concentrations.

Visibility can be defined as the distance that atmospheric conditions permit a person to see at any given time. Technically, visibility is defined as the farthest distance an observer can distinguish a large black object against the horizon. Reduced visibility causes aesthetic impairment of our surroundings and also interferes with aircraft operations. The greatest contribution to visibility reduction in the Southeast Desert Air Basin is from light scattering by "fine particle" aerosols within the size range of 0.1 to 2 microns (a micron is one-millionth of a meter).

Visibility may be impaired by natural or man-made sources, including natural aerosols such as precipitation, fog, soil particles, volcanic emissions, vegetation, sea spray and organic decomposition products; and man-made sources such as sulfates and nitrates.

Visibility measured at William J. Fox Airfield (which is located in the northwestern portion of the City of Lancaster) exceeded the State standard 1 day in 1987 and 5 days in 1988.

Total Suspended Particulates (TSP) is the name given to the solid matter suspended in the atmosphere, of which approximately 95% is from stationary sources.[1] This complicated mixture of natural and man-made materials includes soils particles, biological materials, sulfates, nitrates, organic (or carbon-containing) compounds, and lead. A high volume sampler is used to determine TSP concentration by passing a measured volume of air through a glass fiber filter. The filter then is weighed to determine the concentration of TSP, after which it is analyzed for lead, sulfate, and nitrate by an SCAQMD laboratory. TSP tends to be at higher concentrations in the day but has an unclear seasonal pattern.

High dust levels result from strong winds and loose, arid soil. Much of the valley dust burden is in the form of large, heavy particles. Larger dust particles pose a less serious health threat than small particles produced by fossil fuel combustion.

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[1] Impact Assessment Data: Draft Baseline Projections. (SCAG). Updated March, 1987 (Pages 14-30).

Levels of Total Suspended Particulates have increased since 1982. The Lancaster station exceeded the Federal standard of 150 ug/m^3 (micrograms per cubic meter) once in 1982 and 1985 and 2 days in 1984. Maximum concentrations have increased from 113 ug/m^3 in 1983 to 316 ug/m^3 in 1985, dropping to 137 ug/m^3 in 1986 (maximum concentration was 187 ug/m^3 in 1987). In 1988 the maximum concentration increased to 257 ug/m^3. Particulate concentrations monitored at the Lancaster Station should be representative of the levels experienced at the project site.

Lead In this Basin, atmospheric Lead is generated almost entirely by the combustion of leaded gasoline, and contributed to less than 1 percent of the material collected as Total Suspended Particulate in 1982. Atmospheric Lead concentrations have been reduced substantially in recent years due to the lowering of average Lead content in gasoline. Exceedances of the State air quality standard for Lead (monthly average concentration of 1.50 ug/m^3) now are confined to the densely populated portions of Los Angeles County where vehicle traffic is greatest.

Lead concentrations are typically highest in late fall and winter due to vehicle emissions being trapped by early-morning surface temperature inversions. Lead concentrations vary diurnally with CO, peaking in the early mornings and late evenings. The Lancaster Station has recorded a steady decline in maximum Lead concentrations, from 0.59 ug/m^3 in 1982 to 0.26 ug/m^3 in 1986 (not measured in 1987 and 1988).

Sulphates (SO_X). Atmospheric Sulfates are formed mostly by oxidation of SO_x, and primarily include ammonium sulfate, ammonium bisulfate and traces of sulfuric acid. In 1982, TSP collected at South Coast Air Basin air monitoring stations contained from 7 to 13 percent Sulfate. High Sulfate concentrations occur throughout the year. The highest average concentrations generally occur in the months of July through October, as this period registers many days of high relative humidity, strong photochemical activity and limited vertical mixing, all of which favor the conversion of SO_x emissions to Sulfate. Sulfate concentrations do not show sharp diurnal variation, but peak at different times depending on location.

The Lancaster Station has not exceeded the State standards. Maximum concentrations have decreased from 10.2 ug/m^3 in 1978 to 5.7 ug/m^3 in 1988.

IMPACTS

Short-Term Construction Impacts

Temporary impacts would result from project construction activities due to air pollutants emitted by construction equipment and dust generated during grading and site preparation. These impacts will be relatively small scale but ongoing, as the project site is developed parcel by parcel, until ultimate buildout of the Specific Plan area.

Construction activities for large development projects are estimated by the U.S. Environmental Protection Agency to add 1.2 tons of fugitive dust per acre of soil disturbed per month of grading activity. This is a worst-case estimate (dry, fine, loose soil) and does not account for the effects of watering graded areas and other required mitigation measures which can reduce dust generation by up to 50 percent. The project would also be required to conform to City dust control measures. Much of this dust settles within hours of being generated. Additionally, this material is inert silicates, rather than the complex organic particulates released from combustion sources which are more harmful to health. Dust generated by such activities usually becomes more of a local nuisance than a serious health problem. Construction related dust impacts will be mitigated by compliance with required State, County and City dust control measures.

The project would result in vehicle emissions during grading and construction activities. Heavy-duty equipment emissions are difficult to quantify because of day-to-day variability in construction activities and equipment used. Typical emissions rates (in terms of pounds of pollutant per gallon of fuel burned) for gas-powered and diesel-powered equipment are provided in Appendix I, AIR QUALITY DATA. At typical fuel consumption rates, emission rates from construction activities range from about 1 to 7 pounds per hour per piece of onsite equipment.

Project Impacts

Although the project may result in minor local alterations to wind and temperature patterns, there are no anticipated significant impacts to climate as a direct result of the project. Please refer to Section V, LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT, for a discussion of the project's possible cumulative impact to the regional air cell and climate.

Increased vehicle travel would lead to an overall increase in the local pollutant load due to direct impacts from vehicle emissions. Regional pollutant emissions from stationary sources would also increase due to increased electrical and natural gas consumption. Due

to the large scope of the project and the anticipated volumes of traffic generated by the proposed land uses, the Palmdale Trade and Commerce Center Specific Plan will have a significant individual and cumulative impact upon regional air quality. However, implementation of the Specific Plan will supply much needed local employment opportunities and support services. This is anticipated to reduce commuter traffic to the greater Los Angeles Basin and consequently partially mitigate mobile source emission impacts. Refer to Table 21, PROJECT VEHICLE EMISSIONS; Table 22, PROJECT-RELATED POWER PLANT EMISSIONS; Table 23, PROJECT-RELATED NATURAL GAS EMISSIONS; and Table 24, PROJECT CONTRIBUTION TO TOTAL SOUTHEAST DESERT AIR BASIN EMISSIONS. Tables 21 through 24 were prepared using consumption factors and emissions factors as indicated in the Air Quality Handbook for EIRs (SCAQMD, 1987), project land use data and traffic data in the project traffic report (refer to Appendix I and discussion below for additional information).

The following figures are estimates of pollutant generation utilizing the SCAQMD emission factors and assuming that the project consumption rates will ultimately be comparable to those provided by the SCAQMD. Also, Tables 21 through 24 present only primary pollutant generation of the project, as secondary pollutant generation results from complex factors (sunlight, volume of primary pollutants, wind) that make estimation prohibitive. Therefore, the EIR is limited to primary pollutants in evaluating air quality impacts.

It should be noted that the following figures are for 1996 and assume project buildout. This results in a worst-case assessment, as 1996 emission factors are anticipated to be higher than future (year 2010) rates and due to buildout contributing maximum ADT and utility consumption toward pollutant generation.

Sensitive Receptors. As noted previously, sensitive residential receptors exist in proximity to the project area. Air quality modelling was not conducted to verify potential Carbon Monoxide (CO) impacts, as maximum 1-hour CO concentrations averaged only 11 parts per million (ppm) between 1982 and 1988. This average maximum 1-hour concentration is well below the State 1-hour CO standard of 20 ppm, with typical concentrations substantially lower. The project and cumulative vehicle emissions are not expected to result in Carbon Monoxide (CO) levels exceeding state or federal standards, which are 20 ppm and 35 ppm, respectively, as this would require an over 9 ppm increase in one-hour concentrations over existing maximum levels (in addition, the 1988 maximum 8-hour concentration was 5.88 ppm, compared to the State Standard of 9.1 ppm).

Motor Vehicle Emissions. The amount of motor vehicle emissions associated with the proposed project is calculated based upon the total vehicle miles traveled (VMT) for the

TABLE 21

PROJECT VEHICLE EMISSIONS

POLLUTANT	EMISSIONS (pounds/day)
1996	
Carbon Monoxide	12,385
Nitrogen Dioxide	3,063
Sulphur Dioxide	645
Particulates	744
Total Hydrocarbons	1,128
- Reactive Hydrocarbons	994
2000	
Carbon Monoxide	10,800
Nitrogen Dioxide	2,840
Sulphur Dioxide	645
Particulates	723
Total Hydrocarbons	994
- Reactive Hydrocarbons	887

NOTE: Figures are based on the "Air Quality Handbook for Preparing EIRs," SCAQMD, 1987. Traffic data is based on the project traffic report, and assumes a 35 mph average vehicle speed and project buildout by 1996.

TABLE 22

PROJECT-RELATED POWER PLANT EMISSIONS*

POLLUTANT	EMISSIONS (pounds/day)
Carbon Monoxide	41.2
Nitrogen Dioxide	236.7
Sulphur Dioxide	24.7
Particulates	8.2
Reactive Hydrocarbons	2.1

TABLE 23

PROJECT-RELATED NATURAL GAS EMISSIONS*

POLLUTANT	EMISSIONS (pounds/day)
Carbon Monoxide	11.96
Nitrogen Dioxide	71.73
Sulphur Dioxide	0.00
Particulates	0.09
Reactive Hydrocarbons	3.17

NOTE: Figures are based on the "Air Quality Handbook for Preparing EIRs," SCAQMD, 1987, and assume ultimate project consumption of 17.9 million cubic feet per month of natural gas and 75.1 million kilowatt hours per year of electricity. Traffic data is based on the project traffic report, and assumes a 35 mph average vehicle speed and project buildout by 1990.

TABLE 24

Project Contribution to Total
Southeast Desert Air Basin Emissions
-Year 2010-

AVERAGE ANNUAL EMISSIONS
(pounds/day)

Pollutant	Project	SEDAB (1,000 lbs)	Project Percent SEDAB Emissions
Carbon Monixide	12,438	1,930	0.65
Nitrogen Dioxide	3,371	624	0.54
Sulphur Dioxide	669	120	0.56
Particulates	752	1,006	0.07
Reactive Hydrocarbons	999	366	0.27

Note: 1. Project emissions are from 1996 vehicle emissions at 35 mph, combined with ultimate emissions from electrical power plants natural gas.

2. SEDAB emissions are based on 1988 projections for year 2010 from the SCAQMD.

3. Estimated figures assume project buildout by 1990 (worst-case).

development. The VMT can be determined by multiplying the number of Average DailyTrips (ADT) generated by the proposed project by the average trip length, in miles. (See Section IV.A, TRAFFIC and CIRCULATION, for a more detailed discussion of ADT.)

The project is estimated to result in an ultimate ADT of 169,400 vehicles. The project average trip length is estimated at 7.2 miles (the regional average for non-residential vehicle trips). This results in a total VMT (Vehicle Miles Traveled) estimate of 1,220,000 trips per day (see Appendix B, TRAFFIC STUDY).

Table 21 indicates the pollutant generation and assumptions associated with the project vehicle emissions. Approximately 12,385 pounds per day of Carbon Monoxide would be generated, with lower amounts of other pollutants. Due to motor vehicle emissions control programs, emission rates from the motor vehicles in Southern California are lower each year. However, the net emissions are increasing in some areas due to increases in contributing vehicles (growth). Employee compliance with SCAQMD Regulation XV requirements such as carpools, vanpools and alternate transportation incentives is anticipated to reduce this impact. The amount of motor vehicle emissions associated with the proposed project has been estimated by employing a methodology developed by the South Coast Air Quality Management District, which utilizes mobile emissions factors determined by the California Air Resources Board.

Power Plant Emissions. The proposed project would create a demand for electrical energy, which is generated from power plants presently utilizing fossil fuels. Electric power generating plants are distributed throughout the South Coast Air Basin, and their emissions contribute to the total regional pollution burden. The project is estimated to indirectly generate a total of approximately 236.7 pounds per day of Nitrogen Dioxide at buildout. This is assuming 75.1 million kwh (kilowatt hours) per year based on SCAQMD emission factors and project land use data (see Table 22, PROJECT-RELATED POWER PLANT EMISSIONS for other pollutant figures and Appendix I, AIR QUALITY DATA for emission factors).

Natural Gas Emissions. The primary use of natural gas by the project would be for combustion to produce space heating, water heating and other miscellaneous heating or air conditioning. Consumption is estimated to total 17.9 million cubic feet per month, based on SCAQMD emission factors and project land use data stated above. The project is estimated to indirectly generate a total of 71.73 pounds per day of Nitrogen Dioxide at buildout (see Table 23, PROJECT-RELATED NATURAL GAS EMISSIONS for other pollutants and Appendix I, for assumptions).

Stationary Source Emissions. The industrial and manufacturing uses allowed by the Specific Plan have the potential to emit air pollutants or unpleasant odors resulting in an air quality impact. However, compliance of individual businesses with SCAQMD regulations and guidelines and the City of Palmdale Hazardous Waste Management Plan should mitigate these potential impacts (see Section IV.I, PUBLIC HEALTH AND SAFETY).

Total Emissions. The mobile vehicle emissions and stationary natural gas and power plant emissions would result in the following estimated daily pollutant generation: 12,438 pounds of Carbon Monoxide, 3,371 pounds of Nitrogen Dioxide, 669 pounds of Sulphur Dioxide, 752 pounds of Particulates and 999 pounds of Reactive Hydrocarbons (see Table 24, PROJECT CONTRIBUTION TO TOTAL SEDAB EMISSIONS). Table 24 also indicates the percent of total year 2010 SEDAB emissions generated by the project upon buildout. Actual emissions are anticipated to be a substantially lower percentage, as maximum emissions for the project are assumed by using higher 1996 emission factors. Project emissions are compared to year 2010 basin emissions, as year 1996 and year 2000 forecasts for SEDAB are not available, and the project is anticipated to attain ultimate buildout in 20 years. Project emissions are considered to represent a significant addition of pollutants into the basin, and will be cumulatively significant (see Section V.D, CUMULATIVE IMPACTS). The project would significantly increase air emissions in the site vicinity, particularly along roadways (although resultant concentrations will not exceed state standards). Refer to Section V.C, GROWTH-INDUCING IMPACTS for a discussion of project conformance with the AQMP and SCAG growth forecasts.

MITIGATION MEASURES

#85. To mitigate potential dust generation impacts, the project will comply with State, County and City dust control regulations. These regulations are intended to provide sufficient protection so as to prevent the soil from being eroded by wind, creating dust, or blowing into a public road or roads or other public or private property. In addition to watering prior to and during grading (as discussed in SCAQMD Rule 403), these measures could include interim paving for construction vehicle access and applying chemicals to the soil surface that solidify loose soil.

#86. Construction equipment shall use low sulfur fuel (p.05% by weight).

#87. Construction activities shall be phased and scheduled to avoid high ozone days.

#88. Construction will be discontinued during second stage smog alerts.

#89. The applicant shall, ~~to the extent feasible~~ as required by the Planning Department and the City of Palmdale's Air Quality Element, implement applicable Tier I Control Measures contained in the Final 1989 AQMP (see Appendix I). General measures which shall be applied for the development include:

a. Encourage the use of alternative transportation modes by promoting public transit usage and providing secure bicycle facilities. The applicant will provide bicycle routes (either onstreet or offstreet) where feasible, as determined necessary by the City. The City shall distribute educational material to all businesses regarding the availability of public transit, ridesharing and other alternative transit methods and the location of bicycle routes in the project vicinity. In addition, the educational material shall describe the available methods for reducing energy consumption.

b. Provide mass transit accommodations such as bus turnout lanes and bus shelters if determined necessary by the local transit authority. As final plans are developed, these features should be considered.

#90. Prior to Subsequent Site Plan approvals, energy conservation practices, as required by the Subdivision Map Act, Building Energy Efficiency Standards (California Energy Commission, 1988), and state and local laws, shall be incorporated into the design of the project to have the secondary effect of limiting stationary source pollutants both on and offsite.

#91. All phases of the project shall comply with applicable rules and regulations of the South Coast Air Quality Management District.

#92. Projects that exceed SCAQMD threshold levels shall contribute to the Commuter Computer per City requirements.

UNAVOIDABLE ADVERSE IMPACTS

Implementation and buildout of the Palmdale Trade and Commerce Center Specific Plan is anticipated to have a significant individual and cumulative impact upon local and regional air quality. This impact will be due primarily to increased emissions from mobile sources. It should also be noted that the project provides additional employment and retail services in the Antelope Valley which will result in a regional reduction in air emissions by reducing vehicle miles travelled.

V. Long-Term Implications of the Proposed Project

V. LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

A. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

If the proposed Palmdale Trade and Commerce Center Specific Plan is approved and constructed, a variety of short-term and long-term impacts will occur on both local and regional levels. During construction, vegetation and landscaping on-site would be removed, and portions of surrounding lands would be temporarily impacted by dust and noise over the project buildout. Short-term erosion may occur during grading. There will also be a minor increase in dust and vehicle emissions, caused by grading and construction activities. Short-term traffic impacts are anticipated to include increased traffic volumes due to commuting construction workers. Local traffic will also be impaired by road closures, detours and the presence of grading vehicles during construction activities. These disruptions, however, are temporary, and can be mitigated to a large degree (see Section IV, DESCRIPTION OF ENVIRONMENTAL SETTINGS, IMPACTS AND MITIGATION MEASURES). It should be noted that project construction is anticipated to occur parcel by parcel driven by market forces over the next 20 years. Therefore, short-term construction impacts are anticipated to occur in various portions of the site until ultimate buildout is reached.

The long-term effect of the project proposal and subsequent development will be to eventually convert the site into manufacturing/commercial uses. As a result of this process, the characteristics of the physical, biological, cultural, aesthetic and human environment will be impacted, as discussed in Section IV. Consequences of this development include: increased local traffic volumes, incremental degradation of local air quality, additional noise created by traffic generated by manufacturing/commercial area patrons, incremental increased demands for public services and utilities, and increased energy and natural resource consumption.

Ultimate development of the project site would create long-term environmental consequences that are connected with any transition in land use. However, the proposed project has been designed to benefit the community through tax revenue and related development fees and to benefit the community and region by providing employment opportunities in close proximity to residential areas and major transportation facilities,

thereby helping to reduce regional traffic congestion and air emissions. In these ways, it is intended that the proposed project will contribute to the long-term productivity of the City of Palmdale and associated unincorporated areas.

B. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Approval of the proposed project would cause irretrievable environmental changes. Implementation of the proposed project would result in the following significant environmental changes:

- Commitment of land which will be physically altered to create various commercial/industrial land uses and associated infrastructure.

- Removal of the existing botanical cover in order to develop various aspects of the project.

- Alteration of the human environment as a consequence of the development process. The project, which represents a commitment of land to commercial/industrial use, would increase traffic levels and noise on surrounding roadways.

- Increased requirements for public services and utilities by the project's tenants and patrons representing a permanent commitment of these resources.

- Utilization of various raw materials, such as lumber, sand and gravel for construction. Some of these resources are already being depleted worldwide. The energy consumed in developing and maintaining the site for urban use may be considered a permanent investment.

- Incremental increases in traffic levels in the surrounding circulation system, resulting in associated increases in noise levels and incremental degradation of local air quality.

C. GROWTH-INDUCING IMPACTS OF THE PROPOSED ACTION

The following growth discussion is based on project consistency with the City of Palmdale General Plan and regional growth forecasts (SCAG Draft Baseline Projections). "A project would be inconsistent if it did not conform, or if it used a disproportionately large portion

of the forecasts growth increment. The degree of consistency is a matter of judgement. Inconsistency is considered a significant adverse impact."[1]

Growth forecasts by the Southern California Association of Governments for the City of Palmdale anticipate a population of approximately 152,080 persons by the year 2010[2]. This represents a 785% increase compared to 1984 population figures,[3] and a 172% increase over the 1989 estimated population of 57,862.[4]

The proposed project would permit an estimated 7.64 million square feet of commercial/industrial use, which is approximately 55% of the total projected additional absorption of these land uses in Palmdale through the year 2010.[5] This is considered a significant portion of the future growth increment, although the allowable uses are consistent with the General Plan.

The project includes construction and modification of infrastructure, including widening local arterials, flood control improvements, and accommodation of a new freeway and interchange. These infrastructure improvements are considered to represent a significant growth-inducing impact. It should be noted that the project is of regional significance and is intended to have significant positive growth-inducing effects in terms of planned commercial/industrial land uses to service the projected needs of Palmdale and surrounding areas.

D. CUMULATIVE IMPACTS

This section has been included in the EIR to address the cumulative impacts associated with projects currently approved and proposed in the vicinity of the proposed Palmdale Trade and Commerce Center Specific Plan. In accordance with CEQA Guidelines Section 15130, cumulative impacts shall be discussed when they are significant. This discussion of

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[1] Air Quality Handbook for Preparing EIRs. SCAQMD. Revised April 1987 (page III.22).

[2] Palmdale Trade and Commerce Center Draft Specific Plan. The Keith Companies, February, 1990 (p. 9).

[3] Draft City Projections. SCAG. February 1987.

[4] Palmdale Trade and Commerce Center Draft Specific Pan. The Keith Companies, February, 1990, (page 9).

[5] City of Palmdale Freeway Business Park Specific Plan: Adjustment to Demand Forecast, The Keith Companies, December 13, 1989, Tables III-A, III-B, IV, V and VI, "Net After Market Capture From Outlying Areas."

cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a detail as is provided for the effects attributable to the project alone. The discussions should be guided by the standards of practicality and reasonableness. The following elements are necessary in an adequate discussion of cumulative impacts:

1. Either:

   a. A list of relevant past, present and reasonably anticipated future projects, producing related or cumulative impacts, including those projects outside the control of the Agency, or
   b. A summary of the expected environmental effects in an adopted General Plan or related planning document which is designed to evaluate regional or area-wide conditions.

2. A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and

3. A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable options for mitigation or avoiding any significant cumulative effects of the proposed project.

4. With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinance or regulations rather than the imposition of conditions on a project-by-project basis.

Table 25, SUMMARY OF CUMULATIVE PROJECTS, provides a list of proposed projects within a three mile radius that are expected to contribute to cumulative impacts in the project area (obtained from the City of Palmdale Planning Department files).

The following is a discussion of cumulative impacts. Quantifications of cumulative impacts are based on year 2010 General Plan forecasts as analyzed in the project traffic report contained in Appendix B, TRAFFIC STUDY. In addition, discussions of regional impacts are provided in the City General Plan and SCAG's Impact Assessment: Draft Baseline Projections (March, 1987). Although the City of Palmdale General Plan Update EIR is presently in process, substantial cumulative impact data is available at the City Planning Department, particularly regarding the Draft General Plan elements and City-wide traffic model. Also, specific data for impacts of the Antelope Valley Mall Auto Center and Amargosa Creek flood control improvements is discussed in environmental documents available for review at the City of Palmdale Planning Department.

TABLE 25

SUMMARY OF CUMULATIVE PROJECTS

PROJECT #	CASE NO.(DATE)	CUMULATIVE PROJECTS LOCATION	REQUEST
1.	CUP 89-31 (12-7-89)	Southeast corner of 20th Street East and Avenue Q	Multi-use commercial/ office/daycare/health club complex
2.	TT 47780 (11-16-89)	South side of Avenue R, 1100 feet east of 20th Street East	Subdivide 10 acres into 44 lots
3.	TT 47936/ZC89-10/ CUP 89-24 (11-2-89)	North and South sides of Avenue P and East and West sides of 8th St. East	Subdivide into 14 parcels, change zone from M-A and A-2-5 to MPD and construct Industrial Warehouse building, (152,572 square ft.)
4.	TT 46452/ZC89-35 (11-2-89)	Northwest corner of Elizabeth Lake Rd and 25th Street West	Subdivide 215.6 acre into 401 residential lots, 3 open space lots and 10 acre school site
5.	CUP 89-17 (10-5-89)	Northwest corner of Avenue S and 20th Street East	Construct 103,610 sq. ft. shopping center with a preschool
6.	CUP 89-29 (10-5-89)	East side of 15th Street East, 318 ft. South of Palmdale Blvd.	Construct 3,600 sq. ft. auto center
7.	TT 46017 (10-5-89)	Northeast corner of Avenue P-8 and 20th Street West	Subdivide 15 acres into 47 single-family lots
8.	TT 47856/Site Plan Review 7-89-5 (9-21-89)	Southwest corner of Avenue P and 12th Street East	18 buildings totaling 136,182 sq. ft. on 9.46 acres

TABLE 25
(continued)

PROJECT #	CASE NO.(DATE)	CUMULATIVE PROJECTS LOCATION	REQUEST
9.	Zone Change 88-27 (8-17-89)	East side of 15th Street East, 180 ft. North of Avenue Q-11	Change Zone of 1.94 acre from R-1-7000 to C-1
10.	CUP 89-20 (8-17-89)	East side of 11th Street East at Avenue Q-3	30 Unit apartment complex
11.	Zone Change 89-9 (8-17-89)	East side of 3rd Street East, between Avenue P-8 and Avenue Q	4.81 acre from R-3 DP to M-1
12.	Site Plan Review 3-89-9 (7-20-89)	East side of 5th Street East, approximately 1,038 ft. South of Avenue R	25,000 sq. ft. Industrial building on 1.61 acres
13.	CUP 89-12/ZC89-4 (7-20-89)	Commercial offices in two existing single-family residences	Zone R-1 to C-3 (DP)
14.	V TT 44526 (6-1-89)	Southeast corner of Elizabeth Lake Rd. and 20th Street West	40 acres into 156 single family lots and two detention basin lots
15.	CUP 88-27/TT 47185 (5-15-89)	220 ft. South of Avenue Q, East side of 15th Street East	2.27 acres into 32 town house units
16.	TT 47046 (5-4-89)	North side of Avenue S. between 5th Street East and 6th Street East	14.14 acres into 54 single family lots
17.	CUP 89-14 (20/89)	East side of 15th Street East, 320 ft. North of Avenue Q-11	Medical office in existing building

Traffic and Circulation

The proposed project, in combination with cumulative development will incrementally increase local traffic volumes. Due to the scale of the project, the project's contribution to local cumulative traffic impacts is considered significant. Based on City-wide traffic modelling and the project traffic report (Appendix B), cumulative development is anticipated to exceed p.m. peak hour Level of Service D (generally the maximum acceptable) at the following intersections: 10th Street West/Avenue P, SR-14 southbound off-ramp/Palmdale Boulevard, Sierra Highway/Avenue P.

Cumulative traffic impacts are mitigated by individual projects contributing fair shares toward constructing ultimate road configurations adjacent to their properties as provided in the City's Circulation Element. Projects may also be required to provide additional improvements such as the dedication of right-of-way for the future Highway 138 and the Highway 138/SR-14 interchange. Improvements for nonadjacent roads and/or traffic facilities, such as traffic lights, would require contributions through Assessment District 88-1 or thorough traffic impact fee assessments.

Hydrology

Future development within the project area will increase impervious surfaces, thereby reducing groundwater recharge and increasing the potential for flooding in the area. Cumulative development in the project area will result in alterations to the drainage pattern and flow rates in the project vicinity. Impacts are mitigated case-by-case, including implementation of the Master Plan of Drainage. The City's Master Drainage Plan incudes improvements to Amargosa Creek which passes through the northwest corner of the project site. Implementation of these improvements will assist in alleviating cumulative impacts of development in the project area on drainage.

Public Services and Utilities

Cumulative impacts resulting from the project and additional development in the region may result in increased demands upon existing public services and utilities. Assessment fees and taxes required of developers and future occupants are expected to ultimately reduce these impacts to less than significant levels, although short term significant effects may occur until new facilities are available.

Utilities such as electricity, natural gas and communication systems will experience increased demand; however, developer and service fees typically used to fund necessary improvements will reduce these impacts to less than significant levels. Potential cumulative impacts to public services such as schools, libraries, police, fire and emergency services will

be reduced through funding mechanisms to provide the additional facilities necessary to absorb the increased demand. Short-term impacts such as crowding within schools and increased response time for emergency services may occur until new facilities are available. Significant cumulative impacts may result in the areas of water supply, sewage treatment capacity and solid waste disposal, due to associated regional issues and limited resources (water, treatment capacity, and landfills, respectively).

Geology and Soils

Cumulative effects resulting from the project and development in the vicinity of the project area include erosion and loss of open space. Short-term increases in erosion will occur due to grading activities occurring in the project area and in surrounding developments. Project implementation will also result in a cumulative loss of sand and gravel resources used in project construction, and onsite deposits made inaccessible by development. These cumulative impacts will be mitigated on a project-by-project basis.

Land Use

The proposed project combined with other approved or proposed development, would result in a cumulative impact to the overall character of the area, which is far along in its transition from a rural to a more urbanized environment. An increase urbanized environment will result in unavoidable cumulative impacts such as loss of open space, increased human activity and increased traffic and noise. As cumulative land use impacts are difficult to individually mitigate, mitigation is most effective through regional programs establishing open space and park areas (such as the General Plan process).

Biological Resources

Implementation of the proposed project and future development in the surrounding area will result in incremental decreases in the quantity and range of regional biological resources. These impacts could be mitigated on a project-by-project basis by funding and the implementation, restoration and enhancement of the existing rare and endangered plant communities. Although this would mitigate the impacts to biological resources, the cumulative loss of natural resources is considered a significant effect.

Noise

Section IV.G, NOISE, provides a quantitative cumulative noise analysis based on the projected ultimate traffic volumes. As shown in Section IV.G, existing plus project plus cumulative traffic volumes will result in the 65 CNEL extending approximately 200 feet from the nearest lane centerline on Palmdale Boulevard. Cumulative noise is typically mitigated by each project providing adequate onsite noise attenuation measures.

Light and Glare/Aesthetics

Development of the project site and surrounding areas will result in the increased urbanization of the vicinity and loss of open space in the area. As a result, view of the area will be more characteristic of an urban rather than rural area. Significant impacts are not anticipated, however, as much of the area is primarily zoned for industrial, commercial, and residential land uses.

Short-term aesthetic impacts associated with this project and future projects in the area will include the presence of construction vehicles and equipment. Cumulative project construction will alter the nature and appearances of the project area.

Security lighting associated with development will introduce light and glare into the area. These impacts are typically mitigated separately for each project.

Public Health and Safety

Development of the project site and the surrounding area may result in the introduction of businesses that could use or store hazardous materials. In addition, development of the project vicinity may have the potential for identification of additional hazardous material locations which could require clean-up and disposal. Risks associated with these impacts can be mitigated on a site-by-site basis. Compliance with local, state and federal regulations regarding hazardous materials as well as the proposed Palmdale Hazardous Waste Management Plan will reduce these risks to less than significant levels.

Cultural/Scientific Resources

Cumulative development may result in increased impacts to cultural and scientific resources if not properly mitigated. These potential impacts can be mitigated on a project-by-project basis through requiring archaeological and paleontological surveys in instances where potential for cultural or scientific resources exists, and by requiring field monitoring during grading activities.

Air Quality

The proposed project will, in combination with other pending or approved projects, have a significant cumulative air quality impact due to increased vehicle travel and fossil fuel consumption. These impacts are mitigated individually through requiring each project to include trip reduction design features (bus turnouts, pedestrian/bicycle facilities and balance of land uses). Regulation XV requires employers of more than 100 persons to implement trip reduction plans including measures such as carpools, vanpools, bus transportation and contributions to programs such as the "commuter computer". Onsite stationary sources (industrial and manufacturing) may result in local cumulative emission impacts, however, cumulative air quality impacts are anticipated to be mitigated by complying with South Coast Air Quality Management District "Rules and Regulations" and by following City General Plan land use designations.

VI. Alternatives to the Proposed Project

VI. ALTERNATIVES TO THE PROPOSED PROJECT

In accordance with CEQA Guidelines Section 15126.(d), the following section describes a range of reasonable alternatives which could feasibly attain the basic objectives for the project. In addition, this will evaluate the comparative merits of each alternative.

The discussion of alternatives focuses on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. The following alternatives to the proposed project are analyzed below: A. "No Development"; B. "No Project"; C. "Reduced Density"; D. "Alternate Land Use"; E. "Urban Residential"; and F. "Alternate Site".

A. "NO DEVELOPMENT" ALTERNATIVE (AUTO MALL ONLY)

None of the impacts associated with the construction of the Palmdale Trade and Commerce Center would occur if the "No Development" alternative was selected. Implementation of the "No Development" option would retain existing natural open space and would avoid any adverse physical, biological and human environmental impacts associated with development with the exception of the Auto Mall site (which was previously approved). The aesthetic, biologic and hydrologic characteristics of the project site would remain in their present state. Circulation and traffic impacts from development would not exist as no additional traffic would be generated by the project site. Additional noise would not be generated under the "No Development" alternative and increased demand for public utilities and services would not occur.

Under the "No Development" alternative, land use, relevant planning and fiscal projections would be inconsistent with the City of Palmdale General Plan guidelines which have anticipated project site development. This alternative has been rejected due to the loss of regional vehicle trip reduction, employment opportunities, service availability and economic benefits provided by the proposed project. In addition, this alternative would not preclude site development at a future date.

B. "NO PROJECT" ALTERNATIVE

The "No Project" alternative would allow development based on the existing land use zoning on the subject property, which consists of Commercial Planned Development (approximately 60% of the site) and Manufacturing Planned Development (approximately 40% of the site, or 300 acres). Buildout of the site may be slower and/or more costly with this alternative as more individual plans and associated environmental documents would

have to be processed. Ultimate impacts are anticipated to be similar to those of the proposed project as the land use designations would permit similar land uses (although the project permits commercial/office over a larger area, and therefore may result in greater site intensity). However, impacts of the "No Project" alternative could possibly be greater than those of the proposed project if the site were developed parcel by parcel. Such development may lack the coherence and planning foresight made possible through implementation of a Specific Plan for the project site as a whole.

Traffic and Circulation

The "No Project" alternative could result in increased regional traffic impacts, particularly on S.R. 14, due to reduced opportunities for employment and the consequent impact upon the jobs/housing balance. Ultimate land use intensity might be lower under this alternative, therefore, local traffic impacts may be slightly decreased.

Hydrology

Onsite drainage and hydrology would be impacted to the same level as the proposed development due to similar development area. However, implementation of mitigation and control measures such as construction of detention basins may be more difficult as these would have to be done parcel by parcel and involve separate agreements between multiple land owners.

Public Services and Utilities

Ultimate buildout of the project site under the "No Project" alternative is anticipated to result in decreased land use intensity relative to the proposed project. Therefore, impacts upon public services and utilities are anticipated to be slightly diminished.

Geology and Soils

The "No Project" alternative would result in buildout of the project site as would the proposed project. Therefore, the impacts upon geology and soils of this alternative are anticipated to be similar to those of the proposed project.

Land Use

As stated previously, the "No Project" alternative would allow development of the project site under existing zoning designations. Land use impacts of this alternative are anticipated

to be greater than those of the proposed project, because market forces alone would probably not produce as desireable a mix and ultimate density of land uses as the proposed Specific Plan. The maximum allowable density of development of the site under current zoning is lower than that of the proposed project. This is because under existing zoning the northern portion (approximately 40%) of the site is designated as a Manufacturing Planned Development area, which excludes commercial and office development. The proposed Specific Plan allows commercial and office development throughout the site, except for a relatively small portion located in the crash hazard area of USAF Plant 42 (MX-A Zone).

Impacts upon surrounding residential areas would probably be greater with the "No Project" alternative than the proposed project. This is because the proposed project incorporates buffers and designates Commercial Planned Development in areas adjacent to offsite residential areas along Avenue P, 10th Street West and Division Street.

Biological Resources

As the same area would be built-out with either the proposed project or the "No Project" alternative, similar environmental effects are anticipated.

Noise

The anticipated reduction in local traffic anticipated to accompany the "No Project" alternative would result in decreased noise levels. However, existing residential areas adjacent to the site could be adversely impacted by relatively unrestricted commercial development under existing zoning.

Light and Glare/Aesthetics

Impacts of the "No Project" alternative are anticipated to be similar to those of the proposed project, due to similar land uses.

Public Health and Safety

Impacts of the "No Project" alternative are anticipated to be similar to those of the proposed project, due to similar land uses.

Cultural/Scientific Resources

Impacts of the "No Project" alternative are anticipated to be similar to those of the proposed project, due to similar land uses and development area.

Air Quality

If buildout of the "No Project" alternative results in lower intensity land uses than the proposed project as anticipated, there would be a decrease in local traffic. However, unless the traffic attractors lost in the lower density "No Project" alternative are replaced locally, the jobs/housing balance would be worse than under the proposed Specific Plan. This would result in greater regional commuter traffic and consequent regional air quality impacts.

The "No Project" alternative was rejected because it would not provide as many employment opportunities and support services as the proposed Specific Plan. This alternative would also lack the planning and design benefits gained from a comprehensive Specific Plan.

C. "REDUCED DENSITY" ALTERNATIVE

This alternative has the same allowable land use types and site plan. However, the maximum square footage of each land use has been reduced by 25 percent. For example, the proposed Specific Plan allows up to 300,000 square feet of Post Market Auto Sales/Service use; the "Reduced Density" alternative would allow a maximum of only 225,000 square feet (75 percent of 300,000). Anticipated impacts of the "Reduced Density" alternative relative to the predicted impacts of the proposed project are discussed in the following text. It should be noted that the difference in impacts between this alternative and the proposed project will not be felt until the site has approached ultimate buildout (approximately 15-20 years from present).

Traffic and Circulation

The "Reduced Density" alternative would be expected to generate approximately 75 percent of the local traffic generated by the proposed project due to the 25 percent reduction in overall project density. However, the 25 percent reduction in density results in a similar reduction in available employment opportunities and support services. This could result in increased regional traffic relative to the proposed project.

Hydrology

The same project area would be developed with this alternative, therefore, onsite drainage and hydrology would be impacted to the same level as the proposed development.

Public Service and Utilities

The reduced density of this alternative is anticipated to result in a reduced demand for Public Services and Utilities relative to that predicted for development of the proposed project.

Geology and Soils

As development of this alternative will occur over the same area as the proposed Specific Plan, impacts are anticipated to be similar.

Land Use

The land use impacts of the "Reduced Density" alternative are anticipated to be similar to those of the proposed project, because the allowable land use types and site plan are identical. Land use incompatibility impacts upon existing offsite residential uses may be decreased due to the lower intensity development proposed by this alternative.

Biology

Development of the "Reduced Density" alternative will occur over the same area as the proposed project, therefore, biological impacts will be similar.

Noise

The lower density of this alternative will result in reduced industrial development and local traffic and consequently result in lower noise levels.

Light and Glare/Aesthetics

The lower density of this alternative may result in decreased light and glare impacts due to reduced signage. Landscaping and general building layouts will be similar, though the reduction in density may result in more open space areas producing a slight reduction in aesthetic impacts.

Public Health and Safety

Impacts of the "No Project" alternative are anticipated to be similar to those of the proposed project, due to similar land uses.

Cultural Resources

Impacts of the "No Project" alternative are anticipated to be similar to those of the proposed project, due to similar development area.

Air Quality

The possible increase in regional traffic would generate increased regional air pollution, however, this increase is not anticipated to be significant.

The "Reduced Density" alternative is not being considered at present, as it is not anticipated to achieve the project goal of creating a diversified employment center in central Palmdale as effectively as the proposed Specific Plan. It may result in a less efficient use of prime developable land. Due to a reduction of certain environmental impacts, this alternative is considered the "environmentally superior" alternative. It should be noted that market conditions may result in this alternative being realized (the EIR addresses a worst-case estimated buildout). Furthermore, although the Specific Plan has no "cap" on maximum square footage (the EIR figures are based on a conservative development scenario), the "Reduced Density" alternative will be considered during the Specific Plan review process.

D. "ALTERNATE LAND USE" ALTERNATIVE

The market analysis performed by The Keith Companies for the City examined three alternative development scenarios.[1] The proposed Specific Plan is a modified version of Alternative No. 2 from the market analysis. Alternative No. 1 proposed a mixture of retail and commercial uses, and Alternative No. 3 proposed a mixed use business park with retail and residential uses. Both of these alternatives were projected to leave a considerable portion of the site's developable land vacant at the end of 20 years (32 and 27 percent, respectively).

Both Alternatives No. 1 and No. 2 are projected to result in less intense use of the project site, therefore the respective impacts are anticipated to be less significant than those of the

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[1]The Keith Companies, City of Palmdale Freeway Business Park Specific Plan: Adjustments to Demand Forecast, December 13, 1989.

proposed Specific Plan and similar to those of the "Reduced Density" alternative. Biological and aesthetic impacts would be further reduced due to the existence of undeveloped land. However, these alternatives result in inefficient utilization of prime developable land relative to the proposed project, and buildout of the site would likely occur sometime beyond year 2010. Alternative Nos. 1 and 3 were not addressed within the EIR because they failed to utilize the entire site and were less representative of anticipated market demands.

E. "URBAN RESIDENTIAL" ALTERNATIVE

If a residential alternative is undertaken, most of the environmental impacts associated with the proposed project would still exist. The aesthetic characteristics of the project site would be altered from that of open space to that of a residential community, which would be similar to many environmental impacts of the proposed Trade and Commerce Center.

Hydrological, geological, biological, public health, and cultural/scientific impacts are anticipated to be similar to those associated with the proposed project, due to similar area being graded to accommodate a residential community. Impacts associated with land use and relevant planning would be significant because this alternative would be inconsistent with the land use and relevant planning designations of the City of Palmdale General Plan. Local traffic, noise and air quality impacts would be decreased (at 5 units per gross acre, the 756-acre site would result in approximately 3,780 units generating approximately 37,800 Average Daily Trips, which is approximately 32% of the estimated project traffic). However, regional traffic and consequent air quality impacts would be greater than those of the proposed Specific Plan, due to a jobs/housing imbalance and loss of local employment/services opportunities. Light and glare impacts would also be decreased due to the absence of signage.

Despite these reduced impacts, this alternative was rejected because it would exacerbate the City's jobs/housing imbalance rather than alleviate the current situation, and therefore fails to achieve a primary project objective ("provide a viable mix of commercial, industrial and public uses").

F. "ALTERNATE SITE"

Development of the proposed project on an alternate site would not be anticipated to provide a significant reduction in the project's overall environmental impact. Relocation of the project could reduce hydrological, biological and cultural/scientific resource related impacts if the alternate site contained these resources in lesser quantities or lower quality than the proposed site (although significant site constraints of the proposed project are

relatively absent). Noise and light and glare/aesthetic impacts would be reduced if the alternate site were located in a more remote area. However, location of the project in a more remote area would be likely to result in increased impacts upon traffic, public services and utilities, and air quality. The proposed site's location near downtown Palmdale and accessibility from SR 14 make it ideal for the proposed land uses. It would be difficult to achieve the project's primary objectives of facilitating the positive growth of the Palmdale employment base by locating the project further from the existing commercial areas along the freeway. Consequently, this alternative is not being considered at present.

VII. Inventory of Mitigation Measures

VII. INVENTORY OF MITIGATION MEASURES

#i.a. Prior to the issuance of building permits, the applicant shall submit a written report demonstrating that all mitigation measures imposed by the City to either reduce or avoid significant environmental impacts identified in the Final EIR have either been incorporated in the project design or undertaken as required. Final determination of compliance with imposed mitigation measures pursuant to the requirements of Section 21081.6 of the Public Resources Code shall in turn be subject to the review and approval of the Department of Planning.

#i.b. Prior to the issuance of building permits, the applicant shall pay to the Department of Planning all fees required for the monitoring of mitigation measures required for project development, as determined by the Director of Planning.

TRAFFIC AND CIRCULATION

Each project developer within the Specific Plan area will be required to submit a Transportation Management Plan for review and approval by the Planning Department prior to issuance of occupancy permits, and a focused traffic study for review and approval by the City Engineer and/or City Traffic Engineer, to determine the necessary improvements for impacts generated by that project. On the basis of this and other studies, the developer will improve or fund a pro rata share of improvements and/or the City will undertake improvements through a capital improvement program.

Existing Plus Project

1. The following improvements will be required to provide Level of Service D or better operation (individual applicants will be required to dedicate right-of-way for full ultimate half-width improvements, where roads border their property, full ultimate right-of-way for roads through their property, and/or fund a pro rata share of these improvements, as determined necessary by the City Engineer and/or the City Traffic Engineer):

a. Widen the SR 14 Freeway to 6 lanes south of Palmdale Boulevard to be funded by CalTrans and/or other sources.

b. Widen Avenue P to 6 lanes between the SR 14 Freeway and Sierra Highway.

c. Provide 8 through lanes on 10th Street West between Avenue P and Avenue P-8.

~~d. Upgrade Street B to a 4 lane divided street.~~

e. Widen Palmdale Boulevard to 6 lanes from west of 5th Street West to Division Street.

f. Provide separate right turn lanes on the northbound, eastbound, and westbound approaches at 10th Street West/Avenue P.

g. Widen the northbound SR 14 off-ramp at Avenue P to provide two left and one right turn lane.

h. Widen the northbound SR 14 off-ramp at Palmdale Boulevard to provide two left and 1 right turn lane.

i. At the future intersection of 5th Street West/Avenue P-8, provide two through, two left and one right turn lane on the southbound 5th Street West approach and two through and two left turn lanes on the eastbound Avenue P-8 approach.

~~j. On the northbound Street B approach at Avenue P, provide two left and one right turn lane.~~

k. Provide a second southbound left turn lane on 5th Street West at Palmdale Boulevard.

l. Provide a southbound right turn lane on Sierra Highway at Avenue P.

m. Provide two left and one right turn lane on Avenue P-8 at Sierra Highway.

n. Provide two left and one right turn lane on southbound Street A at Palmdale Boulevard (needed to minimize the possibility of the vehicle queue blocking the intersection at Street A/Avenue Q).

o. Provide traffic signals at the following intersections:

- Street A & P-8, Street A & P-12, Street A & Avenue Q, Street A & Palmdale Boulevard, and Avenue P-12 & 5th Street West.

p. A transit center should be placed at or near the southeast corner of Avenue P and 10th Street West to be funded an a pro rata share by the Specific Plan developers as determined by the City Engineer and/or City Traffic Engineer. The center would allow for buses from several routes to have an off-street transfer point with patron facilities.

2. All road improvements shall be provided in accordance with City design standards to the satisfaction of the City Engineer, prior to issuing occupancy permits.

3. Each applicant shall be required to submit a Traffic Control Plan for review and approval by the City Traffic Engineer, prior to issuance of grading permits to minimize construction-related traffic impacts.

Existing Plus Project Plus Auto Mall

4. The improvements required for existing plus project traffic volumes will be able to accommodate the traffic generated by the Antelope Valley Auto Mall, except at ~~Sierra Highway/Avenue P~~ the following, where ~~this~~ additional improvement will be needed (to be funded on a pro rata basis by project applicants):

a. Provide a second eastbound left turn lane on Avenue P at Sierra Highway.

b. Provide a fourth northbound through lane on 10th Street West ~~at~~ between Avenue P and SR 14.

c. Provide a second southbound left turn lane on 10th Street West at Avenue P-4.

~~d. Provide a second westbound left turn lane on Palmdale Boulevard at 5th Street West.~~

e. Widen Palmdale Boulevard to eight lanes between 5th Street West and the SR 14 Freeway.

HYDROLOGY

Stormwater Runoff

5. All facilities shall be designed and constructed in accordance with the City of Palmdale Drainage ~~Management~~ Master Plan and LACFCD Hydrology Manual to the satisfaction of the City engineer. Local facilities will be installed by individual applicants prior to issuing building permits. Regional facilities (Amargosa Creek improvements and the three detention basins) shall be constructed for portions onsite a given parcel and/or funded on a pro rata basis by each applicant, and shall be completed prior to Specific Plan buildout (site specific studies for each applicant will determine the need for interim measures).

6. According to the City of Palmdale's Master Drainage Plan, the project site shall include local storm drain facilities ranging in size from 30 inches to 78 inches. The site shall also include regional storm drain facilities ranging in size from 66 inches to a 6 foot by 6.5 foot concrete trapezoidal channel.

7. The construction of a concrete trapezoidal channel with a 15 foot base and 1.5:1 side slopes will be required for Amargosa Creek improvements. The channel will have culvert crossings for upstream and downstream transitions.

8. Three detention basins at the eastern boundary of the project site are required for collection of runoff from the west and south, and are intended to replace the City's regional system. One detention basin north of Avenue P-8 will have a volume of 157 acre-feet. This offsite detention basin will require an agreement with the affected property owner(s) prior to final design approval. Two basins south of Avenue P-8 will have a combined total volume of 145 acre-feet.

Peak Attenuation and Storage (Detention Basins)

9. An emergency spillway adequately sized and armored to pass at least the 50-year recurrence flood flow shall be provided.

#10. An emergency flow path shall be provided in the case of spillway overflows.

#11. Seepage collars on supplemental piping outlets shall be installed.

#12. Installation of a cutoff trench beneath the outlet works shall be provided.

#13. An energy dissipator or other protection device shall be installed on the outlet pipes at the end of the detention facility in order to reduce erosion.

#14. Sloped embankment faces shall be provided for structural stability.

#15. Grates, cages, hoods and other devices shall be provided over detention outlet works to prevent objects and debris from blocking openings.

Onsite Safety Provisions

#16. Removable safety cages or grates shall be provided on the entrances to storm drains which flow into or out of the detention facilities. Installation of safety cages or grates shall be provided on "non-culvert" type pipes which are connected to long or extensive underground pipe systems. Cages or grates shall be sloped so that water moving through the grate will exert an upward force on a person or object trapped against the grate. The total grate area shall be large enough to reduce drag forces to safe levels.

#17. Guardrails and/or fences shall be installed near the edge of vertical walls or slopes where inlet or outlet structures are located.

#18. Steps and handrails shall be installed on the periphery of a detention facility where access may be difficult to and from lower detention facilities.

#19. Signs shall be placed around the perimeter of a facility notifying the public of occasional water storage and related safety hazards.

#20. Mild slopes shall be used around the periphery of a retention facility.

#21. To prevent possible falling or slipping, maximum lateral and longitudinal slopes on concrete cunnettes or trickle channels shall be 4 percent (4%).

Water Quality

#22. Each applicant shall submit a Water Quality/Erosion Control Plan for City review and approval, prior to issuing grading permits. The Plan shall indicate specific means of reducing urban pollutants and sedimentation including but not limited to the following:

a. Surplus or waste material shall not be placed in drainage ways or within the 100-year floodplain of surface waters.

b. All loose piles of soil, silt, clay, sand, debris, or other earthen materials shall be protected in a reasonable manner to eliminate any discharge to waters of the State.

c. Dewatering shall be done in a manner so as to eliminate the discharge of earthen material from the site.

d. All disturbed areas shall be stabilized by appropriate soil stabilization measures by October 15th of each year.

e. All work performed between October 15th and May 1st of each year shall be conducted in such a manner that the project can be winterized within 48 hours.

f. All nonconstruction areas shall be protected by fencing or other means to prevent unnecessary disturbance.

g. During construction, temporary gravel or sandbag dikes shall be used as necessary to prevent discharge of earthen materials from the site during periods of precipitation or runoff.

h. Stabilizing agents such as straw and wood chips shall be used during the interim period after grading in order to strengthen slopes while ground cover takes hold.

i. Impervious areas shall be constructed with infiltration trenches along the downhill edges to dispose of all drainage emanating from them.

j. Infiltration trenches shall be constructed on the downgradient side of all structural drip lines.

k. Revegetated areas shall be continually maintained in order to assure adequate growth and root development.

l. Physical erosion control facilities shall be placed on a routine maintenance and inspection program to provide continued erosion control integrity.

m. Where construction activities involve the crossing and/or alteration of a stream channel, such activities shall be timed to occur during the period in which streamflow is expected to be lowest for the year.

n. Periodic cleaning of paved areas shall be performed to remove sediments and absorbed pollutants.

o. Routine cleaning of manholes and catch basins shall be performed to remove sediment and debris.

p. Surveys shall be conducted of all facilities involved in the storage or handling of hazardous or toxic chemicals which might contribute to stormwater pollution.

q. Control of washdown drainage from industrial facilities shall be enforced.

r. Information regarding the disposal of waste oil/grease and pesticide containers shall be provided to new business owners.

s. Controlled use of pesticides and fertilizers shall be enforced.

PUBLIC SERVICES AND UTILITIES

#23. The following mitigation measures will reduce impacts of the proposed Specific Plan, and shall be implemented by each applicant prior to occupancy permits for future site-specific development submittals.

a. Adequate emergency access and circulation throughout and around the project shall be provided to the satisfaction of the Los Angeles County Sheriff's Department.

b. Adequate lighting shall be provided to enhance crime prevention and law enforcement efforts.

c. Proper address signs shall be provided for easy identification of locations during emergencies.

d. Landscape feature standards which do not conceal potential criminal activity around buildings and in parking areas shall be provided.

#24. Developers of individual properties within the Specific Plan area will be responsible for payment of assessment fees and installation of required conduits prior to issuance of occupancy permits.

#25. All overhead lines below 32 KV (Kilovolt) shall be placed underground by applicants prior to issuance of occupancy permits.

#26. The individual project applicants shall coordinate with SCE to ensure that adequate electrical service is provided to the proposed development and that service connection activities will be performed in cooperation with SCE to minimize any short term impacts.

#27. The project developer will be required to pay prevailing sewer assessment fees, provide adequate onsite wastewater conveyance facilities, and will conform with City Public Works Department and County Sanitation District No. 20 development standards pertaining to wastewater.

#28. Provision of water service to the proposed project will be required as a part of project development and will occur to the satisfaction of the City of Palmdale prior to approval of each site-specific development plan. Previous studies have identified several alternatives to mitigate water impacts for projects in the immediate area. These alternatives include the provision of an onsite water supply system, participation in an existing water agreement established by another developer within the area, and/or the payment of Capital Improvement Charges. Project implementation will require mitigation in coordination with the City of Palmdale, Los Angeles County Waterworks District No. 34, Palmdale Water District and the Los Angeles County Fire Department.

#29. **The following State laws require water-efficient plumbing fixtures in structures:**

- Low-flush toilets and urinals are required in virtually all buildings (as required in Health and Safety Code Section 17921.3).
- Efficiency standards must be met that give the maximum flow rate of all new showerheads, lavatory faucets and sink faucets, as specified in the standard approved by the American National Standards Institute on November 16, 1979 (pursuant to Title 20, California Administrative Code Section 1604(f) (Appliance Efficiency Standards)).

- No new appliance may be sold or offered for sale in California that is not certified by its manufacturer to be in compliance with the provisions of the regulations establishing applicable efficiency standards (Title 20, California Administrative Code Section 1606(b) (Appliance Efficiency Standards)).

- Installation of fixtures is prohibited unless the manufacturer has certified to the CEC compliance with the flow rate standards (Title 24 of the California Administrative Code Section 2-5307(b)).

- Pipe insulation is required to reduce water used before hot water reaches equipment or fixtures. Insulation of water heating systems is also required (Title 24, California Administrative Code Section 2-5352(i) and (j).

- Installation of residential water softening or conditioning appliances is prohibited unless certain conditions are satisfied. Included is the requirement that, in most instances, the installation of the appliance must be accompanied by water conservation devices on fixtures using softened or conditioned water (Health and Safety Code Section 4047).

- Government Code Section 7800 specifies that lavatories in all public facilities constructed after January 1, 1985, be equipped with self-closing faucets that limit flow of hot water.

#30. **Recommended measures to be implemented where applicable:**

Interior:

a. Supply line pressure: Reduce water pressure greater than 50 pounds per square inch (psi) to 50 psi or less by means of a pressure-reducing valve.

b. Laundry facilities: Use water-conserving models of washers.

c. Ultra-low-flush toilets: Install 1-1/2-gallons per flush toilets in all new construction.

d. Drinking fountains: Drinking fountains be equipped with self-closing valves.

e. Hotel rooms: Conservation reminders be posted in rooms and restrooms*. Thermostatically controlled mixing valve be installed for bath/shower.

f. Restaurants: Water-conserving models of dishwashers be used for spray emitters that have been retrofitted for reduced flow. Drinking water be served upon request only.*

*The Department of Water Resources or local water district may aid in developing these materials or providing other information.

Exterior:

a. Landscape with low water-using plants wherever feasible.

b. Minimize use of lawn by limiting it to lawn-dependent uses, such as playing fields. When lawn is used, require warm season grasses.

c. Group plants of similar water use to reduce over-irrigation of low-water-using plants.

d. Provide information to occupants regarding benefits of low-water-using landscaping and sources of additional assistance.

e. Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.

f. Install efficient irrigation systems that minimize runoff and evaporation and maximize the water that will reach the plant roots. Drip irrigation, soil moisture sensors and automatic irrigation systems are a few methods of increasing irrigation efficiency.

g. Use pervious paving materials whenever feasible to reduce surface water runoff and to aid in groundwater recharge.

h. Grade slopes so that runoff of surface water is minimized.

i. Investigate the feasibility of using reclaimed wastewater, stored rainwater, or grey water for irrigation.

j. Encourage cluster development, which can reduce the amount of land being converted to urban use. This will reduce the amount of impervious paving created and thereby aid in ground water recharge.

k. Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new developments. This aids ground water recharge.

l. To aid in ground water recharge, preserve flood plains and aquifer recharge areas as open space.

#31. Information shall be provided to new business owners concerning the recycling services in the development area. Said information shall identify nearby recycling centers, identify possible markets for recyclables in the area, and suggest to the business owners that they recycle glass, metal, paper, cardboard, and other materials to the maximum extent feasible.

#32. Source separation facilities shall be incorporated into building design to insure that materials such as metals, glass, paper, plastics and composting matter are recyled.

#33. Insulation and other products made of recycled materials may be used in the construction of homes and commercial buildings.

#34. The Specific Plan landscape design guidelines for developments and streetscapes should be developed to include drought resistant plant materials (xeroscape concepts) which will have minimal maintenance needs generating less yard wastes for disposal at County landfills.

#35. Prior to issuance of occupancy permits, subsequent project applicants shall comply with the City Waste Reduction and Recycling section of the Solid Waste Management Plan.

#36. Trash receptacle design guidelines/standards for the commercial/industrial developments shall include siting of recycling facilities within trash receptacle enclosures.

#37. Prior to issuance of occupancy permits, trash compactors shall also be required for large waste generators to reduce waste volumes and to minimize impacts to County landfill capacities. Identification of "large" waste generators is at the discretion of the City Planning Department.

#38. Site-specific development plans shall require review and approval by the City Fire Department with respect to adequate fire flows, emergency access and building construction standards.

GEOLOGY AND SOILS

Topography

#39. All grading and landform modifications shall be conducted in conformance with state-of-the-practice construction and design parameters set forth in Chapter 70 of the Uniform Building Code.

#40. All graded slopes shall be constructed to be grossly and surficially stable.

#41. To decrease the hydroconsolidation potential and its potential effects to lightly loaded structures, remedial grading shall be performed which could include the following (to the satisfaction of the City engineer, prior to building permit issuance):

- Overexcavation of building pads and adjacent areas in amounts that would be appropriate for the local site conditions and structure type.
- Overexcavated materials replaced with relatively impermeable soils compacted to at least 90 percent relative compaction.
- Use of post-tension concrete slabs.
- Construction of relatively impermeable surfaces adjacent to the proposed structures, such as paved driveways and walkways, and provision of suitable surface drainage to convey runoff onto streets and gutters.
- Impermeable liners for planters, if they are used, to prevent irrigation water from infiltrating into native materials.
- Prevention of over-irrigation of landscaping.
- Provision of adequate landscaping/surface drainage to prevent ponding of water.
- Implementation of measures to prevent offsite surface water runoff from collecting and/or ponding within or around the periphery of the project area.
- Grading carried out under the guidelines set forth in Chapter 70 of the Uniform Building Code.

#42. To decrease the potential for hydroconsolidation and its potential effects on heavily loaded structures, deep foundations shall be used.

Soils

#43. Prior to site development, remedial grading shall be performed within the site to remove collapsible surficial soils.

#44. Additional laboratory testing of clayey soils shall be performed where they are encountered during subsequent geotechnical investigations.

Groundwater

#45. Adequate moisture barriers and positive drainage control shall be employed to mitigate the creation of perched groundwater beneath portions of the site.

Seismicity

#46. The applicant(s) shall adhere to seismic design requirements of the Uniform Building Code which will reduce the likelihood of structural failure and minimize potential impacts resulting from seismic activity.

LAND USE

#47. The three flood control detention basins shall be landscaped to serve as combined recreational and drainage facilities and to buffer offsite residential uses from incompatibility impacts.

#48. Measures to mitigate short-term impacts due to project construction will be implemented by the applicant as required and monitored by the City Planning Department and will include:

a. Limiting the hours of construction activity to the hours of ~~7:00~~ 6:30 am to ~~6:00~~ 8:00 pm Monday through Saturday, with no construction on Sundays or nationally observed holidays.

b. Construction of temporary opaque fencing to screen onsite construction operations, materials and equipment from adjacent property owners and to protect the safety of pedestrian traffic.

#49. Land uses within each of the Planning Areas will be governed by Table 3, PALMDALE TRADE AND COMMERCE CENTER LAND USE MATRIX, of the Specific Plan which indicates permitted, prohibited and conditionally permitted land uses within each category.

#50. Adherence to all design regulations and guidelines from the Palmdale Trade and Commerce Center Specific Plan is required. Individual project compliance with these guidelines shall be monitored by the City of Palmdale Planning Department and/or their agents. Said monitoring and verification of compliance with adopted Specific Plan development standards shall be performed prior to individual project Site Plan approval.

#51. Applicants for future development within the Specific Plan area shall incorporate all feasible measures to reduce project impacts upon USAF Plant 42. Where necessary, these measures shall include minimizing airborne substances and light or glare that may impair visibility in flight paths; providing design features to reduce electromagnetic radiation that may affect aircraft or ground-based electronic instrumentation; and where possible, avoiding land uses and designs which may attract birds that produce safety hazards during flight operations.

BIOLOGICAL RESOURCES

~~#52. Where possible, project development within the Specific Plan area should be designed to avoid displacement or destruction of Joshua Tree habitat. Areas adjacent to the woodland shall have a 50 foot setback from the Joshua Tree plants. Within that setback, native plant cover should be restored to natural habitat values to serve as a buffer if such plant cover is not present.~~

#53. Upon implementation of the project, any Joshua Tree plants that are removed will be transplanted to onsite landscaped areas and/or offsite in accordance with the City's Draft Joshua Tree Preservation ordinance. Such transplantation will be on a project-by-project basis. Preservation Plans shall be submitted to the Department of Planning prior to Issuance of grading permits.

#54. A Joshua Tree Preservation and Transplantation Plan will be developed and submitted to the City of Palmdale Planning Department prior to grading permit issuance.

#55. Prior to issuance of a grading permit for work within the Amargosa Creek Channel, the applicant shall obtain a 1603 Agreement from the California Department of Fish and Game.

NOISE

Project

#56. Prior to issuance of building permits, all future commercial, office, and industrial uses within the 65 CNEL (indicated on Exhibit 26) shall be required to prepare acoustical reports.

#57. Prior to issuance of building permits, all hotel land uses to be built within the 60 CNEL contour (indicated on Exhibit 26) shall be required to prepare acoustical reports.

#58. Prior to issuance of building permits, all future development applications within the Specific Plan area shall be required to submit evidence to the satisfaction of the Planning Director that all proposed uses will comply with City noise standards.

Cumulative

#59. A City-wide assessment district should be established to implement offsite mitigation in the form of barriers and structural upgrades. This would require project applicants to work with the City, other developers and homeowners to determine final wall heights and building upgrades. Funding of improvements would be on a "fair share" or pro rata basis.

AESTHETICS/LIGHT AND GLARE

#60. In order to mitigate the potential cumulative short-term effect of multiple parcels being developed over a 20-year period, the City Planning Department shall endeavor to group future Specific Plan project review and approvals to minimize continuous construction in any one portion of the site.

#61. During project construction (where Site Plan Review is required) the applicant shall be required to provide appropriate screening (as with temporary fencing with opaque material), dust control (see Section IV.K, AIR QUALITY), restricted construction hours, and a traffic control plan (Section IV.A, TRAFFIC AND CIRCULATION).

#62. All landscaping will be installed prior to issuance of occupancy permits.

#63. Landscaping will be consistent with the Specific Plan in order to maintain a cohesive theme across the project site, and in order to reduce aesthetic impacts of structures to adjacent roadways and residential properties.

#64. Any lights used to illuminate the parking areas, driveways, and other exterior or interior areas, shall be designed and located so that direct lighting is confined to the property.

#65. In addition to directional lighting, lighting should not be of greater intensity (wattage) than otherwise necessary for public safety.

#66. During Site Plan Review, project design should incorporate additional techniques to reduce light and glare, such as use of opaque glass instead of reflective glass.

~~#67. Amargosa Creek flood control improvements shall be composed of natural materials (or simulated rock) with interspersed vegetation to maintain existing aesthetic qualities.~~

#68. Impacts upon view corridors along adjacent roadways will be minimized by means of the design standards (building setbacks, height limitations, etc.) and landscaping criteria as set forth in the Specific Plan.

PUBLIC HEALTH AND SAFETY

#69. In order to verify verbal, written and visual information obtained to date, additional information on current conditions of underground storage tanks including operating permits and reports of investigation/testing performed by owners, shall be obtained prior to issuance of grading permits.

#70. Prior to issuance of grading permits, hazardous materials assessments will be performed for individual properties.

#71. Future grading plans and specifications for individual properties within the Specific Plan area shall include a clause regarding observation, testing, and proper disposal of any hazardous materials encountered during grading and construction, particularly for the trash/debris dumping areas.

#72. Prior to issuance of grading permits for work on the property containing the previously described onsite unauthorized dumping ground west of future Division Street and north of future Avenue P-8, the area shall be inspected, tested and any hazardous materials encountered disposed of.

#73. Future project land uses involving the use, storage or transportation of hazardous materials must comply with applicable local, state and federal health and safety regulations, including the proposed City of Palmdale Hazardous Waste Management Plan, upon its completion.

#74. No uses that involve the use, storage or transportation of hazardous materials shall be permitted adjacent to residential areas.

#75. Any use involving hazardous materials will require site plan review and/or a Conditional Use Permit, to minimize land use conflict. Said review shall involve all agencies with jurisdiction such as the local Air Quality Management District and Regional Water Quality Control Board.

CULTURAL RESOURCES

Paleontological Resources

#76. Prior to issuance of a grading permit, a qualified paleontologist shall be retained to formulate and carry out a mitigation program for the site. This paleontologist shall have the power to temporarily direct or divert operations to allow evaluation, and if necessary, salvage any exposed fossils.

#77. Paleontological monitoring efforts shall be based on the sensitivity of the units being excavated, the number of equipment in operation at one time, and the amount of material (in cubic yards) being moved.

a. Geologic units of "high" sensitivity shall be monitored on a full-time basis. If more than one piece of heavy equipment is being run simultaneously and/or more than 25,000 cubic yards of earth is to be graded per day, then additional monitors will be needed.

b. Geological units of "low" sensitivity require monitoring at least once every five days of grading activity.

#78. Matrix samples for microvertebrate screening shall be collected and processed during monitoring. If microvertebrates are present, up to 6,000 pounds of matrix will need to be sampled. This material can be placed to one side of the active grading so as not to delay the project. Screening may be done onsite.

#79. All fossils collected need to be prepared to the point of identification. These remains should be donated to an institution with an educational and/or research interest in the materials and a retrievable storage system, such as the Los Angeles County Museum of Natural History and the San Bernardino County Museum. This shall occur within one year of individual project completion.

#80. A final report summarizing findings, including an itemized inventory, contextual stratigraphic data, and photographs shall accompany the fossils to the designated repository with an additional copy sent to the City of Palmdale Planning Department.

Archaeological Resources

The following mitigation measures pertain to development on or within 50 meters of historic site CA-LAn-1554-H.

#81. Prior to issuance of a grading permit, site CA-LAn-1554-H, and the area within a 50 meter radius of the approximate center of the site, shall be subjected to a surface collection by a qualified archaeologist.

#82. Subsequently, the initial stages of grading shall be monitored by a qualified archaeologist. This archaeologist shall have the power to temporarily direct or divert grading operations to allow evaluation, and if necessary, salvage any exposed artifacts.

The following mitigation measures apply to all development involving grading within the Specific Plan area.

#83. During grading operations, the project Construction Manager shall be responsible for informing the City of Palmdale Planning Department within 12 hours of the discovery of any material of an archaeological nature.

#84. Should the City Planning Department determine that the uncovered material is of an archaeological nature, a professional archaeologist shall be retained to collect and document the archaeological deposit as quickly as is consistent with good archaeological practice. The archaeologist shall have the power to stop or redirect the construction in order to properly recover the artifacts.

#84A. Following the surface collection and monitoring activity, all the artifacts recovered and features found (if any) should be analyzed and described in a monitoring report. The monitoring report shall be submitted to the Planning Department for review and approval prior to any grading or construction activity on the project site. If it is determined that the site was a homestead, a title search should be performed to determine associations with any historic persons, events or themes. The report should present the kind of descriptive and interpretive information usually found in Phase II evaluation reports. An updated form DPR-422 should also be filed with the Archeological Information Center to include new data discovered as a result of mitigation.

AIR QUALITY

#85. To mitigate potential dust generation impacts, the project will comply with State, County and City dust control regulations. These regulations are intended to provide sufficient protection so as to prevent the soil from being eroded by wind, creating dust, or blowing into a public road or roads or other public or private property. In addition to watering prior to and during grading (as discussed in SCAQMD Rule 403), these measures could include interim paving for construction vehicle access and applying chemicals to the soil surface that solidify loose soil.

#86. Construction equipment shall use low sulfur fuel (p.05% by weight).

#87. Construction activities shall be phased and scheduled to avoid high ozone days.

#88. Construction will be discontinued during second stage smog alerts.

#89. The applicant shall, ~~to the extent feasible~~ as required by the Planning Department and the City of Palmdale's Air Quality Element, implement applicable Tier I Control Measures contained in the Final 1989 AQMP (see Appendix I). General measures which shall be applied for the development include:

a. Encourage the use of alternative transportation modes by promoting public transit usage and providing secure bicycle facilities. The applicant will provide bicycle routes (either onstreet or offstreet) where feasible, as determined necessary by the City. The City shall distribute educational material to all businesses regarding the availability of public transit, ridesharing and other alternative transit methods and the location of bicycle routes in the project vicinity. In addition, the educational material shall describe the available methods for reducing energy consumption.

b. Provide mass transit accommodations such as bus turnout lanes and bus shelters if determined necessary by the local transit authority. As final plans are developed, these features should be considered.

#90. Prior to Subsequent Site Plan approvals, energy conservation practices, as required by the Subdivision Map Act, Building Energy Efficiency Standards (California Energy Commission, 1988), and state and local laws, shall be incorporated into the design of the project to have the secondary effect of limiting stationary source pollutants both on and offsite.

#91. All phases of the project shall comply with applicable rules and regulations of the South Coast Air Quality Management District.

#92. Projects that exceed SCAQMD threshold levels shall contribute to the Commuter Computer per City requirements.

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
i.a.	Comments and Responses Packet, Page 85	Prior to the issuance of building permits, the applicant shall submit a written report demonstrating that all mitigation measures imposed by the City to either reduce or avoid significant environmental impacts identified in the Final EIR have either been incorporated in the project design or undertaken as required. Final determination of compliance with imposed mitigation measures pursuant to the requirements of Section 21081.6 of the Public Resources Code shall in turn be subject to the review and approval of the Department of Planning.	Monitoring Report	Prior to Building Permit Issuance	City Planning Director			
i.b.	Comments and Responses Packet, Page 85	Prior to the issuance of building permits, the applicant shall pay to the Department of Planning all fees required for the monitoring of mitigation measures required for project development, as determined by the Director of Planning.	Fee Payment	Prior to Building Permit Issuance	City Planning Director			
		A. TRAFFIC AND CIRCULATION						
ii.	Comments and Responses Packet, Page 85	Each project developer within the Specific Plan area will be required to submit a Transportation Management Plan for review and approval by the Planning Department prior to issuance of occupancy permits, and a focused traffic study for review and approval by the City Engineer and/or City Traffic Engineer, to determine the necessary improvements for impacts generated by that project. On the basis of this and other studies the developer will improve or fund a pro rata share of improvements and/or the City will undertake improvements through a capital improvement program.	Review of Transportation Management Plan Focused Traffic Study Review	Prior to Occupancy Permit Issuance Prior to Occupancy Permit Issuance	City Planning Director City Traffic Engineer			
1.	Comments and Responses Packet, Page 85	The following improvements will be required to provide Level of Service D or better operation (individual applicants will be required to dedicate right-of-way for full ultimate half-width improvements, where roads border their property, full ultimate right-of-way for roads through their property, and/or fund a pro rata share of these improvements, as determined necessary by the City Engineer and/or the City Traffic Engineer): a. Widen the SR 14 Freeway to 6 lanes south of Palmdale Boulevard to be funded by Caltrans and/or other sources. b. Widen Avenue P to 6 lanes between the SR 14 Freeway and Sierra Highway. c. Provide 8 through lanes on 10th Street West between Avenue P and Avenue P-8. d. (Measure deleted from Final EIR). e. Widen Palmdale Boulevard to 6 lanes from west of 5th Street West to Division Street.	Plan Check for Individual Developments Within the Specific Plan Area	Prior to Grading Permit	City Engineer/ City Traffic Engineer			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		f. Provide separate right turn lanes on the northbound, eastbound, and westbound approaches at 10th Street West/Avenue P.						
		g. Widen the northbound SR 14 off-ramp at Avenue P to provide two left and one right turn lane.						
		h. Widen the northbound SR 14 off-ramp at Palmdale Boulevard to provide two left and 1 right turn lane.						
		i. At the future intersection of 5th Street West/Avenue P-8, provide two through, two left and one right turn lane on the southbound 5th Street West approach and two through and two left turn lanes on the eastbound Avenue P-8 approach.						
		j. (Measure deleted from Final EIR).						
		k. Provide a second southbound left turn lane on 5th Street West at Palmdale Boulevard.						
		l. Provide a southbound right turn lane on Sierra Highway at Avenue P.						
		m. Provide two left and one right turn lane on Avenue P-8 at Sierra Highway.						
		n. Provide two left and one right turn lane on southbound Street A at Palmdale Boulevard (needed to minimize the possibility of the vehicle queue blocking the intersection at Street A/Avenue Q).						
		o. Provide traffic signals at the following intersections: • Street A & P-8, Street A & P-12, Street A & Avenue Q, Street A & Palmdale Boulevard and Avenue P-12 & 5th Street West						
		p. A transit center should be placed at or near the southeast corner of Avenue P and 10th Street West to be funded on a pro rata share by the Specific Plan developers as determined by the City Engineer and/or City Traffic Engineer. The center would allow for buses from several routes to have an off-street transfer point with patron facilities.						

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Reporting Process	Milestone	Party	Initials	Date	Remarks
2	Comments and Responses Packet, Page 86	All road improvements shall be provided in accordance with City design standards to the satisfaction of the City Engineer, prior to issuing occupancy permits.	Field Inspection	Prior to Occupancy Permit Issuance	City Engineer			
3.	Comments and Responses Packet Page 86	Each applicant shall be required to submit a Traffic Control Plan for review and approval by the City Traffic Engineer, prior to issuance of grading permits to minimize construction-related traffic impacts.	Traffic Control Plan Review	Prior to Grading Permit Issuance	City Traffic Engineer			
		Existing Plus Project Plus Auto Mall						
4.	Comments and Responses Packet, Page 87	The improvements required for existing plus project traffic volumes will be able to accommodate the traffic generated by the Antelope Valley Auto Mall, except at the following, where additional improvements will be needed (to be funded on a pro rata basis by project applicants): a. Provide a second eastbound left turn lane on Avenue P at Sierra Highway. b. Provide a fourth northbound through lane on 10th Street West between Avenue P and SR 14. c. Provide a second southbound left turn lane on 10th Street West at Avenue P-4. d. Measure deleted from Draft EIR text. e. Widen Palmdale Boulevard to eight lanes between 5th Street West and the SR 14 Freeway.	Plan Check for Individual Developments Within the Specific Plan Area	Prior to Grading Permit Issuance	City Traffic Engineer			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		B. HYDROLOGY						
		Stormwater Runoff						
5.	Comments and Responses Packet, Page 87	All facilities shall be designed and constructed in accordance with the City of Palmdale Drainage Master Plan and LACFCD Hydrology Manual to the satisfaction of the City engineer. Local facilities will be installed by individual applicants prior to issuing building permits. Regional facilities (Amargosa Creek improvements and the three detention basins) shall be constructed for portions onsite a given parcel and/or funded on a pro rata basis by each applicant, and shall be completed prior to Specific Plan buildout (site specific studies for each applicant will determine the need for interim measures).	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance Prior to Specific Plan Buildout	City Engineer City Engineer			
6.	Comments and Responses Packet, Page 87	According to the City of Palmdale's Master Drainage Plan, the project site shall include local storm drain facilities ranging in size from 30 inches to 78 inches. The site shall also include regional storm drain facilities ranging in size from 66 inches to a 6 foot by 6.5 foot concrete trapezoidal channel.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
7.	Comments and Responses Packet, Page 87	The construction of a concrete trapezoidal channel with a 15 foot base and 1.5:1 side slopes will be required for Amargosa Creek improvements. The channel will have culvert crossings for upstream and downstream transitions.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
8.	Comments and Responses Packet, Page 87	Three detention basins in the eastern portion of the project site are required for collection of runoff from the west and south, and are intended to replace the City's regional system. One detention basin, formerly located offsite and identified as Detention Basin A in the Draft EIR, will now be located on Parcels 61 and 65. The two basins south of P-8 and along Division Street will remain in the locations indicated by the Draft EIR. Proposed offsite detention basin locations will require an agreement with the affected property owner(s) prior to final design approval. Basin location and sizing are subject to final design and approval by the City Engineer.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
		Peak Attenuation and Storage (Detention Basins)						
9.	Comments and Responses Packet, Page 88	An emergency spillway adequately sized and armored to pass at least the 50-year recurrence flood flow shall be provided.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
10.	Comments and Responses Packet, Page 88	An emergency flow path shall be provided in the case of spillway overflows.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
11.	Comments and Responses Packet, Page 88	Seepage collars on supplemental piping outlets shall be installed.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
12.	Comments and Responses Packet, Page 88	Installation of a cutoff trench beneath the outlet works shall be provided.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
13.	Comments and Responses Packet, Page 88	An energy dissipator or other protection device shall be installed on the outlet pipes at the end of the detention facility in order to reduce erosion.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
14.	Comments and Responses Packet, Page 88	Sloped embankment faces shall be provided for structural stability.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
15.	Comments and Responses Packet, Page 88	Grates, cages, hoods and other devices shall be provided over detention outlet works to prevent objects and debris from blocking openings.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			

Cond. No.	Reference	Mitigation Measure/Condition of Approval	Reporting Process	Milestone	Party	Initials	Date	Remarks
		Onsite Safety Provisions						
16.	Comments and Responses Packet, Page 88	Removable safety cages or grates shall be provided on the entrances to storm drains which flow into or out of the detention facilities. Installation of safety cages or grates shall be provided on "non-culvert" type pipes which are connected to long or extensive underground pipe systems. Cages or grates shall be sloped so that water moving through the grate will exert an upward force on a person or object trapped against the grate. The total grate area shall be large enough to reduce drag forces to safe levels.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
17.	Comments and Responses Packet, Page 88	Guardrails and/or fences shall be installed near the edge of vertical walls or slopes where inlet or outlet structures are located.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
18.	Comments and Responses Packet, Page 88	Steps and handrails shall be installed on the periphery of a detention facility where access may be difficult to and from lower detention facilities.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
19.	Comments and Responses Packet, Page 88	Signs shall be placed around the perimeter of a facility notifying the public of occasional water storage and related safety hazards.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
20.	Comments and Responses Packet, Page 88	Mild slopes shall be used around the periphery of a retention facility.	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities	Prior to Building Permit Issuance, Completion of Drainage Facilities	City Engineer			
21.	Comments and Responses Packet, Page 88	To prevent possible falling or slipping, maximum lateral and longitudinal slopes on concrete cunnettes or trickle channels shall be 4 percent (4%).	Plan Check for Individual Developments Within the Specific Plan Area and Field Inspection Upon Completion of Drainage Facilities					

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		Water Quality						
22.	Comments and Responses Packet, Page 89	Each applicant shall submit a Water Quality/Erosion Control Plan for City review and approval, prior to issuing grading permits. The Plan shall indicate specific means of reducing urban pollutants and sedimentation including but not limited to the following: a. Surplus or waste material shall not be placed in drainage ways or within the 100-year floodplain of surface waters. b. All loose piles of soil, silt, clay, sand, debris, or other earthen materials shall be protected in a reasonable manner to eliminate any discharge to waters of the State. c. Dewatering shall be done in a manner so as to eliminate the discharge of earthen material from the site. d. All disturbed areas shall be stabilized by appropriate soil stabilization measures by October 15th of each year. e. All work performed between October 15th and May 1st of each year shall be conducted in such a manner that the project can be winterized within 48 hours. f. All nonconstruction areas shall be protected by fencing or other means to prevent unnecessary disturbance. g. During construction, temporary gravel or sandbag dikes shall be used as necessary to prevent discharge of earthen materials from the site during periods of precipitation or runoff. h. Stabilizing agents such as straw and wood chips shall be used during the interim period after grading in order to strengthen slopes while ground cover takes hold. i. Impervious areas shall be constructed with infiltration trenches along the downhill edges to dispose of all drainage emanating from them. j. Infiltration trenches shall be constructed on the downgradient side of all structural drip lines.	Individual Water Quality/ Erosion Control Plan Review, Field Inspections	Prior to Grading Permit Issuance, During Construction	City Planning Director			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Milestone	Party	Initials	Date	Remarks
		k. Revegetated areas shall be continually maintained in order to assure adequate growth and root development.						
		l. Physical erosion control facilities shall be placed on a routine maintenance and inspection program to provide continued erosion control integrity.						
		m. Where construction activities involve the crossing and/or alteration of a stream channel, such activities shall be timed to occur during the period in which stream flow is expected to be lowest for the year.						
		n. Periodic cleaning of paved areas shall be performed to remove sediments and absorbed pollutants.						
		o. Routine cleaning of manholes and catch basins shall be performed to remove sediment and debris.						
		p. Surveys shall be conducted of all facilities involved in the storage or handling of hazardous or toxic chemicals which might contribute to stormwater pollution.						
		q. Control of washdown drainage from industrial facilities shall be enforced.						
		r. Information regarding the disposal of waste oil/grease and pesticide containers shall be provided to new business owners.		Issuance of Occupancy Permit				
		s. Controlled use of pesticides and fertilizers shall be enforced.		Ongoing				
		C. PUBLIC SERVICES AND UTILITIES						
23.	Comments and Responses Packet, Page 90	The following mitigation measures will reduce impacts of the proposed Specific Plan, and shall be implemented by each applicant prior to occupancy permits for future site-specific development submittals.	Review of Site Specific Plans, and Field Inspection	Prior to Issuance of Occupancy Permits	City Planning Director and Los Angeles County Sheriff's Department			
		a. Adequate emergency access and circulation throughout and around the project shall be provided to the satisfaction of the Los Angeles County Sheriff's Department.						
		b. Adequate lighting shall be provided to enhance crime prevention and law enforcement efforts.						
		c. Proper address signs shall be provided for easy identification of locations during emergencies.						

Mit/ Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		d. Landscape feature standards which do not conceal potential criminal activity around buildings and in parking areas shall be provided.						
		Parks and Recreation						
	Comments and Responses Packet, Page 90	None are required.						
		Library Services						
	Comments and Responses Packet, Page 90	No mitigation measures are required.						
		Telephone						
24.	Comments and Responses Packet, Page 91	Developers of individual properties within the Specific Plan area will be responsible for payment of assessment fees and installation of required conduits prior to issuance of occupancy permits.	Payment of Assessment Fees and Field Inspection	Prior to Occupancy Permit Issuance	City Planning Director			
		Electricity						
25.	Comments and Responses Packet, Page 91	All overhead lines below 32 KV (Kilovolt) shall be placed underground by applicants prior to issuance of occupancy permits.	Site Specific Development Plan Review and Field Inspection	Prior to Occupancy Permit Issuance	City Planning Director			
26.	Comments and Responses Packet, Page 91	The individual project applicants shall coordinate with SCE to ensure that adequate electrical service is provided to the proposed development and that service connection activities will be performed in cooperation with SCE to minimize any short term impacts.	Will Serve Letter Required	Prior to Occupancy Permit Issuance	City Planning Director			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Milestone	Responsible Party	Initials	Date	Remarks
	Comments and Responses Packet, Page 91	**Gas** No significant impacts have been identified, therefore, no mitigation measures are required at this time.						
27.	Comments and Responses Packet, Page 91	**Sewer** The project developer will be required to pay prevailing sewer assessment fees, provide adequate onsite wastewater conveyance facilities, and will conform with City Public Works Department and County Sanitation District No. 20 development standards pertaining to wastewater.	Payment of Assessment Fees and Review of Site Specific Development Plans	Prior to Building Permit Issuance	City Planning Director			
28.	Comments and Responses Packet, Page 91	**Water** Provision of water service to the proposed project will be required as a part of project development and will occur to the satisfaction of the City of Palmdale prior to approval of each site-specific development plan. Previous studies have identified several alternatives to mitigate water impacts for projects in the immediate area. These alternatives include the provision of an onsite water supply system, participation in an existing water agreement established by another developer within the area, and/or the payment of Capital Improvement Charges. Project implementation will require mitigation in coordination with the City of Palmdale, Los Angeles County Waterworks District No. 34, Palmdale Water District and the Los Angeles County Fire Department.	Site Specific Development Plan Review	Site Specific Development Plan Approval	City Planning Director			
29.	Comments and Responses Packet, Page 91	The following State laws require water-efficient plumbing fixtures in structures: • Low-flush toilets and urinals are required in virtually all buildings (as required in Health and Safety Code Section 17921.3). • Efficiency standards must be met that give the maximum flow rate of all new showerheads, lavatory faucets and sink faucets, as specified in the standard approved by the American National Standards Institute on November 16, 1979 (pursuant to Title 20, California Administrative Code Section 1604(f) (Appliance Efficiency Standards)). • No new appliance may be sold or offered for sale in California that is not certified by its manufacturer to be in compliance with the provisions of the regulations establishing applicable efficiency standards (Title 20, California Administrative Code Section 1606(b) (Appliance Efficiency Standards)). • Installation of fixtures is prohibited unless the manufacturer has certified to the CEC compliance with the flow rate standards (Title 24 of the California Administrative Code Section 2-530307(b)).	Site Specific Building Plan Reveiw	Prior to Building Permit Issuance	City Inspector			

Mit/ Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	VERIFICATION OF COMPLIANCE: Initials	Date	Remarks
		• Pipe insulation is required to reduce water used before hot water reaches equipment or fixtures. Insulation of water heating systems is also required (Title 24, California Administrative Code Section 2-5352(i) and (j). • Installation of residential water softening or conditioning appliances is prohibited unless certain conditions are satisfied. Included is the requirement that, in most instances, the installation of the appliance must be accompanied by water conservation devices on fixtures using softened or conditioned water (Health and Safety Code Section 4047). • Government Code Section 7800 specifies that lavatories in all public facilities constructed after January 1, 1985, be equipped with self-closing faucets that limit flow of hot water.						
30.	Comments and Responses Packet, Page 92	**Recommended measures to be implemented where applicable:** *Interior*: a. Supply line pressure: Reduce water pressure greater than 50 pounds per square inch (psi) to 50 psi or less by means of a pressure-reducing valve. b. Laundry facilities: Use water-conserving models of washers. c. Ultra-low-flush toilets: Install 1-1/2-gallons per flush toilets in all new construction. d. Drinking fountains: Drinking fountains be equipped with self-closing valves. e. Hotel rooms: Conservation reminders be posted in rooms and restrooms . Thermostatically controlled mixing valve be installed for bath/shower. f. Restaurants: Water-conserving models of dishwashers be used for spray emitters that have been retrofitted for reduced flow. Drinking water be served upon request only. *The Department of Water Resources or local water district may aid in developing these materials or providing other information.	Site Specific Building Plan Reveiw	Prior to Building Permit Issuance	City Inspector			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		Exterior:	Site Specific Landscaping Plan Review	Prior to Building Permit Issuance	City Planning Director			
		a. Landscape with low water-using plants wherever feasible.						
		b. Minimize use of lawn by limiting it to lawn-dependent uses, such as playing fields. When lawn is used, require warm season grasses.						
		c. Group plants of similar water use to reduce over-irrigation of low-water-using plants.						
		d. Provide information to occupants regarding benefits of low-water-using landscaping and sources of additional assistance.						
		e. Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.						
		f. Install efficient irrigation systems that minimize runoff and evaporation and maximize the water that will reach the plant roots. Drip irrigation, soil moisture sensors and automatic irrigation systems are a few methods of increasing irrigation efficiency.						
		g. Use pervious paving materials whenever feasible to reduce surface water runoff and to aid in groundwater recharge.						
		h. Grade slopes so that runoff of surface water is minimized.						
		i. Investigate the feasibility of using reclaimed wastewater, stored rainwater, or grey water for irrigation.						
		j. Encourage cluster development, which can reduce the amount of land being converted to urban use. This will reduce the amount of impervious paving created and thereby aid in ground water recharge.						
		k. Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new developments. This aids ground water recharge.						
		l. To aid in ground water recharge, preserve flood plains and aquifer recharge areas as open space.						

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		Solid Waste						
31.	Comments and Responses Packet, Page 93	Information shall be provided to new business owners concerning the recycling services in the development area. Said information shall identify nearby recycling centers, identify possible markets for recyclables in the area, and suggest to the business owners that they recycle glass, metal, paper, cardboard, and other materials to the maximum extent feasible.	Distribution of Informational Pamphlet	Prior to Occupancy Permit Issuance	City Planning Director			
32.	Comments and Responses Packet, Page 94	Source separation facilities shall be incorporated into building design to insure that materials such as metals, glass, paper, plastics and composting matter are recycled.	Site Specific Building Plan Review	Prior to Building Permit Issuance	City Planning Director			
33.	Comments and Responses Packet, Page 94	Insulation and other products made of recycled materials may be used in the construction of homes and commercial buildings.	Site Specific Building Plan Review	Prior to Building Permit Issuance	City Planning Director			
34.	Comments and Responses Packet, Page 94	The Specific Plan landscape design guidelines for developments and streetscapes should be developed to include drought resistant plant materials (xeroscape concepts) which will have minimal maintenance needs generating less yard wastes for disposal at County landfills.	Site Specific Landscaping Plan Review	Prior to Building Permit Issuance	City Planning Director			
35.	Comments and Responses Packet, Page 94	Prior to issuance of occupancy permits, subsequent project applicants shall comply with the City Waste Reduction and Recycling section of the Solid Waste Management Plan.	Field Inspection	Prior to Occupancy Permit Issuance	City Planning Director			
36.	Comments and Responses Packet, Page 94	Trash receptacle design guidelines/standards for the commercial/industrial developments shall include siting of recycling facilities within trash receptacle enclosures.	Site Specific Building Plan Review	Prior to Building Permit Issuance	City Planning Director			
37.	Comments and Responses Packet, Page 94	Prior to issuance of occupancy permits, trash compactors shall also be required for large waste generators to reduce waste volumes and to minimize impacts to County landfill capacities. Identification of "large" waste generators is at the discretion of the City Planning Department.	Site Specific Building Plan Review	Prior to Occupancy Permit Issuance	City Planning Director			
		Fire Service						
38.	Comments and Responses Packet, Page 94	Site-specific development plans shall require review and approval by the City Fire Department with respect to adequate fire flows, emergency access and building construction standards.	Site Specific Development Plan Review	Prior to Building Permit Issuance	City Planning Director and Fire Department			
		School						
	Comments and Responses Packet, Page 94	Other than mandatory developer fees, no mitigation measures are required at the present.						

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		D. GEOLOGY AND SOILS The following mitigation measures shall be implemented by each project applicant, prior to issuance of grading or building permits, as appropriate or determined by the City Engineer and/or Director of Building and Safety. **Topography**						
39.	Comments and Responses Packet, Page 94	All grading and landform modifications shall be conducted in conformance with state-of-the-practice construction and design parameters set forth in Chapter 70 of the Uniform Building Code.	Grading Plan Review	During and Following Grading	City Inspector			
40.	Comments and Responses Packet, Page 94	All graded slopes shall be constructed to be grossly and surficially stable.	Grading Plan Review	During and Following Grading	City Inspector			
41.	Comments and Responses Packet, Page 95	To decrease the hydroconsolidation potential and its potential effects to lightly loaded structures, remedial grading shall be performed which could include the following (to the satisfaction of the City engineer, prior to building permit issuance): • Overexcavation of building pads and adjacent areas in amounts that would be appropriate for the local site conditions and structure type. • Overexcavated materials replaced with relatively impermeable soils compacted to at least 90 percent relative compaction. • Use of post-tension concrete slabs. • Construction of relatively impermeable surfaces adjacent to the proposed structures, such as paved driveways and walkways, and provision of suitable surface drainage to convey runoff onto streets and gutters. • Impermeable liners for planters, if they are used, to prevent irrigation water from infiltrating into native materials. • Prevention of over-irrigation of landscaping.	Grading Plan Review	Prior to Building Permit Issuance	City Engineer			

Mit/ Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		• Provision of adequate landscaping/surface drainage to prevent ponding of water. • Implementation of measures to prevent offsite surface water runoff from collecting and/or ponding within or around the periphery of the project area. • Grading carried out under the guidelines set forth in Chapter 70 of the Uniform Building Code.						
42.	Comments and Responses Packet, Page 95	To decrease the potential for hydroconsolidation and its potential effects on heavily loaded structures, deep foundations shall be used.	Site Specific Grading Plan Review	Prior to Grading Permit Issuance	City Engineer			
		Soils						
43.	Comments and Responses Packet, Page 95	Prior to site development, remedial grading shall be performed within the site to remove collapsible surficial soils.	Site Specific Grading Plan Review	Prior to Grading Permit Issuance	City Engineer			
44.	Comments and Responses Packet, Page 95	Additional laboratory testing of clayey soils shall be performed where they are encountered during subsequent geotechnical investigations.	Site Specific Grading Plan Review	Prior to Grading Permit Issuance	City Engineer			
		Groundwater						
45.	Comments and Responses Packet, Page 95	Adequate moisture barriers and positive drainage control shall be employed to mitigate the creation of perched groundwater beneath portions of the site.	Site Specific Grading Plan Review	Prior to Grading Permit Issuance	City Engineer			
		Seismicity						
46.	Comments and Responses Packet, Page 96	The applicant(s) shall adhere to seismic design requirements of the Uniform Building Code which will reduce the likelihood of structural failure and minimize potential impacts resulting from seismic activity.	Site Specific Building Plan Review	Prior to Occupancy Permit Issuance	City Inspector			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		II. LAND USE Measures to mitigate traffic, hydrological, noise, aesthetic, and air quality impacts associated with implementation of the proposed Specific Plan are addressed in their respective sections of this EIR.						
47.	Comments and Responses Packet, Page 96	The three flood control detention basins shall be landscaped to serve as combined recreational and drainage facilities and to buffer offsite residential uses from incompatibility impacts.	Detention Basin Plan Review	Prior to Detention Basin Construction	City Planning Director			
48.	Comments and Responses Packet, Page 96	Measures to mitigate short-term impacts due to project construction will be implemented by the applicant as required and monitored by the City Planning Department and will include: a. Limiting the hours of construction activity to the hours of 6:30 am to 8:00 pm Monday through Saturday, with no construction on Sundays or nationally observed holidays. b. Construction of temporary opaque fencing to screen onsite construction operations, materials and equipment from adjacent property owners and to protect the safety of pedestrian traffic.	Construction Inspection	During Construction	City Inspector			
49.	Comments and Responses Packet, Page 96	Land uses within each of the Planning Areas will be governed by Table 3, PALMDALE TRADE AND COMMERCE CENTER LAND USE MATRIX, of the Specific Plan which indicates permitted, prohibited and conditionally permitted land uses within each category.	Development Application Review	Prior to Future Approvals	City Planning Director			
50.	Comments and Responses Packet, Page 96	Adherence to all design regulations and guidelines from the Palmdale Trade and Commerce Center Specific Plan is required. Individual project compliance with these guidelines shall be monitored by the City of Palmdale Planning Department and/or their agents. Said monitoring and verification of compliance with adopted Specific Plan development standards shall be performed prior to individual project Site Plan approval.	Development Application Review	Prior to Individual Project Site Plan Approval	City Planning Director			

Mit/ Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
						OF COMPLIANCE		
51.	Comments and Responses Packet, Page 96	Applicants for future development within the Specific Plan area shall incorporate all feasible measures to reduce project impacts upon USAF Plant 42. Where necessary, these measures shall include minimizing airborne substances and light or glare that may impair visibility in flight paths; providing design features to reduce electromagnetic radiation that may affect aircraft or ground-based electronic instrumentation; and where possible, avoiding land uses and designs which may attract birds that produce safety hazards during flight operations.	Development Application Review	Prior to Individual Project Site Plan Approval	City Planning Director			
		F. BIOLOGICAL RESOURCES						
		The Joshua Tree Woodland area should be protected by *in situ* preservation of the habitat or acquisition of equivalent, offsite habitat within the Sphere of Influence of the City of Palmdale. Preservation is considered to include fencing of the site and dedication of an open space easement to the City of Palmdale. Areas adjacent to the woodland should have a 50-foot setback from the Joshua Tree plants.						
52.	Comments and Responses Packet, Page 97	Measure deleted from Draft EIR text.						
53.	Comments and Responses Packet, Page 97	Upon implementation of the project, any Joshua Tree plants that are removed will be transplanted to onsite landscaped areas and/or offsite in accordance with the City's Draft Joshua Tree Preservation ordinance. Such transplantation will be on a project-by-project basis. Preservation Plans shall be submitted to the Department of Planning prior to Issuance of grading permits.	Preservation Plan Review	Prior to Grading Permit Issuance	City Planning Director			
54.	Comments and Responses Packet, Page 97	A Joshua Tree Preservation and Transplantation Plan will be developed and submitted to the City of Palmdale Planning Department prior to grading permit issuance.	Preservation Plan Review	Prior to Grading Permit Issuance (Within Joshua/ Juniper Tree Habitat)	City Planning Director			
55.	Comments and Responses Packet, Page 97	Prior to issuance of a grading permit for work within the Amargosa Creek Channel, the applicant shall obtain a 1603 Agreement from the California Department of Fish and Game.	1603/404 Review and Permit Process	Prior to Grading Permit Issuance (Within Joshua/ Juniper Tree Habitat, Within Amargosa Creek)	City Planning Director			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
		G. NOISE						
		All acoustical reports shall be submitted for review and approval by the Department of Planning prior to Site Plan review.						
		Project						
56.	Comments and Responses Packet, Page 97	Prior to issuance of building permits, all future commercial office uses within the 65 CNEL, (indicated on Exhibit 26) shall be required to prepare acoustical reports.	Development Application Review	Prior to Building Permit Issuance	City Planning Director			
57.	Comments and Responses Packet, Page 97	Prior to issuance of building permits, all hotel land uses to be built within the 60 CNEL contour (indicated on Exhibit 26) shall be required to prepare acoustical reports.	Development Application Review	Prior to Building Permit Issuance	City Planning Director			
58.	Comments and Responses Packet, Page 97	Prior to issuance of building permits, all future development applications within the Specific Plan area shall be required to submit evidence to the satisfaction of the Planning Director that all proposed uses will comply with City noise standards.	Development Application Review	Prior to Building Permit Issuance	City Planning Director			
		Cumulative						
59.	Comments and Responses Packet, Page 98	A City-wide assessment district should be established to implement offsite mitigation in the form of barriers and structural upgrades. This would require project applicants to work with the City, other developers and homeowners to determine final wall heights and building upgrades. Funding of improvements would be on a "fair share" or pro rata basis.	Ongoing Monitoring of Regional Traffic Noise	Ongoing	City Planning Director			
		H. AESTHETICS						
		The following are recommended mitigation measures for the proposed project:						
60.	Comments and Responses Packet, Page 98	In order to mitigate the potential cumulative short-term effect of multiple parcels being developed over a 20-year period, the City Planning Department shall endeavor to group future Specific Plan project review and approvals to minimize continuous construction in any one portion of the site.	Development Application Review	Prior to Grading Permit Issuance	City Planning Director			
61.	Comments and Responses Packet, Page 98	During project construction (where Site Plan Review is required) the applicant shall be required to provide appropriate screening (as with temporary fencing with opaque material), dust control (see Section IV.K, AIR QUALITY), restricted construction hours, and a traffic control plan (Section IV.A, TRAFFIC AND CIRCULATION).	Site Inspection	During Construction	City Inspector			
62.	Comments and Responses Packet, Page 98	All landscaping will be installed prior to issuance of occupancy permits.	Site Inspection	Prior to Occupancy Permit Issuance	City Inspector			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
63.	Comments and Responses Packet, Page 98	Landscaping will be consistent with the Specific Plan in order to maintain a cohesive theme across the project site, and in order to reduce aesthetic impacts of structures to adjacent roadways and residential properties.	Site Plan Review	Prior to Site Plan Approval	City Planning Director			
64.	Comments and Responses Packet, Page 98	Any lights used to illuminate the parking areas, driveways, and other exterior or interior areas, shall be designed and located so that direct lighting is confined to the property.	Site Plan Review	Prior to Site Plan Approval	City Planning Director			
65.	Comments and Responses Packet, Page 98	In addition to directional lighting, lighting should not be of greater intensity (wattage) than otherwise necessary for public safety.	Site Plan Review	Prior to Site Plan Approval	City Planning Director			
66.	Comments and Responses Packet, Page 98	During Site Plan Review, project design should incorporate additional techniques to reduce light and glare, such as use of opaque glass instead of reflective glass.	Site Plan Review	Prior to Site Plan Approval	City Planning Director			
67.	Comments and Responses Packet, Page 98	Measure deleted from Draft EIR text.						
68.	Comments and Responses Packet, Page 98	Impacts upon view corridors along adjacent roadways will be minimized by means of the design standards (building setbacks, height limitations, etc.) and landscaping criteria as set forth in the Specific Plan.	Site Plan Review	Prior to Site Plan Approval	City Planning Director			
		L. PUBLIC HEALTH AND SAFETY						
69.	Comments and Responses Packet, Page 99	In order to verify verbal, written and visual information obtained to date, additional information on current conditions of underground storage tanks including operating permits and reports of investigation/testing performed by owners, shall be obtained prior to issuance of grading permits.	Review of Additional Information	Prior to Grading Permit Issuance	City Planning Director			
70.	Comments and Responses Packet, Page 99	Prior to issuance of grading permits, hazardous materials assessments will be performed for individual properties.	Site Assessment	Prior to Grading Permit Issuance	City Planning Director			
71.	Comments and Responses Packet, Page 99	Future grading plans and specifications for individual properties within the Specific Plan area shall include a clause regarding observation, testing, and proper disposal of any hazardous materials encountered during grading and construction, particularly for the trash/debris dumping areas.	Review of Grading Plans	Prior to Grading Permit Issuance	City Planning Director			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
72.	Comments and Responses Packet, Page 99	Prior to issuance of grading permits for work on the property containing the previously described onsite unauthorized dumping ground west of future Division Street and north of future Avenue P-8, the area shall be inspected, tested and any hazardous materials encountered disposed of.	Review of Additional Information	Prior to Grading Permit Issuance	City Planning Director			
73.	Comments and Responses Packet, Page 99	Future project land uses involving the use, storage or transportation of hazardous materials must comply with applicable local, state and federal health and safety regulations, including the proposed City of Palmdale Hazardous Waste Management Plan, upon its completion.	Compliance with Local, State and Federal Regulations	Ongoing	City Planning Director			
74.	Comments and Responses Packet, Page 99	No uses that involve the use, storage or transportation of hazardous materials shall be permitted adjacent to residential areas.	Development Application Review	Prior to Future Development Approval	City Planning Director			
75.	Comments and Responses Packet, Page 99	Any use involving hazardous materials will require site plan review and/or a Conditional Use Permit, to minimize land use conflict. Said review shall involve all agencies with jurisdiction such as the local Air Quality Management District and Regional Water Quality Control Board.	Site Plan/ CUP Review	Prior to Site Plan/ CUP Approval	City Planning Director			
		J. CULTURAL RESOURCES						
		The following mitigation measures shall be implemented and monitored on a project by project basis following approval of the Palmdale Trade and Commerce Center Specific Plan and certification of this EIR, and a written report shall be submitted to the Department of Planning for all phases of the project.						
		Paleontological Resources						
76.	Comments and Responses Packet, Page 99	Prior to issuance of a grading permit, a qualified paleontologist shall be retained to formulate and carry out a mitigation program for the site. This paleontologist shall have the power to temporarily direct or divert operations to allow evaluation, and if necessary, salvage any exposed fossils.	Submittal of Written Evidence	Prior to Grading Permit Issuance	City Planning Director			
77.	Comments and Responses Packet, Page 100	Paleontological monitoring efforts shall be based on the sensitivity of the units being excavated, the number of equipment in operation at one time, and the amount of material (in cubic yards) being moved. a. Geologic units of "high" sensitivity shall be monitored on a full-time basis. If more than one piece of heavy equipment is being run simultaneously and/or more than 25,000 cubic yards of earth is to be graded per day, then additional monitors will be needed. b. Geological units of "low" sensitivity require monitoring at least once every five days of grading activity.	Grading Monitoring	During Grading	Qualified Paleontologist			

Mit/ Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
						OF COMPLIANCE		
78	Comments and Responses Packet, Page 100	Matrix samples for microvertebrate screening shall be collected and processed during monitoring. If microvertebrates are present, up to 6,000 pounds of matrix will need to be sampled. This material can be placed to one side of the active grading so as not to delay the project. Screening may be done onsite.	Grading Monitoring	During Grading	Qualified Paleontologist			
79.	Comments and Responses Packet, Page 100	All fossils collected need to be prepared to the point of identification. These remains should be donated to an institution with an educational and/or research interest in the materials and a retrievable storage system, such as the Los Angeles County Museum of Natural History and the San Bernardino County Museum. This shall occur within one year of individual project completion.	Fossil Donation	Within One Year After Completion of Grading	Qualified Paleontologist			
80.	Comments and Responses Packet, Page 100	A final report summarizing findings, including an itemized inventory, contextual stratigraphic data, and photographs shall accompany the fossils to the designated repository with an auditional copy sent to the City of Palmdale Planning Department.	Final Report	Within One Year After Completion of Grading	Qualified Paleontologist			
		Archaeological Resources						
		The following mitigation measures pertain to development on or within 50 meters of historic site CA-LAn-1554-H.						
81.	Comments and Responses Packet, Page 100	Prior to issuance of a grading permit, site CA-LAn-1554-H, and the area within a 50 meter radius of the approximate center of the site, shall be subjected to a surface collection by a qualified archaeologist.	Surface Collection	Prior to Grading Permit	Qualified Archaeologist			
82.	Comments and Responses Packet, Page 100	Subsequently, the initial stages of grading shall be monitored by a qualified archaeologist. This archaeologist shall have the power to temporarily direct or divert grading operations to allow evaluation, and if necessary, salvage any exposed artifacts.	Grading Monitoring	During Grading	Qualified Archaeologist			
		The following mitigation measures apply to all development involving grading within the Specific Plan area.						
83.	Comments and Responses Packet, Page 100	During grading operations, the project Construction Manager shall be responsible for informing the City of Palmdale Planning Department within 12 hours of the discovery of any material of an archaeological nature.	Grading Monitoring	During Grading	Construction Manager			
84.	Comments and Responses Packet, Page 101	Should the City Planning Department determine that the uncovered material is of an archaeological nature, a professional archaeologist shall be retained to collect and document the archaeological deposit as quickly as is consistent with good archaeological practice. The archaeologist shall have the power to stop or redirect the construction in order to properly recover the artifacts.	Grading Monitoring	During Grading	City Planning Department			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
84a.	Comments and Responses Packet, Page 101	Following the surface collection and monitoring activity, all the artifacts recovered and features found (if any) should be analyzed and described in a monitoring report. The monitoring report shall be submitted to the Planning Department for review and approval prior to any grading or construction activity on the project site. If it is determined that the site was a homestead, a title search should be done to determine associations with any historic persons, events or themes. The report should present the kind of descriptive and interpretive information usually found in Phase II evaluation reports. An updated form DPR-422 should also be filed with the Archaeological Information Center to include new data discovered as a result of mitigation.	Final Report	Prior to Subsequent Grading	Qualified Archaeologist			
		K. AIR QUALITY						
85.	Comments and Responses Packet, Page 101	To mitigate potential dust generation impacts, the project will comply with State, County and City dust control regulations. These regulations are intended to provide sufficient protection so as to prevent the soil from being eroded by wind, creating dust, or blowing into a public road or roads or other public or private property. In addition to watering prior to and during grading (as discussed in SCAQMD Rule 403), these measures could include interim paving for construction vehicle access and applying chemicals to the soil surface that solidify loose soil.	Construction Monitoring	During Grading	Construction Manager			
86.	Comments and Responses Packet, Page 101	Construction equipment shall use low sulfur fuel (p.05% by weight).	Construction Monitoring	During Grading	Construction Manager			
87.	Comments and Responses Packet, Page 101	Construction activities shall be phased and scheduled to avoid high ozone days.	Construction Monitoring	During Grading	Construction Manager			
88.	Comments and Responses Packet, Page 101	Construction will be discontinued during second stage smog alerts.	Construction Monitoring	During Grading	Construction Manager			

Cond. No.	EIR Reference	Mitigation Measure/Condition of Approval	Monitoring and Reporting Process	Monitoring Milestone	Responsible Party	Initials	Date	Remarks
89	Comments and Responses Packet, Page 101	The applicant shall, as required by the Planning Department and the City of Palmdale's Air Quality Element, implement applicable Tier I Control Measures contained in the Final 1989 AQMP (see Appendix I). General measures which shall be applied for the development include: a. Encourage the use of alternative transportation modes by promoting public transit usage and providing secure bicycle facilities. The applicant will provide bicycle routes (either onstreet or offstreet) where feasible, as determined necessary by the City. The City shall distribute educational material to all businesses regarding the availability of public transit, ridesharing and other alternative transit methods and the location of bicycle routes in the project vicinity. In addition, the educational material shall describe the available methods for reducing energy consumption. b. Provide mass transit accommodations such as bus turnout lanes and bus shelters if determined necessary by the local transit authority. As final plans are developed, these features should be considered.	Development Application Review	Prior to Future Development Approval	City Planning Director			
90.	Comments and Responses Packet, Page 102	Prior to Subsequent Site Plan approvals, energy conservation practices, as required by the Subdivision Map Act, Building Energy Efficiency Standards (California Energy Commission, 1988), and state and local laws, shall be incorporated into the design of the project to have the secondary effect of limiting stationary source pollutants both on and offsite.	Site Plan Review	Prior to Site Plan Approval	City Planning Director			
91.	Comments and Responses Packet, Page 102	All phases of the project shall comply with applicable rules and regulations of the South Coast Air Quality Management District.	Project Review	Ongoing	SCAQMD			
92.	Comments and Responses Packet, Page 102	Projects that exceed SCAQMD threshold levels shall contribute to the Commuter Computer per City requirements.	Development Application Review	Prior to Future Development Approval	City Planning Director			

VIII. Inventory of Unavoidable Significant Effects

VIII. INVENTORY OF UNAVOIDABLE ADVERSE IMPACTS

TRAFFIC AND CIRCULATION

Future (year 2010) traffic would result in three intersections operating at Level of Service E after implementation of recommended mitigation measures.

HYDROLOGY

With implementation of the above mitigation measures, no unavoidable adverse impacts are anticipated.

PUBLIC SERVICES AND UTILITIES

The project represents a significant increase in local water and sewer service demand, and a significant cumulative increase in solid waste generation.

GEOLOGY AND SOILS

~~Development of the proposed Specific Plan will modify existing onsite topography and alter and/or eliminate existing natural drainages.~~ With implementation of the mitigation measures, no unavoidable adverse impacts are anticipated.

LAND USE

Implementation of the proposed Palmdale Trade and Commerce Center Specific Plan will result in loss of existing open space areas, and will result in land use incompatibilities due to development of office, commercial and public administrative uses adjacent to existing offsite residential uses along Avenue P, 10th Street West and Division Street.

BIOLOGICAL RESOURCES

~~Ultimate buildout of the Palmdale Trade and Commerce Center Specific Plan area will result in the loss of desert habitat, including Joshua Tree Woodland.~~ With implementation of the mitigation measures, no unavoidable adverse impacts are anticipated.

NOISE

Project implementation will result in significant individual and cumulative noise increases in the project vicinity. Onsite project impacts can be mitigated with appropriate noise attenuation measures employed on future developments.

Noise impacts upon surrounding areas will be significant without establishment of a City-wide assessment district, or similar means, to mitigate project and cumulative noise impacts.

LIGHT AND GLARE/AESTHETICS

The Palmdale Trade and Commerce Center will result in development of existing open space areas. This will significantly affect the aesthetic character of the project site and may obstruct certain views from neighboring residences. Structures, signs and lighting may also result in significant light and glare impacts.

PUBLIC HEALTH AND SAFETY

None have been identified, after implementation of the required mitigation measures.

CULTURAL RESOURCES

No unavoidable adverse impacts are anticipated with implementation of the recommended mitigation measures.

AIR QUALITY

Implementation and buildout of the Palmdale Trade and Commerce Center Specific Plan is anticipated to have a significant individual and cumulative impact upon local and regional air quality. This impact will be due primarily to increased emissions from mobile sources. It should also be noted that the project provides additional employment and retail services in the Antelope Valley which will result in a regional reduction in air emissions by reducing vehicle miles travelled.

IX. Effects Found Not to be Significant

IX. EFFECTS FOUND NOT TO BE SIGNIFICANT

The City of Palmdale conducted an Initial Study on August 18, 1989 to determine the significant effects of the proposed project and the scope of the Environmental Impact Report. In the course of the evaluation, certain aspects of the project were found to be less than significant. These impacts were determined to be less than significant due to the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type.

In accordance with CEQA Guidelines Section 15128, the following section provides a brief description of potential impact areas marked "no" on the Initial Study, indicating that the potential effect is considered less than significant. Impact areas marked as "maybe" or "yes" on the Initial Study are adequately examined in the appropriate section of the Environmental Impact Report.

A. Earth

A.1. *Does the parcel contain slopes of 15% or greater?* No

The project site is relatively flat and there are no slopes over 15%. Therefore, this does not constitute the potential for a significant impact on the environment.

A.2. *Is any portion of the project site in an area of medium or high landslide risk and are there any known landslides on the subject property?* No

The site is relatively flat and there are no known areas of potential landslides within the project site. Therefore, this does not constitute the potential for a significant impact on the environment. Potential geology constraints are discussed in Section IV.D of the EIR.

A.3. *Is any significant modification of major landforms proposed?* No

Refer to response No. A.2.

A.4. *Does the site include any unique geological features or is it in a significant resource areas?* No

Unique geological features, or unique resource areas are not present within the project site. Therefore, potential for a significant impact exists in this regard.

A.5. *Is the parcel in an area of high shrink/swell potential as shown on Plate 14.6 of the Palmdale Community General Plan?* No

The site has areas of low to medium shrink/swell potential. Soil studies are required in areas of potential shrink/swell conditions and standard mitigation measures are included in projects which will mitigate these conditions to a level of insignificance. Therefore, this does not constitute the potential for a significant impact on the environment (see Section IV.D of the EIR).

Noise

F.3. *Is the project site adjacent to a land use that will, or will the project generate unusual periodic concentrations of human activity?* No

The proposed project could result in concentrations of human activity, depending on the uses which are proposed in the Specific Plan. Although these concentrations of human activity are not anticipated to be "unusual" for a regional commercial zoned area, potential impacts are addressed in Section IV.F, LAND USE and Section IV.G, NOISE of the EIR.

Risk

I.2. *Is the project in the airport potential crash zone?* No

Subsequent analysis of the Specific Plan has revealed that a small portion (approximately 41 acres) of the project is within the airport potential crash zone. A detailed discussion regarding potential aircraft crash hazards from USAF Plant 42 is provided in Section IV.E of the EIR.

I.3. *Is the project within or adjacent to a high fire hazard area as defined by the Palmdale Community Plan?* No

No portions of the proposed project will be within the wildlife hazard area. Therefore, this does not constitute the potential for a significant impact on the environment.

Housing

J.1. *Will the project result in the displacement of people from the existing site?* No

The project does not include any sites with existing residential development. Therefore, this does not constitute the potential for a significant impact on the environment.

Schools

L.1. *Will the proposed project affect the City's schools?* Not applicable.
Although educational impacts were found to be insignificant (N/A), a detailed discussion is provided in Section IV.C of this EIR, with respect to required school impact fees.

Aesthetics

D.1 *Is a major ridgeline or hillside area which is visible from the valley floor involved in the project?*

There are no ridgelines or hillsides within the project site. Therefore, this does not constitute the potential for a significant impact on the environment.

Public Controversy

Q.1 *Is the project or action environmentally controversial in nature, or can it reasonably be expected to become controversial upon disclosure to the public?* No

The environmental impacts of the proposed project site are not expected to be controversial, due to the relatively flat nature of the site, lack of extensive vegetation and compatibility with present land use designations. Therefore, this does not constitute the potential for a significant impact on the environment.

X. Organizations and Persons Consulted

X. ORGANIZATIONS AND PERSONS CONSULTED

CITY/APPLICANT

City of Palmdale
38306 Ninth Street East
Palmdale, CA 93550

- Ms. Sonja Wilson - Senior Planner
- Mr. Asoka Herath - Senior Planner
- Mr. Robert Stanley - Associate Planner
- Mr. Doug Dykhouse - City Traffic Engineer

PREPARERS OF THE ENVIRONMENTAL IMPACT REPORT

Robert Bein, William Frost, & Associates
14725 Alton Parkway
Irvine, CA 92718

- Ms. Barbara Eljenholm, Vice President, Environmental Services
- Mr. Kevin Thomas, Director, Environmental Services
- Mr. Bruce Phillips, Hydrology Engineer
- Ms. Novin Rashedi, Hydrology Engineer
- Mr. William Ryan, Environmental Analyst
- Mr. Kevin Erbe, Assistant Environmental Analyst
- Ms. Alison Johnston, Assistant Environmental Analyst

SUBCONSULTANTS

Schaefer Dixon Associates
22 Mauchly
Irvine, CA 92718

- Mr. Scott Magorien

Pacific Southwest Biological Services
P.O. Box 985
National City, CA 92050

- Mr. Mitchel Beauchamp

RMW Paleo Associates
23352 Madero, Suite J
Mission Viejo, CA 92691
Ms. Marilyn Morgan

Kunzman Associates
4650 Barranca Parkway
Irvine, CA 92714
Mr. Gary Hansen

Mester Greve Associates
280 Newport Center Drive, Suite 230
Newport Beach, CA 92660
Mr. Fred Greve

PUBLIC SERVICE AND UTILITY AGENCIES

Los Angeles County Sheriff Department
1010 West Avenue J
Lancaster, CA 93534
Mr. James Murren
Mr. Gary E. Vance

Los Angeles County Fire Department
1320 Northeastern Avenue
Los Angeles, CA 90063
Forestry Division, Room 264
Ms. Lily Cusick
Captain Ron Hayton

Southern California Edison Company
P.O. Box 4349
Lancaster, CA 93539
Mr. Fred Trueblood

Southern California Gas Company
P.O. Box 457
Tujunga, CA 91042
Mr. Santo Plescio
Mr. Roger Ziemer

Palmdale Water District
2005 East Avenue Q
Palmdale, CA 93500
Mr. Dennis Lamoreaux

Palmdale School District
P.O. Box 900218
Palmdale, CA 93590
Ms. Pamela Johnson

Palmdale Disposal Company
P.O. Box 4040
Palmdale, CA 93550
Mr. Phil Arklin

Palmdale City Library
700 East Palmdale Boulevard
Palmdale, CA 93550
Ms. Linda Storsteen

Palmdale Department of Parks and Recreation
38260 10th Street East
Palmdale, CA 93550
Mr. John Lasagna

Pacific Bell
2130 Ward Avenue
Simi Valley, CA 93065
Mr. Scott Clissold

XI. Bibliography

XI. BIBLIOGRAPHY

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XII. Comments and Responses

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STATE OF CALIFORNIA—OFFICE OF THE GOVERNOR

GEORGE DEUKMEJIAN, Go

OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO, CA 95814

May 11, 1990

MAY 14 1990

Robert Stanley
Ctiy of Palmdale
38306 Ninth Street East
Palmdale, CA 93550

Subject: Palmdal e Trade & Commerce Center Specific Plan, SCH# 89090618

Dear Mr. Stanley:

The State Clearinghouse has submitted the above named draft Environmental Impact Report (EIR) to selected state agencies for review. The review period is now closed and the comments from the responding agency(ies) is(are) enclosed. On the enclosed Notice of Completion form you will note that the Clearinghouse has checked the agencies that have commented. Please review the Notice of Completion to ensure that your comment package is complete. If the comment package is not in order, please notify the State Clearinghouse immediately. Remember to refer to the project's eight-digit State Clearinghouse number so that we may respond promptly.

Please note that Section 21104 of the California Public Resources Code required that:

> "a responsible agency or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency."

Commenting agencies are also required by this section to support their comments with specific documentation. These comments are forwarded for your use in preparing your final EIR. Should you need more information or clarification, we recommend that you contact the commenting agency(ies).

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact Barbara Ceran at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

David C. Nunenkamp
Deputy Director, Permit Assistance

Enclosures

Notice of Completion

Appendix F

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 916/445-0613

See NOTE below

SCH # 89090618

Project Title: Palmdale Trade and Commerce Center Specific Plan

Lead Agency: City of Palmdale

Contact Person: Robert Stanley

Street Address: 38306 Ninth Street East

Phone: (805) 272-9613

City: Palmdale, CA **Zip:** 93550

County: Los Angeles

Project Location

County: Los Angeles **City/Nearest Community:** Palmdale

Cross Streets: Avenue P, 10th St.West, Palmdale Blvd., Division Street **Total Acres:** 756

Assessor's Parcel No. _____ **Section:** 22, portions of 15&27 **Twp.** 6N **Range:** 12W **Base:** _____

Within 2 Miles: **State Hwy #:** 14 & 138 **Waterways:** Amargosa Creek, Lake Palmdale

Airports: U.S.A.F. Plant 42 **Railways:** Southern Pacific Railroad **Schools:** _____

Document Type

CEQA:
- ☐ NOP
- ☐ Early Cons
- ☐ Neg Dec
- ☒ Draft EIR
- ☐ Supplement/Subsequent
- ☐ EIR (Prior SCH No.) _____
- ☐ Other _____

NEPA:
- ☐ NOI
- ☐ EA
- ☐ Draft EIS
- ☐ FONSI

Other:
- ☐ Joint Document
- ☐ Final Document
- ☐ Other _____

Local Action Type

- ☐ General Plan Update
- ☐ General Plan Amendment
- ☐ General Plan Element
- ☐ Community Plan
- ☒ Specific Plan
- ☐ Master Plan
- ☐ Planned Unit Development
- ☐ Site Plan
- ☐ Rezone
- ☐ Prezone
- ☐ Use Permit
- ☐ Land Division (Subdivision, Parcel Map, Tract Map, etc.)
- ☐ Annexation
- ☐ Redevelopment
- ☐ Coastal Permit
- ☐ Other _____

Development Type

- ☐ Residential: *Units* _____ *Acres* _____
- ☒ Office: *Sq.ft.* 217700 *Acres* 147 *Employees* _____
- ☒ Commercial: *Sq.ft.* 270100 *Acres* 261 *Employees* _____
- ☒ Industrial: *Sq.ft.* 267600 *Acres* 175 *Employees* _____
- ☐ Educational _____
- ☐ Recreational _____
- ☐ Water Facilities: *Type* _____ *MGD* _____
- ☐ Transportation: *Type* _____
- ☐ Mining: *Mineral* _____
- ☐ Power: *Type* _____ *Watts* _____
- ☐ Waste Treatment: *Type* _____
- ☐ Hazardous Waste: *Type* _____
- ☒ Other: Hotel, 82,000 s.f. 9.4 Acres

Project Issues Discussed in Document

- ☒ Aesthetic/Visual
- ☐ Agricultural Land
- ☒ Air Quality
- ☒ Archaeological/Historical
- ☐ Coastal Zone
- ☒ Drainage/Absorption
- ☒ Economic/Jobs
- ☐ Fiscal
- ☒ Flood Plain/Flooding
- ☐ Forest Land/Fire Hazard
- ☒ Geologic/Seismic
- ☒ Minerals
- ☒ Noise
- ☒ Population/Housing Balance
- ☒ Public Services/Facilities
- ☒ Recreation/Parks
- ☒ Schools/Universities
- ☐ Septic Systems
- ☒ Sewer Capacity
- ☒ Soil Erosion/Compaction/Grading
- ☒ Solid Waste
- ☒ Toxic/Hazardous
- ☒ Traffic/Circulation
- ☒ Vegetation
- ☒ Water Quality
- ☒ Water Supply/Groundwater
- ☐ Wetland/Riparian
- ☒ Wildlife
- ☒ Growth Inducing
- ☒ Landuse
- ☒ Cumulative Effects
- ☐ Other _____

Present Land Use/Zoning/General Plan Use

Manufacturing Planned Development and Commercial Planned Development

---

Project Description

The project is a Specific Plan governing 756.2 acres of primarily undeveloped desert land. The Specific Plan allows retail, office, industrial and hotel uses, and is intended to create a focus for commercial development in the City of Palmdale. The project will provide needed employment opportunities and support services, and will help to alleviate regional jobs/housing imbalance.

CLEARINGHOUSE CONTACT: 916/445-0613
GARRETT ASHLEY

STATE REVIEW BEGAN: 3-28-90

DEPT REV TO AGENCY: 5-4

AGENCY REV TO SCH : 5-9

SCH COMPLIANCE : 5-11

PLEASE RETURN NOC WITH ALL COMMENTS

AQMD/APCD: 33 (Resources: 3/31)

CMT	SNT	
	•	Resources
		[redacted]
		[redacted]
		[redacted]
		[redacted]
✓	•	Conservation
	•	Fish & Game
		[redacted]
	•	Parks & Rec/[redacted]
		[redacted]
		[redacted]
✓	•	DWR
		[redacted]
	•	Aeronautics
		[redacted]
✓	•	Caltrans # 7
		[redacted]
		[redacted]
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CMT	SNT	
		[redacted]
		[redacted]
		[redacted] (Schools)
		[redacted]
	•	ARB
		[redacted]
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		[redacted]
		[redacted]
	✓	Reg. WQCB # 6 Vict
		[redacted]
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		[redacted]
	•	PUC
		[redacted]
		[redacted]
		[redacted]
		[redacted]
		Other:

(* = sent by lead / ** = sent by SCH)

COMMENT NO. 1

CITY OF PALMDALE
OFFICE OF THE
TRAFFIC/TRANSPORTATION ENGINEER

MEMORANDUM

TO: Robert Stanley, Planner
FROM: Doug Dykhouse, Traffic/Transportation Engineer
RE: Traffic Study for Palmdale Trade and Commerce Center
DATE: March 23, 1990

I have reviewed the third submittal of the traffic study (dated March 21, 1990) and have some comments, which are discussed below. On the whole, the study appears to be complete enough for release for public review and comment.

Page 3

Item d.3 needs clarification. With 8 lanes south of Avenue P, what does 10th Street West look like north of Avenue P? From other parts of the text it is apparent that a fourth northbound through lane should extend from Avenue P to the freeway.

Pages 3 and 4

Items d.5 and f.5 overlap each other. We need clarification as to the extent of the six-lane section versus the eight-lane section.

Page 5

I will repeat my comment for the third time regarding contributions for traffic signal construction: Paragraph "c" under Mitigation Measures needs to include contributions for the cost of those (7) traffic signals which are not in the City's master plan of traffic signals.

Page 20

In the last paragraph, the consultant adequately describes the difference between trip generation used in the DKS study and this study.

Page 37

The consultant has added a discussion about the intersection of Avenue Q and Palmdale Boulevard and its

replacement, an intersection between Street A and Palmdale Boulevard. It is still not clear that the intersection of Avenue Q and Palmdale Boulevard should be vacated. The consultant needs to describe the problems that would arise were Avenue Q and Palmdale Boulevard left as is, with or without a Street A being constructed.

General

There is going to be an enormous increase in traffic on the surrounding street system. The traffic study identifies a very long list of mitigation measures which are all valid but which may or may not be feasible. The cost of construction will be very large and a funding source must be found. More importantly, the effect on adjacent land uses must be considered. The mitigation calls for widening some street sections by as much as three traffic lanes. The cost of additional rights-of-way for the widening and the physical ability to actually construct the widening without seriously jeopardizing the viability of adjoining land use needs to be given due consideration.

DJD/glb4139

cc: Stephen H. Williams, Director of Public Works

RESPONSE NO. 1

Kunzman Associates
Transportation Planning • Traffic Engineering

APR 18 1990

April 16, 1990

Mr. Kevin Thomas
Robert Bein, William Frost Associates
14725 Alton Parkway
Irvine, CA 92718

Dear Mr. Thomas:

This letter provides information in response to the comments offered by Doug Dykhouse regarding our traffic study for the Palmdale Trade and Commerce Center in his memorandum dated March 23, 1990.

Comment:

Item d.3 on page 3 needs clarification. With 8 lanes south of Avenue P, what does 10th Street West look like north of Avenue P? From other parts of the text it is apparent that a fourth northbound through lane should extend from Avenue P to the freeway.

Response:

The mitigation in item d.3 results from the projected daily volume on 10th Street West south of Avenue P. Peak hour intersection analysis also indicates a need for a fourth northbound lane on 10th Street West at Avenue P. The logical ending point for this northbound lane is at the SR-14 overcrossing. Therefore, 10th Street West north of Avenue P would have four northbound and three southbound lanes.

Comment:

Items d.5 and f.5 on pages 3 and 4 overlap each other. We need clarification as to the extent of the six lane section versus the eight lane section.

4650 Barranca Parkway • Irvine, CA 92714 • FAX (714) 559-0260 • Telephone (714) 559-4231

Response:

Item d.5 refers to the six lane street section on Palmdale Boulevard needed to accommodate existing plus project traffic. When the traffic from the Antelope Valley Auto Mall is added, the lane requirements on Palmdale Boulevard increase from six to eight (referenced in item f.5).

Comment:

I will repeat my comment for the third time regarding contributions for traffic signal construction: Paragraph "c" under Mitigation Measures on page 5 needs to include contributions for the cost of those (7) traffic signals which are not in the City's master plan of traffic signals.

Response:

Paragraph c was intended to include those signals which are not in the City's master plan of traffic signals. The paragraph could be reworded to state "the project shall make payments in accordance with existing City policies for the necessary improvements including the installation of traffic signals".

Comment:

The consultant has added a discussion about the intersection of Avenue Q and Palmdale Boulevard and its replacement, an intersection between Street A and Palmdale Boulevard. It is still not clear that the intersection of Avenue Q and Palmdale Boulevard should be vacated. The consultant needs to describe the problems that would arise were Avenue Q and Palmdale Boulevard left as is, with or without a Street A being constructed.

Response:

An intersection on Palmdale Boulevard at Avenue Q or at Street A could be designed so as to provide the required storage area for peak hour traffic flows as discussed on page 37 of the traffic study. The intersection should be aligned to accommodate the major movement (i.e. either right or left turns) approaching Palmdale Boulevard from the north. The existing Avenue Q intersection facilities right turns and the proposed Street A intersection facilities left turns.

The projected peak hour turning movement volumes (for existing plus project plus auto mall) are listed below:

	Peak Hour	
	AM	PM
Right Turns	70	200
Left Turns	110	480

These projections indicate that the intersection of Street A/Palmdale Boulevard would be the preferred alignment.

Comment:

There is going to be an enormous increase in traffic on the surrounding street system. The traffic study identifies a very long list of mitigation measures which are all valid but which my or may not be feasible. The cost of construction will be very large and a funding source must be found. More importantly, the effect on adjacent land uses must be considered. The mitigation class for widening some street sections by as much as three traffic lanes. The cost of additional rights-of-way for the widening and the physical ability to actually construct the widening without seriously jeopardizing the viability of adjoining land use needs to be given due consideration.

Response:

So noted.

If you have any questions or need additional information, please do not hesitate to call.

Sincerely,

KUNZMAN ASSOCIATES

Gary Hansen

Gary Hansen, P.E.

#1612

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063

(213) 267-2481

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

COMMENT NO. 2

APR - 2 1990

March 21, 1990

Kevin Erbe, Asst. Environmental Analyst
Robert Bein, William Frost & Associates
14725 Alton Parkway
P.O. Box 19739
Irvine, CA 92718

Dear Mr. Erbe:

SUBJECT: ENVIRONMENTAL IMPACT REPORT -- PALMDALE (PALMDALE TRADE AND COMMERCE CENTER -- SPECIFIC PLAN) 715-ACRE SITE

Our evaluation of the impact on fire protection and paramedic service for the proposed development is based on the current level of service available within the general area.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICE AVAILABILITY
The subject development will receive fire protection and paramedic service from the County of Los Angeles Fire Department. Fire Station #24, located at 1050 West Avenue P, Palmdale, CA 93550, is the jurisdictional engine company for this property.

EQUIPMENT	DISTANCE*/MILES	TIME/MINUTES	MEN
Engine 24	1.0	1.7	3
Truck 24	1.0	1.7	3
Engine 37	2.4	4.1	3
Paramedic Squad 37	2.4	4.1	2
Engine 129	4.5	7.7	3
Engine 84	7.9	13.4	3

* Avenue P-8 and 5th Street West

PROJECT IMPACT ON SERVICES
Additional manpower, equipment, and facilities will be needed to serve this development. Limited tax revenues have

restricted the Fire Department's ability to meet new growth needs. Although general plans for upgrading fire protection in this area have been developed, the Department will not be able to implement these plans without specific provisions for the necessary manpower, equipment, and facilities. Mitigation of this problem should be required prior to granting approval of this development. The Fire Department will work with the developer to establish appropriate mitigation arrangements for the proposed project. Any and all mitigation arrangements may be superseded by subsequent County ordinance.

DESIGN AND CONSTRUCTION
The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.

Fire flows of up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for a five-hour duration will be required for the commercial/industrial business park.

Final fire flow will be based on the size of the building, its relationship to other structures and property lines, and the type of construction used.

Additional fire life safety requirements will be addressed at building plan check.

Fire Department requirements for access, fire flow and hydrants are addressed when approval for tentative subdivision maps are considered.

FORESTRY DIVISION
The following items have been, or should be analyzed in the Environmental Impact Report:

1. Oak Tree Removal Permit.
2. Rare and/or endangered plants and animals.
3. Soil erosion potential and mitigation.

If you have any additional questions, please feel free to contact me at (213) 267-2481.

Very truly yours,

P. MICHAEL FREEMAN

BY
JOSEPH FERRARA, CHIEF, FORESTRY DIVISION
PREVENTION AND CONSERVATION BUREAU

JF:lc

Response No. 2
Los Angeles County Fire Department
Mr. Joseph Ferrara, Chief, Forestry Division
Prevention and Conservation Bureau
(letter dated March 21, 1990)

2. The information regarding service in the project vicinity and the suggested mitigation measures will be considered by the City during the project review process. Mitigation Measure No. 38 in the Draft EIR provides for the recommended mitigation, which requires that site specific development proposals comply with prevailing requirements of the County Fire Department. In regard to the comment concerning additional manpower, equipment and facilities, it should be noted that the proposed project is a Specific Plan for phased development of the area over a period of several years. Therefore, project impacts will be felt gradually over an extended period. Commonly, property and development taxes are used to expand services when necessary. However, if accrued tax revenues are insufficient, the phased implementation of the project will allow ample time to develop alternate programs to finance necessary improvements.

JN 25957
5/16/90

City of
Santa Clarita

23920 Valencia Blvd.
Suite 300
City of Santa Clarita
California 91355

Phone
(805) 259-2489
Fax
(805) 259-8125

RECEIVED
APR - 4 1990

COMMENT NO. 3

April 2, 1990

Mr. Robert Stanley
City of Palmdale Planning Department
38300 Ninth Street East
Palmdale, California 93550

RE: Review of Draft Environmental Impact Report (SCH# 89090618)
Trade and Commerce Center Specific Plan

Dear Mr. Stanley:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) prepared for the Palmdale Trade and Commerce Center Specific Plan. The City of Santa Clarita has reviewed the DEIR in accordance with the provisions of the California Environmental Quality Act.

Based on the information, discussion and findings contained in the DEIR, the City of Santa Clarita has no comments on the document or the proposed specific plan at this time.

We appreciate your inclusion of the City of Santa Clarita in the environmental review for this project. If you have any questions regarding this letter, please call me at (805) 255-4343.

Sincerely,

Donald M. Williams
Associate Planner

DMW:lf

Response No. 3
City of Santa Clarita
Mr. Donald M. Williams, Associate Planner
(letter dated April 2, 1990)

3. No response required.

JN 25957
5/16/90

COMMENT NO. 4

APR 10 1990

MR. GARRETT ASHLEY
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

April 6, 1990

IGR/CEQA
DEIR
Palmdale
Ave P/Division St/
Palmdale Bl./10th St W
Palmdale Trade and
Commerce Center
Draft Specific Plan
Vic LA-14-R61.77

GARY McSWEENEY - District 7

Project Review Comments

SCH NO. 89090618

Caltrans has reviewed the above-referenced document. Based on the information received, we have the following comments:

The corridor for the SR 138 Freeway will be determined by a Route Location Study. The Avenue P-8 alignment and the "old" adopted alignment may be two of several alternatives that would be considered in this study. The City of Palmdale requested that Avenue P-8 be considered the location of SR 138. However, the R/W width of 100 feet (140 ft. including easement - Fig. 6) designated for Avenue P-8 would not be adequate for a freeway or expressway. The conceptual sketch for the Avenue P-8 interchange at SR 14 does not adequately reflect the magnitude of a freeway to freeway interchange. Also the Circulation Plan should address anticipated generated traffic, impacts to intersections and interchanges at SR 14, and proposed mitigation measures.

If you have any questions regarding this response, please call me at (ATSS) 640-2376 or (213) 620-2376.

Original Signed by

GARY McSWEENEY
IGR/CEQA Coordinator
Transportation Planning and
Analysis Branch

Attachment

cc: Robert Stanley, City of Palmdale

Response No. 4
CALTRANS District 7
Mr. Gary McSweeney, IGR/CEQA Coordinator
Transportation Planning and Analysis Branch
(letter dated April 6, 1990)

4. The EIR provides an impact analysis for the Palmdale Trade and Commerce Center Specific Plan appropriate for the conceptual nature of the project and stage in the review and approval process. The possible future alignment of SR 138 along Avenue P-8 and the associated interchange with SR 14 was analyzed based on available information. The future alignment and configuration has not been decided. The EIR has addressed the anticipated freeway interchange location and has provided a discussion of possible local traffic flow effects of the new freeway and interchange. At this time, a detailed analysis would be inappropriate and beyond the scope of this document. Separate in-depth environmental analysis and review will be required for development of the future SR 138 alignment and interchange. In addition, future development within the Specific Plan area will require further environmental analysis, in accordance with the currently anticipated/adopted freeway alignment and interchange.

Please refer to Response No. 18.c, regarding the deletion of shaded text from the Specific Plan indicating the potential interchange location.

JN 25957
5/16/90

CITY OF PALMDALE
OFFICE OF THE
CITY ENGINEER

MEMORANDUM

RECEIVED MAY - 8 1990

TO: Robert Stanley, Associate Planner

FROM: for John Mundweil, Acting City Engineer

SUBJECT: Draft EIR Palmdale Trade & Commerce Center Draft Specific Plan

DATE: April 18, 1990

Engineering has reviewed the above referenced EIR and has the following comments:

1. This report shall be submitted to the City's geologist, Converse Consultants, Pasadena, for review and comment prior to the EIR. **a**

2. One of the proposed detention basins is offsite. An agreement with adjacent property owners shall be obtained prior to final approval. **b**

3. Discharge from basins is proposed to outlet into a 6'x6.5' trapezoidal channel shown in the City of Palmdale Master Plan for Drainage. Since this channel has not been constructed, the interim condition should be discussed. **c**

4. A Master Sanitary Sewer Plan is currently being developed for the City of Palmdale. This Specific Plan should be coordinated with the Master Sewer Plan. **d**

Should you have any additional concerns that need to be addressed, please feel free to ask.

JM/PS/th
151304181990

cc: Kehar S. Dhinsa, Assistant City Engineer
Peter C. Smee, BSI

Response No. 5
City of Palmdale
Mr. John Mundweil, Acting City Engineer

5.a The City's staff geologist has reviewed the Draft EIR and has submitted comments on the trenching study (refer to attached letter from Mr. Gregory Rzonca of Converse Consultants).

5.b This information will be considered by the City during the project review and approval process. As noted in the comment, any land acquisition necessary as part of Specific Plan implementation, including road and flood control improvements, will be conducted in accordance with state and local property acquisition and compensation requirements (including land appraisal and fiscal impact assessment, and relocation costs). As an alternative to offsite detention basin construction, the City Planning Commission recommended relocation of the offsite detention basin to onsite Parcels 61 and 65, in response to concerns raised by adjacent residents.

5.c Should the referenced Master Plan of Drainage trapezoidal channel not be constructed prior to operation of the detention basin, the interim condition could result in erosion of the presently unlined channel. However, this impact is not considered significant, as the proposed detention basins will be required to be designed to meet or reduce existing stormwater runoff flows leaving the property.

5.d This comment is noted and will be considered by City staff and decision makers in the project review and approval process. As this is a City-prepared Specific Plan, coordination of development in accordance with the Master Sanitary Sewer Plan presently in progress should be facilitated.

JN 25957
5/16/90

May 11, 1990

ENGINEERING GEOLOGIC FEASIBILITY REVIEW APPROVAL
Palmdale Trade and Commerce Center Specific Plan
(Formerly Freeway Business Park)
Palmdale, California
CCW Project 88-31-241-13

DRAFT

This is Engineering Geologic Feasibility Review Approval for the proposed Palmdale Trade and Commerce Center Specific Plan (Formerly Freeway Business Park). The purpose of this letter is to provide our comments regarding a report that describes trenching and evaluation of a photolineament with respect to possible faulting. This letter follows our feasibility review letter dated February 20, 1990. The review approval is based upon the results and conclusions of the Schaefer Dixon Associates letter "Results of Exploratory Trenching and Evaluation of the Photolineament," dated March 6, 1990, consultant's project 9R-123B.

Based on the identified Schaefer Dixon Associates document we understand the suspect photolineament is not associated with faulting. As a consequence, from our perspective the project is feasible and can go to the design phase.

The feasibility approval is contingent upon a thorough geotechnical design report being prepared for project development. That can be performed during the design phase of the project. The design geotechnical study should be based on the grading plan to be used for earthwork. A geotechnical report should be prepared that considers pertinent soils engineering, geologic and hydrogeologic conditions. It would present recommendations including but not necessarily limited to site grading, collapsible soil distribution and treatment, seismicity and location and effects of nuisance water disposal.

If you have any questions please contact the undersigned.

CCW

Gregory F. Rzonca, CEG 1191
Principal Engineering Geologist

Dist: 2/City of Palmdale
Attn: Mr. Frank Iranshad
1/ Robert Bein, William Frost Associates
Attn: Mr. Kevin Thomas
1/ Schaefer Dixon Associates
Attn: Mr. Robert Lynn

COMMENT

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2711
LOS ANGELES, CALIFORNIA 90053-2325

April 18, 1990

REPLY TO
ATTENTION OF

APR 19 1990

Office of the Chief
Environmental Resources Branch

Mr. Robert Stanley
City of Palmdale
38306 Ninth Street East
Palmdale, California 93550

Dear Mr. Stanley:

We have reviewed the Draft Environmental Impact Report (DEIR) for the Palmdale Trade and Commerce Center Specific Plan, as requested in a letter from your office.

Work in waters of the United States might require a permit under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. Please give our Regulatory Branch documentation that clearly describes the area and extent of any proposed work in watercourses and adjacent wetlands to help us make that determination.

If the proposed project involves any Federal assistance through funding or permits, compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470f) and implementing regulations, 36 CFR 800, will be required.

Thank you for the opportunity to review and comment on this document.

Sincerely,

Terrance R. Bergman
Robert S. Joe
Chief, Planning Division

Response No. 6
Department of the Army
Mr. Robert S. Joe, Chief, Planning Division
Environmental Resources Branch
April 18, 1990

6. The portion of Amargosa Creek crossing the project site is within Assessment District 88-1, which includes provision of improvements to this creek segment. A Mitigated Negative Declaration has been prepared for Amargosa Creek improvements within Assessment District 88-1 which addresses 404 permitting. The Palmdale Trade and Commerce Center Draft EIR also addresses biological impacts of Amargosa Creek improvements. The project does not require any Federal funding or assistance.

JN 25957
5/16/90

COMMENT NO.

CITY OF PALMDALE
OFFICE OF THE
TRAFFIC/TRANSPORTATION ENGINEER

MEMORANDUM

TO: Robert Stanley, Planner
FROM: Doug Dykhouse, Traffic/Transportation Engineer
RE: Draft Environmental Impact Report for Palmdale Trade and Commerce Center Specific Plan
DATE: April 24, 1990

I have reviewed the draft EIR and concur with the conclusions reached in the traffic analysis. I have the following comments regarding proposed traffic impact mitigation measures.

Mitigation measure 4.c calls for a second left turn lane at Avenue P-4 and 10th Street West. Since Avenue P-4 is apparently being eliminated as a public through street, this second left turn lane would become unnecessary.

Mitigation measure 4.d calls for a second westbound left turn lane on Palmdale Boulevard at 5th Street West. This does not seem necessary since left turn demand in that direction could not be expected to amount to very much.

Identified on Exhibit 12 but not discussed under mitigation measures are additional traffic signals. Seven of the signals shown are unfunded. Of those, two will not be warranted or necessary because of changes to the circulation system. Those two are Street B at Avenue P and Avenue P-6 at Division. The remaining five need to be added to the list of mitigation measures.

This project will generate nearly 170,000 trips per day which will burden traffic flow over a large area. Despite the proposed mitigation measures, there will be three intersections which will operate at level of service E. It is appropriate that transit service be enhanced and promoted as a further mitigation measure. A transit center should be placed at or near the southeast corner of Avenue P and 10th Street West. The center would allow for buses from several routes to have an off-street transfer point with patron facilities.

The cost of the mitigation measures identified in the EIR as well as the traffic signals and transit center mentioned above is estimated to be on the order of $6.8 million. This

amount could be allocated in different ways, but the most equitable means would be by the amount of traffic generated. Dividing the $6.8 million by the total 169,400 trips per day generated gives an approximate cost of $40 per daily trip. This would be assigned to each land use as follows:

LAND USE	DAILY TRIPS	MITIGATION FEE
Commercial	350/acre	$14,000/acre
Off-Price/Promotional	700/acre	$28,000/acre
Office	250/acre	$10,000/acre
Industrial	66/acre	$2,640/acre
Hotel	7/room	$290/room

e cont.

The above fee schedule or one comparable to it should be adopted along with the Specific Plan. Alternatively, an assessment district could be formed for transportation improvements, however, construction of such improvements would not be necessary for maybe 10 to 15 years. At that time it would be far more difficult to get the participation of developers in the Trade & Commerce Center. It would be easier to collect the funds up front in the form of fees.

In summary, there is going to be an enormous increase in traffic on the surrounding street system. The traffic study identifies a very long list of mitigation measures which will have impacts of their own. As indicated above, a traffic mitigation fee will provide necessary funds but there are land use impacts which need to be considered.

The mitigation measures call for widening some street sections by as much as three traffic lanes. The additional right-of-way requirements may seriously jeopardize the viability of some adjoining land uses. The effect would be to reduce the amount of developable land to such an extent that some commercial projects may become financially infeasible. Alternatively, a reduction in setback requirements would provide room for street widening, would leave developable land, but at the expense of reduced landscaping. These trade-offs need to be weighed by the decision makers. f

DJD/glb4293

cc: Stephen H. Williams, Director of Public Works
Clyde E. Evans, Director of Planning
Asoka Herath, Senior Planner

Response No. 7
City of Palmdale
Mr. Doug Dykhouse, Traffic/ Transportation Engineer
(letter dated April 24, 1990)

7.a-b Mitigation measure 4.D has been deleted in the Final EIR per the staff report submitted to the Planning Commission dated May 3, 1990. The Avenue P-4 segme between 10th Street West and 5th Street West is now included as part of the Speci Plan, therefore, mitigation measure 4.C will remain in the Final EIR.

7.c The following new mitigation measure #1.O will be added to the Final docume per the above mentioned staff report:

Provide traffic signals at the following intersections:

- Street A & P-8, Street A & P-12, Street A and Avenue Q, Street A a Palmdale Boulevard, and Avenue P-12 and 5th Street West.

7.d The following new mitigation measure #1.P will be added to the Final document p the above mentioned staff report:

A transit center should be placed at or near the southeast corner of Avenue P a 10th Street West. The center would allow for buses from several routes to have off-street transfer point with patron facilities.

Land acquisition and construction financing could be provided by the transit distri City, a local assessment district or a combination of the above (see Response N 7.e below). This land use type is permitted within the Planned Development La Use Category proposed for this portion of the Specific Plan area.

7.e The recommended mitigation measure was determined by the Planning Commissi to be duplicative because it recommends a financing method of mitigation measur already existing in the EIR. It was also determined that the recommended financi method was too restrictive and did not account for inflation and other undetermin costs of implementing the traffic mitigation measures. Therefore, the Planni Commission deleted it from the recommended mitigation measure section of the st report.

7.f The comment is noted and will be considered by the City in the project review a approval process. Impacts due to proposed mitigation measures requiring widen of streets will be incorporated into the Final EIR. Potential impacts include, but a not limited to, jeopardizing the viability of adjoining land uses due to reduc developable area, economic impacts of City purchase of private land needed f right-of-way and necessary compensation to land owners and occupants, a reduction in setback requirements resulting in possible increased aesthetic and noi impacts.

JN 25957
5/16/90

ANTELOPE VALLEY UNION HIGH SCHOOL DISTRICT

Robert

44811 SIERRA HIGHWAY, LANCASTER, CALIFORNIA 93534-3226
(805) 948-7655

COMMENT NO. 8

BOARD OF TRUSTEES
ENCE W. RUCKER, PRESIDENT
JAROLD WRIGHT, CLERK
WILDA N. ANDREJCIK
STEVE LANDAKER
SOPHIA WAUGH

ADMINISTRATION
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EDUCATIONAL SERVICES
E. MICHAEL ROSSI
ASSISTANT SUPERINTENDENT
PERSONNEL SERVICES
DARLENE HINKEL
ASSISTANT SUPERINTENDENT
BUSINESS SERVICES

April 25, 1990

APR 30 1990

City Of Palmdale Planning Department
38306 9th. Street East
Palmdale CA 93550

Attn: Robert Stanley
From: Richard Aitken

Subject: E.I.R., Palmdale Trade and Commerce Center

Dear Mr. Stanley:

The draft E.I.R . does not adequately address the impact of the proposed project on schools, resulting from the increased employment generated by the project. The mandatory developer fees may not be adequate to provide for both temporary and permanent school facilities, to accommodate students which are generated as a result of this project.

Sincerely,

Richard J. Aitken

Richard Aitken
District Engineer

RA/skw

ANTELOPE VALLEY HIGH SCHOOL • DESERT WINDS HIGH SCHOOL • HIGHLAND HIGH SCHOOL • LITTLEROCK HIGH SCHOOL
PALMDALE HIGH SCHOOL • QUARTZ HILL HIGH SCHOOL • ANTELOPE VALLEY ADULT SCHOOL

Response No. 8
Antelope Valley Union High School District
Mr. Richard Aitken, District Engineer

8. Development of the Specific Plan area will create job opportunities but will nc create additional housing and therefore is not anticipated to have a significant impac upon school facilities. Payment of development fees should adequately mitigate an project related impacts, in accordance with the intent of Assembly Bill 3180. Th Specific Plan area is anticipated to be developed over a period of twenty years, an developments within the project area will require separate environmental review.

JN 25957
5/16/90

RECEIVED
APR 30 1990

COMMENT NO.9

Linda L. Reynolds
6830 Amber Place
Lemon Grove, CA 92045

April 27, 1990

Planning Commission
City of Palmdale
38306 9th Street East
Palmdale, CA 93550

Dear Commissioners:

I am writing to express my opposition to the drainage and water retention plan proposed in the specific plan entitled "Palmdale Trade and Commerce Center." Under this plan my property (parcel 3006-016-002) east of Division Street between Avenues P-4 and P-5 will be used in its entirety for flood control drainage retention. I am opposed to the proposed rezoning of my property to flood control. a

There are several alternatives to this rezoning. First the flood control plan currently in place for the specific plan area can be implemented. The proposed specific plan does not identify any physical or environmental factors which require that a new drainage plan be developed. b

In addition, the proposed specific plan includes as a second option an alternative flood control plan which does not require the condemnation of my property. Instead of ponding drainage on my property, there is no reason why drainage should not be carried beyond my property and discharged into a channel which will carry floodwaters east to the Sierra Highway.

Should the city adopt the drainage plan and zoning recommended in the specific plan, the city will have to immediately condemn and pruchase my property at its current fair market value. Obviously, rezoning my property to flood control will remove all private property value from my parcel. In my opinion failure to purchase my property would constitute a taking, and would unfortunately leave property owners with no alternative but to file an inverse condemnation suit against the city. c

Condemnation of private property is an extreme act of government, an action which should be undertaken only in the absence of alternatives. Obviously drainage and flood control options are available in lieu of condemnation of my property, and I urge your Commission to reject the drainage plan and condemnation actions proposed in the specific plan for the Palmdale Trade and Commerce Center.

Today the specter of condemnation makes my further planning for

annexation and parcel development a futile effort. In closing
appreciate your consideration of my request, and hope that you wi
act quickly to restore my planning options for development of thi
parcel.

Sincerely,

Linda L. Reynolds

Linda L. Reynolds

Response No. 9
Ms. Linda L. Reynolds

9.a Refer to response No. 5.b.

9.b The City of Palmdale drainage policies and Master Plan of Drainage require that the difference in runoff volume between existing and developed conditions must be retained onsite. This is consistent with requests from Edwards Air Force Base, which receives project runoff. The proposed drainage basins are also strategically located to serve as buffers between onsite and offsite land uses. The City will consider alternatives to the proposed action during the project review and approval process, and as noted in Response No. 5.b.

9.c Refer to Response No. 5.b.

JN 25957
5/16/90

849-7211
843-7111

COMMENT NO. 10

CARL W. JOHNSON COMPANY
CONTRACTORS — ENGINEERS
325 NORTH VICTORY BOULEVARD
BURBANK, CALIFORNIA 91502-1879

STATE LICENS

May 1, 1990

Planning Commission
City of Palmdale
38306 9th St. East
Palmdale, CA 93550

RE: Palmdale Trade & Commerce
Center Specific Plan

Dear Commissioners:

Having recently obtained information regarding subject plan. This letter is to voice my strenuous objection to same. Basically it would seriously and adversely impact the value, use and or occupancy of my property which I have held for over 30 years.

Property Description

S.E. corner of Avenue P and Division St. Tract 7670 Lot 38 that part (Ex. of Sts.) W. of TR No. 21659 and N. of W. Prolongation of C/L of Pictorial St.

This property front's on Ave. P and should be developed for use complementing other currently planned development in this area.

Enclosed please find copy of remarks by fellow property owner Linda L. Reynolds which reflect most of my views in greater detail.

Kindly place my name on your mailing list as respects to any further consideration of this plan.

Carl W. Johnson

Carl W. Johnson, Trustee
CARL W. JOHNSON TRUST

Planning Comm
Clyde E Evans
Bertha Heaton
Sharon McCaughey
Carol Lynch
Sonja Wilson

Response No. 10
Carl W. Johnson Company
Mr. Carl W. Johnston, Trustee

10. Refer to Response Nos. 5.b and 9.b.

JN 25957
5/16/90

COMMENT NO. 11

LAW OFFICES OF
KESTLER & WALSH
LANCASTER OFFICE CENTRE
43770 15TH STREET WEST, SUITE 200
P. O. BOX 4379
LANCASTER, CALIFORNIA 93539-4379

WILLIAM WALSH IV
THOMAS P. KESTLER
ROBERT GILLON
ROBERT T. LEPORE
MARTIN C. BEESON
TERENCE A. BAIRD
PATRICK M. DELANEY
BRIAN C. YEP
TERRY R. MENEFEE

TELEPHONE
(805) 948-16
FAX
(805) 948-496

May 2, 1990

City of Palmdale Planning Commission
708 Palmdale Boulevard
Palmdale, California 93550

Re: Public Hearing on May 3, 1990
Agenda Items 6D and 6E, Concerning Consideration of a Environmental Impact Report for the Palmdale Trade and Commerce Center and Draft Specific Plan
Our Ref. No.: 6-BEDNIA.04-9823-6B

Dear Members of the Planning Commission:

These comments are being submitted on behalf of Dr. Hasan Behdadnia, who is the owner of a 20± acre parcel situated between the Antelope Valley Freeway and Division Street, north of Avenue P-8. This parcel is included in the proposed Palmdale Trade & Commerce Center and is a part of Assessment District 88-1. The property is therefore currently being assessed approximately $24,000 per year in assessment fees levied under Assessment District 88-1. The parcel is currently vacant.

The purpose of this public hearing is to allow the Planning Commission of the City of Palmdale to consider whether to recommend to the Mayor and City Council approval of a Specific Plan and a Environmental Impact Report (EIR #90-1) which, according to the Notice of Public Hearing "serves to inform the public of possible significant environmental effects of the project and recommends possible mitigation measures."

The Notice of Public Hearing further states that an Environmental Impact Report (EIR) has been completed on the project and that a copy of the draft EIR is available for public review at the Planning Department.

It is the position of our client that the draft Environmental Impact Report and the proposed Specific Plan 90-1 are not ready for recommendation of this body to the Mayor or the City Council due to its incomplete nature and the deficiencies contained therein. a

The following comments are for the consideration of the Planning Commission before acting upon this matter.

1. THE PUBLIC HAS NOT BEEN PROVIDED AN OPPORTUNITY TO REVIEW THE REVISED SPECIFIC PLAN WHICH THE PLANNING COMMISSION IS CONSIDERING ON THIS AGENDA:

In February, 1990, a draft Specific Plan for the Palmdale Trade & Commerce Center was prepared for the City of Palmdale and circulated to members of the public. This is not, however, the draft which this Planning Commission or the City Council will be considering. We have been informed that Keith Company is preparing a second draft which contains many changes, some of which are significant.

A revised draft of the Palmdale Trade & Commerce Center has not been made available until the afternoon of May 2, 1990. Due to the delay in availability we have not had the opportunity to review it. However, it has been learned that certain modifications, including but not limited to, deletion of at least one set of secondary roadways (Avenue P-6 and Avenue "B") in the northeastern section and the elimination of the secondary project entryways in the northeasterly section of the Specific Plan. b

Since the Revised Draft of the Specific Plan has not been offered for review by the public, we and the public at large, have not been informed of these changes, their effect upon our client's property, or the effect of such deletions of traffic improvements upon the remaining streets and roadways and the effect of other modifications not yet known.

2. THE DRAFT ENVIRONMENTAL IMPACT REPORT IS NOT CONSISTENT WITH THE DRAFT SPECIFIC PLAN:

As explained above, the Environmental Impact Report is based upon the unrevised draft Specific Plan which was prepared in February, 1990. Changes in the Specific Plan will most certainly affect the results of traffic, sewer, water, drainage, light, noise, growth-inducing impacts and other environmental factors contained in the draft Environmental Impact Report. If there have been modifications in the draft Specific Plan, it would follow that the Environmental Impact Report must also be modified to bring it into conformity with the changes which have occurred in the Specific Plan. The has not been done. c

3. THE BIOLOGICAL REPORT IS DEFICIENT:

Specifically, the zoology survey refers to birds which are "winter visitors" to this area. The survey which, on the basis of the zoology report, was obviously done in the winter time. It is well known that rodents, reptiles and some mammals, including the Desert Tortoise and the Mojave Ground Squirrel are not active in the winter time.

The zoology report is devoid of any reference to the Desert Tortoise which has been placed upon the federal endangered species list. In addition, the Mojave Ground Squirrel, a rodent which is considered threatened by the California Department of Fish and Game, has been summarily dismissed. Although the author of the report states that the presence of Mojave Ground Squirrel has been historically reported from the Antelope Valley area, he or she concludes that it is not expected to occur on the site due to lack of proper habitat and proximity to urban development and roads. This conclusion is deficient, since the survey supporting the report was apparently not done during a period when this rodent would normally be active.

4. THE EIR FAILS TO CONSIDER THE PROPOSED HIGHWAY 138 FREEWAY INTERCHANGE:

The draft Specific Plan states in Section 3.5, Summary Project Description, as follows:

> "Highway 138: CALTRANS previously designated an alignment for Highway 138 north of the Specific Plan area. This route alignment, however, has been developed with other uses, thus precluding its use for Highway 138. CALTRANS is therefore interested in selecting a new route alignment. <u>One preferred alignment would approximate that of Avenue P-8 from SR14</u> east to the planned Regional Airport terminal. This has implications for the Specific Plan area in that <u>this alignment would require a major interchange</u> within <u>the Specific Plan area</u> and offers the opportunity to develop land uses complimentary to the airport." (underlining added)

Further, Exhibit 7 of the Specific Plan illustrates the Future Highway 138 alignment to be determined. Exhibit 10,

the Circulation Plan of the Specific Plan, outlines the potential limits for Future Highway 138 interchange. The outline of the proposed interchange is also shown on Exhibit 12, Exhibit 13, and Exhibit 16 of the Specific Plan.

At an informational meeting conducted by the Palmdale City staff of Dr. Behdadnia was provided with two specific configurations of the proposed 138 interchange. Both of these configurations would deprive our client of his property and leave very little, if any, of the remaining property available for development. This interchange would replace or parallel Avenue P-8 and create a significant impact upon light, traffic, and noise generated by the existence of a freeway interchange where none previously existed. The Enviromental Impact Report fails to address the issues created by the proposed 138 interchange.

5. THE PROPOSED TRAFFIC IMPROVEMENTS ARE INSUFFICIENT TO HANDLE THE TRAFFIC GENERATED BY THE SPECIFIC PLAN:

Table 10 of the Traffic Study located on page B-55 of the Draft Environmental Impact Report demonstrates that several streets will be functioning at unsatisfactory levels even after the proposed improvements have been completed.

It is noted that Avenue P-8 at 10th Street West will be functioning in both the morning and afternoon at a "D" level. Street "B" at Avenue P would be functioning at an afternoon level of "D". Sierra Highway at Avenue P will be functioning at a level of "E". 5th Street West at Palmdale Boulevard will be functioning in the afternoon at a level of "E". 10th Street West at Avenue P will be functioning at an "E" level, and 10th Street West at Avenue P-4 will be functioning at an "E" level in the afternoon. These traffic levels are generally considered to be unacceptable.

These levels remain constant or decrease when projected for the year 2010, as shown on Table 11 of page B-60 of the Environmental Impact Report.

If roadways, such as Avenue "B" and Avenue P-6 are deleted or modified in the revised Specific Plan draft, this will place further burden upon the remaining roadways. If some of these roadways are those already overburdened, the increased traffic will be unbearable. Since the public has not been afforded the opportunity to review a revised Specific Plan draft, it has not been forewarned of these implications.

6. THE ENVIRONMENTAL IMPACT REPORT CONTAINS ERRORS WHICH DIRECTLY AFFECT PROPERTY OWNERS WITHIN THE PROPOSED SPECIFIC PLAN:

EXAMPLE:

Exhibit 19 of the EIR entitled "Water Service Plan" displays a "proposed 16-inch water line extending from the Antelope Valley Freeway east along Avenue P-8 to Division Street, then north to Avenue P. It is not shown as a water line to be installed with Assessment District 88-1 funds. A review of Assessment District 88-1's documentation shows that the water line will, in fact, contrary to the EIR Exhibit 19, be installed with Assessment District 88-1 funds. This error could be very misleading to a purchaser of a property adjacent to this water line, since that prospective purchaser would devalue the property to make up for the cost of constructing the 16-inch water line. g

These comments are based upon an initial review of the Draft Environmental Impact Report and Draft Specific Plan. Since a Revised Draft of the Specific Plan was unavailable and a "Final" Environmental Impact Report is being prepared, but currently unavailable, a detailed analysis was not undertaken. It is anticipated further comments will result from a review of the Revised Environmental Impact Report and Specific Plan when they have been reviewed. h

It is, therefore, of the utmost importance that this property owner and the public at large be given sufficient opportunity to review the revised documents before the Planning Commission recommends adoption. If the Planning Commission recommends adoption tonight, there is insufficient time for an interested party to review and respond to the revisions before the City Council hearing scheduled for May 24, 1990.

Very truly yours,

KESTLER & WALSH

By _____
TERENCE A. BAIRD

TAB:sh
cc: Carol Lynch, Esq. (Via FAX)
Robert W. Toone
Clyde Evans

Response No. 11
Mr. Terence Baird
Law Offices of Kestler & Walsh

11.a This comment will be considered by the City of Palmdale during the project review and approval process.

11.b The Draft Palmdale Trade & Commerce Center Specific Plan has been available for public review since March 27, 1990. In addition, the City has conducted extensive noticing and numerous workshops with affected landowners during which earlier versions of the Draft Specific Plan were discussed. The revisions noted in the comment, during the May 3 and May 14, 1990 Planning Commission hearing, and discussed further below in Response No. 11.c, are primarily a direct result of comments received by the City from affected landowners. These changes are intended to improve overall circulation and land use compatibility of the project. Potentially affected parties were properly notified of the May 3, 1990 Planning Commission hearing during which these changes were discussed, and have been properly notified of the May 14, 1990 Planning Commission hearing during which the Draft Specific Plan was considered, along with the Environmental Impact Report. Similarly, the City will provide appropriate notification of the tentatively scheduled May 24, 1990 City Council hearing, during which the Environmental Impact Report will be considered for certification, and the proposed Specific Plan will be considered for adoption.

11.c The proposed Draft Specific Plan does contain modifications to the original Draft Specific circulated in late March, 1990. These modifications pertain primarily to changes in the circulation plan of the northern portion of the project site. The diagonal collector between 5th Street West and Avenue P-6 has been deleted (Exhibit 10). The alignment of a bike path has been slightly modified (Exhibit 11). Although the Avenue P-4 collector was deleted prior to the May 3, 1990 Planning Commission hearing, the May 14, 1990 Planning Commission hearing resulted in a recommendation for Avenue P-4 to be shown as a public road from 5th Street West to 10th Street West. Finally, the location of an AT&T easement, which was addressed in the EIR, has been added to Exhibit 12. The Final EIR will address the revised Draft Specific Plan. Should the changes to the Specific Plan be determined to be significant, the City staff will prepare appropriate documentation.

For the purpose of clarification, the possible development scenario used in the traffic analysis differs slightly from that described on page 22 of the revised Draft Specific Plan. The development scenario addressed in the Draft EIR is a refinement of a Specific Plan scenario, as discussed at length within Section III of the Draft EIR. It should be noted that development within the Specific Plan area is intended to be driven by market forces, and the Specific Plan is flexible regarding allowable land uses. These factors make projection of buildout scenarios and analysis of resulting impacts difficult. The EIR analysis is based on conservative assumptions and available data, in consideration of the conceptual level of project design and type

of approvals being sought. However, future developments within the project area will be subject to individual environmental review which will utilize updated information regarding land uses within the project area and the surrounding vicinity.

11.d Although the EIR and Biological Resources Assessment did not specifically address the Desert Tortoise, the site survey included a search for specimens, indirect signs of present or past use of the site by the Desert Tortoise, and an assessment of the site in terms of habitat value for the Desert Tortoise. The same is true for the Mojave Ground Squirrel. The site survey was conducted by qualified biologists with expertise in vertebrate and reptilian surveys. The survey did occur in winter when neither species would be active. However, the biologists utilized references and previous biological surveys to determine which species are likely to be present, and searched for indirect signs of species' presence (i.e. scat, tracks, burrows etc.).

The site survey did not locate any direct or indirect signs of Desert Tortoise or Mojave Ground Squirrel use of the site. Furthermore, the relatively disturbed nature of the site and the urbanized condition of surrounding areas would reduce the viability of the site as habitat for either species. Future project applicants will be required to comply with prevailing policies of the California Department of Fish and Game (CDFG), prior to receiving grading permits. The applicable requirements for this site will not be known until CDFG releases its "density maps" indicating estimated habitat value of Desert Tortoise habitat areas.

City staff have not located or been presented with other technical data regarding Biological Resources that would affect the conclusions in the Draft EIR.

11.e Refer to Response No. 4.

11.f Table 12 of the traffic study and Table 12 in the EIR indicate projected intersection levels of service (LOS) upon the proposed project buildout date in the year 2010. Three intersections will be operating at LOS E after implementation of proposed mitigation. This is an unavoidable adverse impact, and, should the project be approved, requires a Statement of Overriding Considerations as part of the findings for the Specific Plan. This impact will be manifested over a period of twenty years during which time further mitigation can be implemented if necessary.

The streets deleted from the Specific Plan dated February 1990 are collector streets (see Response No. 11.c). Their loss is not likely to significantly increase traffic on the major arterials, and is therefore unlikely to significantly increase traffic congestion at intersections along these arterials (traffic that would have been directed to these public streets are now anticipated to be accommodated through private streets and driveways within individual development areas).

As discussed in Response No. 17.b, Avenue P-4 has been recommended to be shown as a public road on the Final Specific Plan Circulation Plan.

11.g This comment is noted and will be incorporated into the Final EIR.

JN 25957
5/16/90

11.h These comments will be considered by the City of Palmdale during the project review and approval process. It should be noted that, in response to this comment and others, the City continued the May 3, 1990 Planning Commission hearing to May 14, 1990.

JN 25957
5/16/90

Barton-Aschman Associates, Inc.

75 North Fair Oaks Avenue
Pasadena, California 91109-1090
USA

Phone: (818) 449-3917
Telex: 675336
Fax: (818) 440-8940

COMMENT NO. 12

May 3, 1990

Mr. Robert Stanley
City of Palmdale
Planning Department
38306 Ninth Street East
Palmdale, California

RE: Comments on Draft Environmental Impact Report
Palmdale Trade and Commerce Center
Draft Specific Plan
(SCH Number 89090618)

Dear Mr. Stanley:

Barton-Aschman Associates, Inc., has reviewed the above-referenced document, concentrating specifically on the traffic and circulation portions of the Draft Environmental Impact Report (DEIR). In general, we found the traffic analysis to be a very conservative evaluation of potential future conditions; so conservative that we believe the analysis may lead to conclusions that overstate the ultimate requirement for the roadway system in the vicinity of the site.

We believe the analysis is conservative in a number of respects:

A. The assumptions of land-use types and amounts.

B. The traffic assignment methodology.

C. The travel characteristic assumptions.

05/03/90 05:19PM *E-S PASADENA P02

In addition, we found some inconsistencies between tables in the report, and we have some ideas for mitigation measures that may be less capital-intensive than those recommended in the DEIR.

The following paragraphs summarize our comments in the above areas.

LAND-USE ASSUMPTIONS

Page 32 of the DEIR clearly states that the EIR had "assumed conservative (high) estimate of potential ultimate development potential" and further that "the EIR also makes conservative assumptions regarding the anticipated types of land uses . . . which directly affects the project traffic generation estimates."

Palmdale decision-makers need to be aware of the fact that these conservative land-use type and square footage assumptions result in very high trip generation estimates for the Specific Plan area.

STUDY METHODOLOGY

The traffic and circulation analysis presented in Appendix B assigns automobile trips to/from the Specific Plan area manually to the anticipated roadway network that will serve the site. A total of 98 percent of the trips were assigned to the roadway network as if they were totally new trips, and all trips have been assigned to completely leave or enter the entire Specific Plan area. No interrelationship among land uses has been taken into account. In effect, all of the developments within the Specific Plan area have been assumed to be totally independent, free-standing, suburban projects that have no relationship with one another.

Page 61 of the DEIR discusses the characteristics of travel to/from the commercial land uses within the Specific Plan area: "During the evening peak hour, people driving home from work stop to shop, creating a minor peak in commercially generated traffic volumes."

Despite this recognition of "pass-by" trips, no reductions were taken for pass-by trips in the circulation analysis. All trips were assigned to the road network as new trips. In the DEIR analysis, a trip that left an employment center, stopped at a retail land use, and then proceeded to leave the study area was counted as three automobile trips (one trip leaving the office, one trip entering the retail, and one trip leaving the retail).

Obviously, the methodology used in the DEIR tends to double-count some automobile trips. The manual assignment methodology used in the DEIR is an appropriate methodology for analyzing the impact of a single project or even a small number of projects. However, when an entire Specific Plan area is evaluated, this methodology has significant shortcomings.

It seems to us that it would have been more appropriate to use a computer assignment model to evaluate the traffic impacts of the Specific Plan area. A model could measure the relationship between land uses, avoid double-counting trips within the study area, evaluate the impacts of pass-by trips, and balance the usage of all of the streets within the study area. For a project as big and as complex as the Palmdale Trade and Commerce Center Specific Plan area, we believe a computer model methodology should have been used for trip generation, distribution, and assignment.

As a result of the manual assignment methodology, the DEIR represents the assignment of too much traffic to the street network.

TRAVEL CHARACTERISTICS

The DEIR trip generation estimates do not assume any reduction in peak-hour automobile trips as a result of transportation demand management or transit usage. All employers with more than 100 employees must submit a plan to the Air Quality Maintenance District that shows how they will work to increase the density of auto occupancy, thereby reducing peak-hour employee commuting. A total of 7,600,000 square feet of development--much of which is oriented toward employment-type land uses--will certainly generate substantial peak-hour commute trips. To ignore transportation demand management as an adjustment to future travel levels or even as a mitigation measure seems very shortsighted.

Again, the result of the assumptions regarding travel characteristics tends to overstate the amount of traffic that will be using the Specific Plan area street system. Again, the tendency is to overstate the required roadway improvements.

ANALYTIC INCONSISTENCIES

Existing Versus Planned Geometrics

Table 9 shows the intersection cross-sections under the conditions of "planned geometrics." Table 5 shows existing lane geometrics. At the intersections of State Route 14 southbound off-ramp at Palmdale Boulevard, State Route 14 northbound off-ramp at Palmdale Boulevard, and Sierra Highway at Avenue P-8, there are inconsistencies between existing and planned geometrics. At all three of these intersections, right-turn lanes which exist under existing conditions have disappeared under future conditions with planned improvements. There does not appear to be any reason for the loss of the right-turn lanes at these three intersections.

Since we have not reviewed the detailed capacity calculations, we do not know if these right-turn lanes would change the volume-to-capacity ratio or the level of service projected at the future intersections.

Fifth Street West Cross-Sections

Table 9 and Table 14 (page 89B) show different cross-sections for the southbound approach at Fifth Street West/Avenue Q. There does not appear to be any reason why these cross-sections would be different.

Application of Existing and Recommended Cross-Sections

Exhibit 6 and the discussion on page 57 indicate that Avenue P-8 exists today as a four-lane, divided street between Division Street and Sierra Highway. Project mitigation calls for the provision of two left-turn lanes and one right-turn lane on Avenue P-8 approaching Sierra

Highway. If Avenue P-8 already exists as a four-lane, divided street, the provision of an additional left-turn lane merely requires adding a turn lane to the existing median area.

Mitigation 1c calls for the provision of eight through lanes on Tenth Street West between Avenue P and Avenue P-8. The DEIR does not show the cross-sections actually tested on Table 11, "Existing Plus Project Geometrics." Table 14 shows existing plus project plus Auto Mall geometrics for some of the intersections along Tenth Street; however, no cross-sections are identified for Tenth Street West at Avenue P-4.

The cross-sections assumed for Tenth Street West/Avenue P show four northbound through lanes and three southbound through lanes (Table 14, page 89B). Tenth Street West/Avenue P-8 shows only three northbound through lanes and two southbound through lanes. It is not clear from the DEIR whether eight through lanes on Tenth Street West has actually been analyzed.

A similar condition exists for Palmdale Boulevard. The "existing plus project plus auto mall" mitigation measures call for the widening of Palmdale Boulevard to eight lanes between Fifth Street West and the State Route 14 freeway (page 91E). However, the intersection cross-sections shown on Table 14 show only three eastbound and three westbound lanes at the State Route 14/Palmdale Boulevard ramp termini.

Since the intersection cross-sections for Fifth Street West/Palmdale Boulevard are not included in either Table 11 or Table 14, it is impossible to tell what cross-section has been tested under future conditions.

Summary

Lane configurations seem to have changed for no apparent reason between existing conditions and a future street system that is purported to represent improved conditions over today's cross-sections. Likewise, it is not clear from the DEIR that all of the corridor widenings have actually been reflected in the evaluation of future intersection performance. If the existing right-turn lanes actually belong in the future condition evaluations, then it is possible that the required cross-sections outlined in the DEIR may be reduced.

MITIGATION SUGGESTIONS

Circulation System

The DEIR tests a very sparse system of collector and minor arterial streets within the Specific Plan area. For example, Traffic Zones 1 and 3 combined total approximately 148 acres, and the land-use plan suggests that these two zones would generate 57,200 automobile trips per day; yet this combination of traffic zones is served by only one collector street. The DEIR makes the assumption that all of the traffic from Zones 1 and 3 will enter and leave these zones at only two locations--Tenth Street West/Avenue P-4 or Avenue P-8/Avenue P-4. Despite the fact that Zones 1 and 3 have approximately one-half mile of frontage on Tenth Street West and three-quarters of a mile of frontage on Avenue P-8, the DEIR assumes only one access point onto both of these streets for Zones 1 and 3.

Similarly, almost 90 percent of the 49,000 trips per day generated to/from Zone 2 are assigned to either Street B or Avenue P-6. Again, well over one mile of arterial street frontage exists for Zone 2, but all traffic is limited to only three entry points to the arterial street system.

A more dense collector street system would dramatically change the conclusions regarding required intersection cross-sections. Three examples follow:

A. ***Extend Street A to the North***--If Street A were extended to the north to serve Traffic Zone 3, it would reduce the projected travel demand at Fifth Street West/Avenue P-8, and it would certainly reduce the five-lane southbound cross-section suggested in the DEIR for this intersection.

B. ***Fifth Street West Connection to Street B***--If Fifth Street West were extended in an easterly direction to intersect with Street B, the traffic to/from Zone 2 could be better distributed along Avenue P, and the capacity problem projected for Street B/Avenue P might very well disappear.

C. *Southbound Frontage Road*--A new southbound frontage road connecting the southbound State Route 14 ramps at Tenth Street West and Avenue P should be investigated. If these two ramps were connected in a "split-diamond" configuration, southbound trips could leave the freeway and enter the Avenue P corridor without impacting the critical intersection of Tenth Street West/Avenue P. Left turns at this intersection would be eliminated, and the level of service would improve. A similar northbound frontage road does not appear to be feasible because of existing residential development in the northeast quadrant of State Route 14/Avenue P.

Parcel Impacts

The minor arterial/collector street system in the DEIR does not appear to take large parcel boundaries into account. For example, Avenue P-4 bisects a major parcel that extends along Tenth Street West from Avenue P to Avenue P-8. This major parcel is intended to accommodate a single, unified retail shopping center in excess of 500,000 square feet. The intrusion of Avenue P-4 through the middle of the shopping center parcel would dramatically affect the feasibility of this project.

A circulation system that extended Street A to Avenue P-4 and looped easterly and southerly to connect with Fifth Street West would serve Zones 1 and 3 without bisecting the shopping center parcel.

The shopping center parcel could be served with two direct access points onto Tenth Street West and access onto the extended Street A. These access points could be designed with enough capacity to eliminate the need for the recommended eight-lane cross-section on Tenth Street West.

Improvement Lane Selection

The DEIR mitigation measures seem to concentrate on major corridor widenings in order to make key intersections along these corridors operate satisfactorily. However, in most cases, simpler and therefore perhaps more feasible improvements have been overlooked in favor of the corridor widening. For example, at the proposed intersection of Tenth Street

West/Avenue P-8, the DEIR recommends that a total of seven north-south lanes on Tenth Street West (three through lanes in each direction and left-turn lanes) be provided. At the same time, Avenue P-8 is assumed to have only two westbound approach lanes. It would obviously be much easier to widen Avenue P-8 in order to achieve satisfactory intersection operations.

Exactly the same choices seem to have been made at the following locations:

- Avenue P/Fifth Street West
- Avenue P/Street B
- Palmdale Boulevard/State Route 14 southbound off-ramp

In virtually all of these cases, the simpler side street widening has been ignored in favor of a major widening along the main street.

Even if one were to ignore the conservative nature of all of the assumptions and methodologies described above and one were to accept the conservative numbers in the DEIR, it appears that the eight-lane recommended widenings on Tenth Street West and Palmdale Boulevard could both be averted by a more aggressive widening program along the minor streets (i.e., minor arterials and collector streets) within the Specific Plan area.

CONCLUSIONS

We believe the DEIR traffic and circulation analysis overstates the impacts of the Specific Plan area development. Therefore, the required mitigation measures also represent an overstatement of the transportation system needed to adequately accommodate the buildout of the Specific Plan.

A traffic generation, distribution, and assignment methodology that recognized the relationships among land uses within the Specific Plan area, the concept of pass-by trips, and the effects of transportation demand management are needed in this DEIR.

A traffic assignment methodology that better balances travel demands along parallel corridors is needed in this DEIR.

A more realistic estimate of the number of minor arterial/collector streets needed to serve these very large traffic zones is needed in this DEIR.

We believe that when the factors mentioned above are taken into account, the lane requirements called for in the DEIR will be reduced. This will be especially true for the recommended eight-lane sections along Tenth Street West and Palmdale Boulevard

Thank you very much for the opportunity to review and comment upon this DEIR, and we would be happy to clarify any of the points raised in this letter.

Sincerely,

BARTON-ASCHMAN ASSOCIATES, INC.

Patrick A. Gibson, P.E.
Senior Vice President

R.K. Kumar, Ph.D.
Senior Associate

PAG:jg

Response No. 12
Barton Aschman Associates, Inc.
Patrick A. Gibson, P.E., Senior Vice President

12. It should be noted that the project traffic study was prepared under the direction of the City traffic engineer, and that opinions from a third technical expert does not necessarily indicate an inadequate traffic study. The general nature of the comments from Barton Aschman Associates suggest that the project traffic study used in the EIR results in excessive traffic projections. The methodology employed was intended to result in a conservative estimate of traffic, in consideration of the relatively conceptual nature of the Specific Plan, which could allow even more intense land uses than assumed in the Draft EIR. It should also be noted that as subsequent more detailed development proposals are submitted, the City will conduct a project review for consistency with the Specific Plan and EIR, and may require more detailed traffic analyses. Refer to the attached comment from Mr. Doug Dykhouse, City of Palmdale Traffic/Transportation Engineer.

    These comments and opinions set forth will be considered by the City Council during the project review and approval process. It should be noted that, at the May 14, 1990 Planning Commission hearing, the Commission recommended to show Avenue P-4 as a public road to provide adequate circulation and to maintain consistency with City traffic improvement policies.

JN 25957
5/16/90

CITY OF PALMDALE
OFFICE OF THE
TRAFFIC/TRANSPORTATION ENGINEER

M E M O R A N D U M

TO: Robert Stanley, Planner
FROM: Doug Dykhouse, Traffic/Transportation Engineer
RE: Letter from Barton-Aschman Associates Regarding Draft EIR for Palmdale Trade and Commerce Center
DATE: May 11, 1990

I have reviewed the May 3, 1990, letter from Barton-Aschman regarding the traffic analysis portion of the EIR. As I indicated to you yesterday, Kunzman Associates should be requested to respond to specific points of the letter. From a general standpoint, Barton-Aschman's review does not present substantiating evidence which would refute the results published by Kunzman.

The EIR traffic analysis is conservative by design. This was a stated objective. The analysis cannot be specific as to size of individual projects nor to individual site access. The analysis is an evaluation of a land use plan, not of any specific site design. Generalizations about trip generation and trip interaction between projects is a necessity. We are required to be conservative in examining environmental impacts.

The Kunzman study is not a stand-alone analysis. They had the benefit of the city-wide transportation analysis conducted by DKS Associates for the circulation element of the general plan. That study is based upon an elaborate, computerized transportation planning model. DKS also studied separately the future traffic conditions on 10th Street West between Palmdale Boulevard and Avenue P. These DKS studies conclude that 10th Street West will become the busiest street in the City of Palmdale and that additional traffic lanes will be required. The results of the Kunzman study are consistent with the earlier studies completed by DKS.

The thrust of Barton-Aschman's letter is to attempt to show that 10th Street West will not need to be widened and that Avenue P-4 is not necessary. The latter point is contradicted by their own statements that a more extensive internal street system is required to alleviate traffic problems. As for 10th Street West, the conclusion that it must, eventually, be widened predates the inception of the Trade & Commerce Center.

We should expect more detailed discussion from Kunzman which should satisfy the Planning Commission that the traffic analysis conducted for the EIR is complete and valid.

DJD/glb4465

COMMENT NO. 13

Urban Residential Alternative

This alternative would develop the site as residential uses. Most of the environmental impacts associated with the proposed project would still exist. This alternative would be inconsistent with the land use and relevant planning designations of the General Plan. This alternative was rejected because it would exacerbate the City's jobs/housing imbalance rather than alleviate the current situation.

Alternate Site

This alternative would relocate the proposed project to an alternative site. This is not anticipated to reduce the projects overall environmental impact. The available site large enough to accommodate this project would be further from the accessibility of SR 14 Freeway and more remote areas. This would not achieve the project's objectives of faciliting positive growth of the employment base which is located next to existing commercial areas and along the freeway.

RECOMMENDATION

Staff recommends that the Planning Commission:

1. Certify that it has reviewed and considered the Draft EIR for the Palmdale Trade and Commerce Center Specific Plan (SCH# 89090618) and that said EIR will be completed in compliance with CEQA.

2. Recommend to the Mayor and City Council to certify that it has reviewed and considered the Draft EIR for the Palmdale Trade and Commerce Center Specific Plan (SCH# 89090618) and that said EIR has been completed in compliance the CEQA.

MOTION

If the Planning Commission wishes to certify the EIR, the following motions should be made:

1. Move that the Planning Commission certify that they have reviewed and considered Environmental Impact Report 90-01 for The Palmdale Trade and Commerce Center, and that the Draft EIR is in compliance with the California Environmental Quality Act; and

2. That the Planning Commission recommends that the Mayor and City Council certify EIR 90-01 for The Palmdale Trade and Commerce Center.

ADDENDUM

The following are staff-initiated corrections to the EIR:

Page 14 & 227
Unavoidable adverse impacts, Geology and Soils, states: Development of the proposed Specific Plan will modify existing on-site topography and alter and/or eliminate existing natural drainages.

This should be changed to read: With implementation of the mitigation measures, no unavoidable adverse impacts are anticipated.

Explanation:

1. There are no significant geologic or topographic features located on the project site.

2. The site is in a disturbed state, due to past farming, partially developed with commercial uses, trash dumping, off-road vehicles, the 14 Freeway and grading for the approved Auto Mall.

3. There are no significant desert wash habitats in connection with the drainages that exist on the project site.

4. The water source is urban run-off.

5. The drainages have been altered numerous times due to surrounding development, as well as, on site disruptions discussed above.

6. The Amargosa Creek which crosses the project site at the northwestern corner, is part of Assessment District 88-1 approved for channel improvements.

Page 18 & 227

Under Unavoidable adverse impacts, Biological Resources, states: Ultimate buildout of the Palmdale Trade and Commerce Center Specific Plan area will result in the loss of desert habitat, including Joshua Tree Woodland.

This should be changed to read: With implementation of the mitigation measures, no unavoidable adverse impacts are anticipated.

Explanation:

1. The site is in a disturbed state. Most of the project site has been disturbed by commercial development, grading, the 14 Freeway, past grazing, fires, grubbing, illegal dumping and off-road vehicles.

2. The Joshua Tree woodland that is on-site is next to major streets, significant traffic and major development. For this reason it can no longer be considered a habitat for wildlife.

3. When the site is developed, a preservation plan will be required and the developer will have to follow the City of Palmdale's guidelines for the preservation of Joshua Trees.

Page 91 & 209

Delete mitigation measure #4.C & 4.D.

Explanation:

1. Mitigation measure 4.C calls for a second left turn lane at Avenue P-4 and 10th Street West. Since Avenue P-4 is apparently being eliminated as a public through street, this second left turn lane would become unnecessary.

2. Mitigation measure 4.D calls for a second westbound left turn lane on Palmdale Boulevard at 5th Street West. This does not seem necessary since left turn demand in that direction could not be expected to amount to very much according to the City's Traffic Engineer.

Page 90 & 209
Add new mitigation measure #1.0, which states:

Provide traffic signals at the following intersections:

- Street A & P-8, street A & P-12, Street A & Avenue Q, street A & Elizabeth Lake Road and Avenue P-12 & 5th Street West

Explanation:

Identified on Exhibit 12 but not discussed under mitigation measures are additional traffic signals. Seven of the signals shown are unfunded. Of those, two will not be warranted or necessary because of changes to the circulation system. Those two are Street B at Avenue P and Avenue P-6 at Division. The remaining five need to be added to the list of mitigation measures.

Page 90 & 209
A new mitigation measure #1.P which states:

A transit center should be placed at or near the southeast corner of Avenue P and 10th Street West. The center would allow for buses from several routes to have an off-street transfer point with patron facilities.

Explanation:

This project will generate nearly 170,000 trips per day which will burden traffic flow over a large area. Despite the proposed mitigation measures, there will be three intersections which will operate at level of service E. It is appropriate that transit service be enhanced and promoted as a further mitigation measure.

Page 161
Section H. Aesthetics: Delete mitigation measure #67.

Explanation:

1. As discussed in the Hydrology Report page C-14 the Amargosa Creek improvement for this area has been designed and is part of an Assessment District. The Amargosa crossings would be comprised of double box culverts with transitions at the upstream and downstream of each crossing.

Page 138
Delete mitigation measure #52.

Explanation:

1. The City currently requires mapping and a Joshua Tree Preservation Plan on a case by case basis. This will determine the required mitigation for the Joshua's on each individual site.

Page 171 & 224
Change mitigation measure #79 to add: and the San Bernardino County Museum; to read:

"...such as the Los Angeles County Museum of Natural History and the San Bernardino County Museum.

Page 189 & 225
Change mitigation measure #89 to delete: to the extent feasible; to add: as required by the Planning Department and the City of Palmdale's Air Quality Element; to read:

The application shall, as required by the Planning Department and the City of Palmdale's Air Quality Element,...

RECOMMENDED MITIGATION MEASURES

The following should be considered as a mitigation measure per the City Traffic Engineer:

The cost of the mitigation measures identified in the EIR as well as the traffic signals and transit center mentioned above is estimated to be on the order of $6.8 million. This amount could be allocated in different ways, but the most equitable means would be by the amount of traffic generated. Dividing the $6.8 million by the total 169,400 trips per day generated gives an approximate cost of $40 per daily trip. This would be assigned to each land use as follows:

LAND USE	DAILY TRIPS	MITIGATION FEE
Commercial	350/acre	$14,000/acre
Off-Price/Promotional	700/acre	$28,000/acre
Office	250/acre	$10,000/acre
Industrial	66/acre	$2,640/acre
Hotel	7/room	$290/room

The above fee schedule or one comparable to it should be adopted along with the Specific Plan. Alternatively, an assessment district could be formed for transportation improvements, however, construction of such improvements would not be necessary for maybe 10 to 15 years. At that time it would be far more difficult to get the participation of developers in the Trade & Commerce Center. It would be easier to collect the funds up front in the form of fees.

In summary, there is going to be an enormous increase in traffic on the surrounding street system. The traffic study identifies a very long list of mitigation measures which will have impacts of their own. As indicated above, a traffic mitigation fee will provide necessary funds but there are land use impacts which need to be considered.

The mitigation measures call for widening some street sections by as much as three traffic lanes. The additional right-of-way requirements may seriously jeopardize the viability of some adjoining land uses. The effect would be to reduce the amount of developable land to such an extent that some commercial projects may become financially infeasible. Alternatively, a reduction in setback requirements would provide room for street widening, would leave developable land, but at the expense of reduced landscaping. These trade-offs need to be weighed by the decision makers.

Respectfully submitted,
CLYDE E. EVANS, Director of Planning

CEE/lob
wp3291

Response No. 13
City of Palmdale
Planning Commission Hearing Staff Report

13. As noted in the Staff report comments, the information will be incorporated into the Final EIR. At the May 14, 1990 Planning Commission hearing, the financing mitigation measure identified on Page 12 of the May 3,1990 staff report will not be included as a project mitigation measure, as City staff feels that existing language in the Draft EIR provides for similar financing options. City staff feels that specific trip generation fees may be established as an alternative financing method.

JN 25957
5/16/90

Comment and Response No. 14
Verbal Comments
Planning Commission Hearing
May 3, 1990

14.a Mr. Bob Reynolds, representing four property owners.

Comment:

Property owners disagree with the proposed location of the detention basins.

Response:

This is comment pertains to the Specific Plan, not the EIR. Refer to Response No. 5.b.

14.b Mr. William [Diemell]

Comment:

Commented on the need for greenbelts along SR 14 and an Avenue P-8 off-ramp.

Response:

The Landscape Concept Plan of the Specific Plan provides extensive landscape screening of properties fronting the freeway with informal masses of evergreen and deciduous trees from the City's approved plant list. The Landscape Concept proposes that individual developments with freeway frontage develop informal landscape treatments, so that the image presented to the freeway user is a window to the park-like character of the interior of the Center. The existing interchanges from SR 14 are anticipated to adequately serve the Specific Plan area and surrounding vicinity.

14.c **Forest City Development**
Mr. Victor [Gurkis]

Comment:

The traffic analysis in the EIR was too conservative due to overly conservative land use assumptions and methodology. Submitted a traffic study prepared by Barton-Aschman Associates, Inc (see Comment No.12).

Response:

Refer to Response No. 12.

JN 25957
5/16/90

14.d **Watt Commercial Development**
Mr. Ron [Haddenless]

Comment:

Mitigation No. 41 on page 124 of the Draft EIR requires impermeable liners for planters. This will restrict the amount of landscaping that can be put on a property.

Response:

The Specific Plan area contains soils with potential for conditions of perched groundwater and hydroconsolidation. Waterproof planters will reduce the amount of water introduced into native soils, thereby reducing the potential for hydro-consolidation. This is a necessary mitigation measure.

14.e Mr. Andy [Eliopolis]

Comment:

His lot along Avenue P will be impacted by the Amargosa Creek re-alignment.

Response:

The Planning Commission responded that this is an Assessment District 88-1 issue, and does not pertain to either the Specific Plan or the EIR (also see Response No. 6).

14.f **[Otaka] House Limited**
Mr. Mike Callagy, Consulting Engineer

Comment:

Performed traffic analysis on the Specific Plan circulation system north of Avenue P-8 and east of 10th Street West. The traffic data provided by the EIR is acceptable, however, their study was more conservative showing higher traffic volumes. According to their study, under the proposed roadway configuration, 5th Street West and Avenue P-8 will have "big" problems.

Response:

Refer to Response No. 17.

State of California

THE RESOURCES AGENCY OF CALIFOR

Memorandum

COMMENT NO. 15

To: Dr. Gordon F. Snow
Assistant Secretary for Resources

Mr. Robert Stanley
City of Palmdale
38306 Ninth Street East
Palmdale, CA 93550

Date: April 30, 1990

Subject: Draft Environmental Impact Report for the Palmdale Trade and Commerce Center SCH# 89090618

From: Department of Conservation—Office of the Director

The Department of Conservation's Division of Mines and Geology (DMG) has reviewed the Draft Environmental Impact Report (EIR) for the Palmdale Trade and Commerce Center Draft Specific Plan for the City of Palmdale. This Draft EIR analyzes the environmental impacts that will result from the development of a 756-acre site, located in western Palmdale, which is planned for a variety of business park land uses. Specific development projects within the study area are not addressed in this EIR. The following reports were reviewed by DMG:

- Draft Environmental Impact Report, Palmdale Trade and Commerce Center Draft Specific Plan, prepared for the City of Palmdale by Robert Bein, William Frost and Associates, JN 25957-2898, March 1990, SCH# 89090618.

- Geology, Soils and Seismicity Portion for EIR for Palmdale Trade and Commerce Center Specific Plan, Palmdale, California, by Schaefer Dixon Associates, Project No. 9R-123B, dated February 8, 1990.

- Results of Exploratory Trenching and Evaluation of the Photolineament, Palmdale Trade and Commerce Center Specific Plan, Palmdale, California, by Schaefer Dixon Associates, Project No. 9R-123B, dated March 6, 1990.

Based on our review of these reports, we offer the following comments:

1. The Draft EIR states that the principal geologic and seismic hazards for the project are the proximity of the site to the San Andreas Fault, approximately one mile southwest of the project site, and the potential for hydrocompaction of soils. The Draft EIR briefly discusses the nearby active faults that may affect the project site. The Draft EIR proposes to mitigate seismic shaking by following the requirements of the Uniform Building Code (UBC). However, data is not provided in the Draft EIR on the peak ground acceleration or duration of strong shaking that can be expected from seismic events on nearby active faults. Because of the proximity of the project site to the San Andreas Fault, a major seismic event on this fault may produce ground accelerations in excess of UBC design criteria. In the development of the UBC code, a policy decision was made to create regional criteria for design and

not criteria for localized or microzone design (ATC, 1984). The project site lies within zone 4 of the UBC which has a seismic zone factor of 0.4, representing an effective peak acceleration of 0.4g (Table No. 23-I, UBC, 1988). However, in the development of the UBC it was recognized that there "may be locations inside of the 0.4g contour where higher values (of effective peak acceleration) would be appropriate" (ATC, 1984).

Therefore, the Final EIR should provide data on the ground motion parameters expected on the site from each causative fault. These parameters should include peak ground acceleration and duration of strong shaking. Additional impacts from this seismic shaking should be discussed. In addition, the design engineer and architects should be provided with information on the seismic setting of the project site so that they may properly evaluate whether UBC design is adequate for the site conditions. a

2. The Draft EIR states that hydrocompaction of shallow soils is a problem for the development of the site. The Draft EIR proposes to mitigate hydrocompaction by either recompacting the soil or constructing deep foundations. Geotechnical boring logs and laboratory testing results are not appended to the Draft EIR. Data is not presented on the maximum depth of the soil susceptible to hydrocompaction, the recommended removal depth of soil, or required depth of the deep foundations. Since the depth to which soils must be removed or foundation extended may have an effect on the feasibility of the project, we suggest that the City and the developer consider the potential impacts of the design alternatives. The Final EIR should include, as a mitigative measure, the requirement that site-specific geotechnical investigations be performed for each structure to determine the depth of soil recompaction and/or deep foundation design. b

If you have any questions regarding these comments, please contact Zoe McCrea, Division of Mines and Geology Environmental Review Officer, at (916) 322-2562.

Dennis J. O'Bryant

Dennis J. O'Bryant
Environmental Program Coordinator

DJO:KC:skk

cc: Zoe McCrea, Division of Mines and Geology
Kit Custis, Division of Mines and Geology

Reference: Applied Technology Council, 1984, Tentative Provisions for the Development of Seismic Regulations for Buildings, ATC 3-06.

Response No. 15
State of California Department of Conservation - Office of the Director
Mr. Dennis J. O'Bryant, Environmental Program Coordinator

15.a The seismic design requirements of the Uniform Building Code are standards used extensively in the City of Palmdale. The following mitigation measure will be incorporated into the Final EIR text:

> Future project applicants for development within the Specific Plan area shall submit detailed geotechnical studies including estimated values of peak ground motion and duration of ground motion, and site-specific geotechnical investigations for each proposed structure to determine the necessary building design to withstand the identified peak ground acceleration and duration of strong shaking, the necessary depth of soil recompaction (for unsuitable materials including soils subject to hydroconsolidation) and/or deep foundation design, in accordance with accepted engineering standards and to the satisfaction of the City Engineer.

15.b Refer to Response No. 15.a.

COMMENT NO. 16

State of California

The Resources Agency

Memorandum

Date : APR 18 1990

To
1. Gordon F. Snow, Ph.D.
   Assistant Secretary for Resources
2. City of Palmdale
   38306 9th Street East
   Palmdale, CA 93550
   Attention: Robert Stanley

From : Department of Water Resources
Los Angeles, CA 90055

Subject : DEIR for Palmdale Trade and Commerce Center Specific Plan, SCH 89090618

Your subject document has been reviewed by our Department of Water Resources staff. Recommendations, as they relate to water conservation and flood damage prevention, are attached. a

After reviewing your report, we also would like to recommend that you further consider implementing a comprehensive program to use reclaimed water for irrigation purposes in order to free fresh water supplies for beneficial uses requiring high quality water supplies. b

For further information, you may wish to contact John Pariewski at (213) 620-3951. Thank you for the opportunity to review and comment on this report.

Sincerely,

Jay Federman
for Charles White

Charles R. White, Chief
Planning Branch
Southern District

Attachments

RECEIVED
MAY 9 1990
STATE CLEARINGHOUSE

DEPARTMENT OF WATER RESOURCES RECOMMENDATIONS FOR WATER CONSERVATION AND WATER RECLAMATION

To reduce water demand, implement the water conservation measures described here.

Required

The following State laws require water-efficient plumbing fixtures in structures:

- Health and Safety Code Section 17921.3 requires low-flush toilets and urinals in virtually all buildings as follows:

  "After January 1, 1983, all new buildings constructed in this state shall use water closets and associated flushometer valves, if any, which are water-conservation water closets as defined by American National Standards Institute Standard A112.19.2, and urinals and associated flushometer valves, if any, that use less than an average of 1-1/2 gallons per flush. Blowout water closets and associated flushometer valves are exempt from the requirements of this section."

- Title 20, California Administrative Code Section 1604(f) (Appliance Efficiency Standards) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, and sink faucets, as specified in the standard approved by the American National Standards Institute on November 16, 1979, and known as ANSI A112.18.1M-1979.

- Title 20, California Administrative Code Section 1606(b) (Appliance Efficiency Standards) prohibits the sale of fixtures that do not comply with regulations. No new appliance may be sold or offered for sale in California that is not certified by its manufacturer to be in compliance with the provisions of the regulations establishing applicable efficiency standards.

- Title 24 of the California Administrative Code Section 2-5307(b) (California Energy Conservation Standards for New Buildings) prohibits the installation of fixtures unless the manufacturer has certified to the CEC compliance with the flow rate standards.

- Title 24, California Administrative Code Sections 2-5352(i) and (j) address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. These requirements apply to steam and steam-condensate return piping and recirculating hot water piping in attics, garages, crawl spaces, or unheated spaces other than between floors or in interior walls. Insulation of water-heating systems is also required.

- Health and Safety Code Section 4047 prohibits installation of residential water softening or conditioning appliances unless certain conditions are satisfied. Included is the requirement that, in most instances, the installation of the appliance must be accompanied by water conservation devices on fixtures using softened or conditioned water.

- Government Code Section 7800 specifies that lavatories in all public facilities constructed after January 1, 1985, be equipped with self-closing faucets that limit flow of hot water.

To be implemented where applicable

Interior:

1. Supply line pressure: Water pressure greater than 50 pounds per square inch (psi) be reduced to 50 psi or less by means of a pressure-reducing valve.

2. Drinking fountains: Drinking fountains be equipped with self-closing valves.

3. Hotel rooms: Conservation reminders be posted in rooms and restrooms.* Thermostatically controlled mixing valve be installed for bath/shower.

4. Laundry facilities: Water-conserving models of washers be used.

5. Restaurants: Water-conserving models of dishwashers be used or spray emitters that have been retrofitted for reduced flow. Drinking water be served upon request only.*

6. Ultra-low-flush toilets: 1-1/2-gallon per flush toilets be installed in all new construction.

Exterior:*

1. Landscape with low water-using plants wherever feasible.

2. Minimize use of lawn by limiting it to lawn-dependent uses, such as playing fields. When lawn is used, require warm season grasses.

3. Group plants of similar water use to reduce overirrigation of low-water-using plants.
4. Provide information to occupants regarding benefits of low-water-using landscaping and sources of additional assistance.

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*The Department of Water Resources or local water district may aid in developing these materials or providing other information.

5. Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.

6. Preserve and protect existing trees and shrubs. Established plants are often adapted to low-water-using conditions and their use saves water needed to establish replacement vegetation.

7. Install efficient irrigation systems that minimize runoff and evaporation and maximize the water that will reach the plant roots. Drip irrigation, soil moisture sensors, and automatic irrigation systems are a few methods of increasing irrigation efficiency.

8. Use pervious paving material whenever feasible to reduce surface water runoff and to aid in ground water recharge.

9. Grade slopes so that runoff of surface water is minimized.

10. Investigate the feasibility of using reclaimed waste water, stored rainwater, or grey water for irrigation.

11. Encourage cluster development, which can reduce the amount of land being converted to urban use. This will reduce the amount of impervious paving created and thereby aid in ground water recharge.

12. Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new developments. This aids ground water recharge.

13. To aid in ground water recharge, preserve flood plains and aquifer recharge areas as open space.

FLOOD DAMAGE PREVENTION

In flood-prone areas, flood damage prevention measures required to protect a proposed development should be based on the following guidelines:

1. It is the State's policy to conserve water; any potential loss to ground water should be mitigated.

2. All building structures should be protected against a 100-year flood.

3. In those areas not covered by a Flood Insurance Rate Map or Flood Boundary and Floodway Map, issued by the Federal Emergency Management Agency, the 100-year flood elevation and boundary should be shown in the Environmental Impact Report.

4. At least one route of ingress and egress to the development should be available during a 100-year flood.

5. The slope and foundation designs for all structures should be based on detailed soils and engineering studies, especially for hillside developments.

6. Revegetation of disturbed or newly constructed slopes should be done as soon as possible (utilizing native or low-water-using plant material).

7. The potential damage to the proposed development by mudflow should be assessed and mitigated as required.

8. Grading should be limited to dry months to minimize problems associated with sediment transport during construction.

Response No. 16
State of California
Department of Water Resources
Mr. Charles R. White
Chief, Planning Branch, Southern District

16.a Recommended mitigation measures regarding water conservation appear in the Draft EIR text. Applicable recommended flood damage prevention measures have been incorporated into the proposed flood control system, including use of onsite detention basins and improvements to Amargosa Creek through Assessment District 88-1.

16.b This comment will be considered by the City of Palmdale during the project review and approval process.

5/11/90
9:10 a.m.
Asoka

COMMENT NO. 17

Cornerstone Engineering, Inc.
2505 "M" St. Bakersfield, CA 93301

May 10, 1990

City of Palmdale
Planning Commission
38306 9th Street East
Palmdale, California 93550

Reference: Palmdale Trade & Commerce Center
Specific Plan

Honorable Commissioners:

Pursuant to your instructions of the May 3, 1990 meeting of the Planning Commission, regarding the above captioned Specific Plan, we do hereby file the following comments. On behalf of our client, Ohtaka House, Ltd., we thank you for your concern and attention to these matters.

On April 24, 1990, we transmitted to your Honorable Commission, a letter stating our concerns over the removal of the P-4 connector from 5th Street West to 10th Street West. In order to keep this letter from being repetitive, we will not elaborate on every point of the previous letter. All of the concerns and data in the letter are applicable to the comments contained in this correspondence. a

We are in possession of a Specific Plan, entitled "Palmdale Trade & Commerce Center, Final Draft, dated May 1990." These comments are in regard to the area bounded by P-8 on the South 10th Street West on the West, "P" Street on the North, and the Antelope Valley Freeway on the East. Concerning the previously mentioned Specific Plan area (PD-7), we strenuously object to the transportation/circulation element of the plan. The May 1990 plan proposes to serve the entire center of the PD-7 planning area with a single cul-de-sac a quarter of a mile in length. Although we have searched at all levels of city administration, we are unable to receive a prudent or reasonable explanation for this situation.

CONSULTING CIVIL ENGINEERING AND LAND SURVEYING
Telephone (805) 325-9474 FAX (805) 322-0129

Under Section 2.0 of the Specific Plan, entitled "Goals, Objectives, and Policies", we find that in regard to Plan area PD-7, the transportation item, "D", is faulted.

Under the Transportation Section, two (2) goals are envisioned, to provide for functional access to the area and to encourage use of intermodal transportation within the plan area. By removing the P-4 connector from 5th Street West to 10th Street West, neither goal is obtainable.

Under the Objective Section, two (2) accomplishments are sought. First, an efficient circulation system within the plan area, and second, a circulation system which maximizes land potential. Parcel 7, as shown on Exhibit "3" is land-locked. The new plan proposes to serve Parcel 7 off of a cul-de-sac over 1,300 feet in length. This is neither efficient, nor does it provide a circulation system, which would maximize land use potential.

Under the Policy Section, Item 2 proposes to limit access onto major arterial and collector roads. While removal of the P-4 connector certainly reduces the number of connections to 10th Street West, it literally over loads the P-8 circulation corridor.

In Section 4.0 of the Specific Plan, components are presented. Under Section 4.2.2 regarding Land Use Plan, the first general concept regards circulation. The characteristic of the circulation system defined in the first paragraph discusses roadways being assigned to property lines, with efforts being made to consolidate smaller parcels. The P-4 alignment from 10th Street West falls exactly on the larger parcel boundaries, between 3A, 3B, 6 & 7. Therefore, the extension of P-4 follows plan concept.

In Subsection 4.4, the Circulation Plan is specifically addressed. The 5th Street West extension North from P-8 is defined as a minor arterial or collector and has 84 feet of Right-of-Way. On page 31, minor arterials and collectors are defined as forming the secondary circulation system within the specific plan.

Additionally, these streets are to be constructed only when the need for access or safety is determined by the City Traffic Engineer. As mentioned previously Lot 7, in the PD-7 area, is land-locked. Therefore, the 5th Street West extension North from P-8 is required to provide proper interior circulation and access to Parcel 7. As stated in the first sentence of the definition of minor arterial and collectors, these streets are designed to provide circulation. Cul-de-sacs do not accomplish this. By definition alone, the 5th Street West extension, North from P-8, must be continued to exit on to another roadway, providing circulation. Again, the most logical and effective way to provide circulation to the interior of PD-7 is to continue Westerly along the P-4 alignment to 10th Street West. In my April 24, 1990 letter, I addressed the safety issues, regarding the termination of 5th Street West, one quarter mile North of P-8. Your attention is directed to that letter and its comments concerning safety. I will expand on these comments at your May 14, 1990 meeting.

Exhibit 10 on page 32 depicts the circulation plan for the PD-7 area. You will notice that the only roadway providing access for the entire interior of this area is a cul-de-sac on the 5th Street West alignment, North from P-8, which is over one quarter mile in length. The development standards of the City of Palmdale allow only a 500 foot cul-de-sac in commercial areas. This length is inadequate to reach the land-locked Parcel 7. To this correspondence, I have attached a drawing of a cul-de-sac designed for four lanes and large enough to allow emergency vehicle turning. The cul-de-sac is 150 feet in diameter!! There is no city standard for such a facility. You will also notice that, except for one short cul-de-sac on the North of the Antelope Valley Freeway, there are no other cul-de-sacs in the plan area, much less minor arterial cul-de-sac's. All minor arterial/collector roadways operate just as the plan specifies, they circulate. a

Under Section 4.5, infrastructure for the plan area is discussed. You will notice that both sewer and water lines occupy the P-4 alignment.

On Exhibit 12, a proposed 30 inch sewer line (Assessment District 88-1) is proposed to connect 10th Street West to P-8. A portion of this alignment runs along the alignment of P-4.

On Exhibit 13, a 12" water main is designed to occupy that same alignment.

As you review the February Draft Specific Plan, the Environmental Impact Report and the May 1990 Final Plan for the area, it is evident that the entire infrastructure system for the PD-7 plan area, was designed to have P-4 extend Easterly from 10th Street West and connect to the 5th Street West extension Northerly from P-8. The entire Environmental Impact Report in general, and the traffic/circulation, air quality, safety, and public facilities infrastructure in specific, address this P-4 minor arterial connector. It would appear that the only explanation for the removal of the P-4 connector would be that the developers of Parcels 3A, 3B, and 4 intend to build a commercial structure across this alignment. Even if the P-4 alignment were eliminated, construction of a structure across this area would be very difficult, if not impossible. As can be seen on plan documents, an A T & T Department of Defense telephone communication line bisects this property. It is our understanding that relocation of this line would not be possible. Additionally, Exhibit 13 of the plan indicates a 12" water line on this alignment from 10th Street West, extending to the East. Clearly, construction of any type of structure on top of the 12" water line or the A T & T Department of Defense communication line, would not be allowed.

As discussed earlier, the Environmental Impact Report proposed for certification on the project was not prepared based on the May 1990 plan. Specifically, the items listed earlier were studied, based on the P-4 minor arterial collector through the center of the PD-7 planning area. On page B-46 of the Environmental Impact Report, the Traffic Consultant indicates that the 5th Street West, P-8 intersection to be at level of service "F" in the P.M. and "E" in the A.M. Even if the traffic study was a bit conservative, as suggested by others at the May 3rd Planning Commission Meeting, adding that P-4 traffic would make an already undesirable intersection problem impossible.

As I mentioned in my April 24th letter, the air quality impacts associated with the removal of P-4 were not addressed in the EIR.

Again, even if the Traffic Consultant overstated the traffic condition in the PD-7 area, at buildout, removal of the P-4 connector would add an additional five million plus miles of vehicle traffic per year to the Plan. d

I have attached to this correspondence, copies of the minutes from the Pre-Application Meeting No. 4-90-1 concerning this property. The last item on page 2 of the Development Advisory Board's comments concern coordinating a drive isle access Westerly from 5th Street West alignment from 10th Street. This is the same P-4 alignment that was shown on the February 1990 draft plan. Clearly the need for public safety and access provisions is documented in the Environmental Impact Report and my correspondence with your Commission.

The first item on page 3 of the Development Advisory Board's report indicates the Fire Department's concern over this cul-de-sac on 5th Street West. The Fire Department's statement is that the 5th Street West cul-de-sac does not provide adequate accessibility. a

We do therefore respectfully present to your Commission two alternatives which will accomplish all of the plan goals, objectives, and policies, and provide adequate circulation and provision for public facilities.

Preferred Resolution

Extend P-4 Easterly from 10th Street West to intersect with the extension of 5th Street West Northerly from P-8. All facilities to be in an 84 foot right-of-way, dedicated to the public for operation and maintenance by the City of Palmdale.

Secondary Resolution

To extend P-4 Westerly from the end of the 5th Street West extension, Northerly of P-8, to approximately 7th Street as a public right-of-way. From thence, continuing Westerly to its intersection with 10th Street West as a permanent access easement for the benefit of all properties in the PD-7 area, in a configuration to handle traffic adequately.

Again, we wish to thank the Chairman and Commissioners for their understanding and attentiveness to these matters. Should you have any questions or concerns, please do not hesitate to call. We will also be present at the May 14, 1990 meeting for discussion of this matter.

Respectfully,

CORNERSTONE ENGINEERING, INC.

Michael J. Callagy, President
Civil Engineer, Reg. Exp. 6/92

REGISTERED PROFESSIONAL ENGINEER
MICHAEL J CALLAGY
NO. 36214
CIVIL
STATE OF CALIFORNIA

MJC/ss

cc: Ohtaka House Company, Ltd.

Response No. 17
Cornerstone Engineering, Inc.
Mr. Michael J. Callagy, President

17.a Pages 1 through 3 of the comment relate to the proposed onsite circulation system, which is a Specific Plan issue and does not raise environmental concerns.

17.b In response to concerns raised in this and other comments, the Planning Commission (at the May 14, 1990 public hearing) recommended adoption of the Palmdale Trade & Commerce Center Specific Plan, with the provision that Avenue P-4 is shown as a public street from 5th Street West to 10th Street West. Should the Circulation Plan be revised at a later date to show Avenue P-4 as a private drive, significant additional traffic impacts could result at the intersection of Avenue P-8 and 10th Street West, as southbound traffic on 10th Street West would be concentrated at Avenue P-8 for eastbound traffic into the Specific Plan area. The AT&T easement will be considered in future site specific design plans. The referenced water line is proposed, and could be relocated if Avenue P-4 were deleted or changed to a private drive.

17.c Please refer to Response No. 11.c.

17.d As the total Average Daily Traffic would not be affected by the Avenue P-4 deletion, no significant impacts would occur relative to air quality and vehicle miles of travel. As noted in Response No. 17.b, the Planning Commission has recommended project approval subject to retaining Avenue P-4 as a public roadway.

JN 25957
5/16/90

COMMENT NO. 18

LAW OFFICES OF
KESTLER & WALSH
LANCASTER OFFICE CENTRE
43770 15TH STREET WEST, SUITE 200
P. O. BOX 4379
LANCASTER, CALIFORNIA 93539-4379

WILLIAM WALSH IV
THOMAS P. KESTLER
ROBERT GILLON
ROBERT T. LEPORE
MARTIN C. BEESON
TERENCE A. BAIRD
PATRICK M. DELANEY
BRIAN C. YEP
TERRY R. MENEFEE

TELEPHONE
(805) 948-1618
FAX
(805) 948-4989

May 14, 1990

HAND DELIVERED

City of Palmdale
Planning Commission
708 Palmdale Boulevard
Palmdale, California 93550

Re: Public Hearing on May 14, 1990 Concerning Draft of Specific Plan and Environmental Impact Report for Palmdale Trade and Commerce Center
Our Ref. No.: 6-BEDNIA-9823-6C

Dear Members of the Planning Commission:

The following comments are submitted on behalf of Dr. Hassan Behdadnia, who is the owner of the 20 plus or minus-acre parcel situated between the Antelope Valley Freeway and Division Street north of Avenue P-8. The comments contained in the earlier letter dated May 2, 1990 to the Palmdale Planning Commission are incorporated herein by reference.

The following are additional comments regarding the proposed recommendation of the Planning Commission that the Specific Plan and Environmental Impact Report be forwarded to the Palmdale City Council for adoption.

It is our client's position that, despite recent modifications to the Specific Plan and the Environmental Impact Report, these documents are not yet complete nor ready for adoption.

Since the previous hearing on May 3, 1990, our client has submitted the Draft Environmental Impact Report to an environmental planning consultant. As a result of the review of the consultant, the following comments and objections are set forth.

1. THE DRAFT ENVIRONMENTAL IMPACT REPORT DOES NOT SUFFICIENTLY COMMUNICATE TO THE PUBLIC OR THE LEGISLATIVE BODY THE ENVIRONMENTAL IMPACTS. THE SPECIFIC PLAN FAILS AS A "SPECIFIC" PLAN. a

Due to the vague nature of the "project description," (the Specific Plan) it is extremely difficult to analyze the manner in which environmental impacts have been described and determined. The EIR "project" is described as "all actions associated with the implementation and

development of the Palmdale Trade and Commerce Center Specific Plan . . . The Specific Plan provides project-wide land use, landscape, circulation, and infrastructure plans." There is a lack of specificity as to the types of land uses which may result from the Specific Plan.

Conceivably, under this non-specific Specific Plan the entire area could be developed with only one land use. It is recognized that a Specific Plan which consists entirely of office buildings will have a different environmental impact than 592 acres of light manufacturing or retail shopping centers. Since the Specific Plan contains little or no specific information as to the land use in any particular location, the Environmental Impact Report is incapable of analyzing the environmental impact which may result from land uses within this Specific Plan.

2. THE DRAFT ENVIRONMENTAL IMPACT REPORT FAILS TO CONSIDER THE CUMULATIVE IMPACT OF THE FOREST CITY REGIONAL SHOPPING MALL UNDER CONSTRUCTION ADJACENT TO THE SPECIFIC PLAN. b

The analysis for Cumulative Impacts, sets forth a series of residential tracts, conditional use permits, and other uses which are in the general area. In addition, it refers to the Antelope Valley Regional Auto Mall as being a Specific Plan within the area encompassed by this Environmental Impact Report. At fault is the fact that the cumulative impact of the regional shopping mall currently under construction on the northwest corner of 10th Street West and Avenue P is not even mentioned among the projects which may have a cumulative impact. Since this major shopping center was not even included in the original analysis, the simple addition of this project to the list of cumulative projects will not remedy the problem. A detailed and total analysis to include the impact of this major shopping center will be necessary before this Environmental Impact Report is complete.

3. THE PROPOSED ANTELOPE VALLEY FREEWAY/HIGHWAY 138 INTERCHANGE SHOULD NOT BE INCLUDED IN THIS SPECIFIC PLAN. c

The Environmental Impact Report has made some provisions for the proposed Antelope Valley Freeway/Highway 138 Interchange. However, the interchange is not a part of the Specific Plan (Executive Summary, page 1).

In addition, there has been, to the knowledge of the undersigned, no official adoption of the interchange by

any governmental authority, including but not limited to, the State of California, CALTRANS, the City of Palmdale, the Regional Airport Commission, or the County of Los Angeles. Since no governmental body has acted upon this freeway interchange, it has no place in the Specific Plan, and therefore should not appear on any depiction of the Specific Plan. The fact that the City of Palmdale has conducted a traffic study which indicates that could be a viable use, is not grounds for including it in the Specific Plan when the City of Palmdale has failed to formally act or adopt such a plan.

Since the proposed "CALTRANS Interchange" is not yet even in a planning stage, it should not be shown on this Environmental Impact Report or Specific Plan. The proposed interchange which does not exist except as the most remote of possibilities does not belong within the Specific Plan or Environmental Impact Report. We note the "Metropolitan Bypass" which was a proposed freeway from Gorman to Palmdale parallel to the California Aqueduct was considered by CALTRANS for many years. It has now been abandoned.

4. THE MANNER OF IMPACT DEFINITION, ANALYSIS OF IMPACTS, IMPACT MITIGATION, AND REMAINING SIGNIFICANT IMPACTS (IF ANY) IS CONFUSING. d

CEQA sets forth the definition of significant impacts as any "substantial adverse change(s) in the physical conditions which exist in the area affected by the proposed project." Guidelines, Section 1500.2(g).

A review of the draft EIR does not allow the reader to determine whether significant effects have been mitigated to a level of non-significance, or whether a Statement of Overriding Considerations will be required for certain impacts such as traffic and/or air quality degradation. Although staff reports indicate that such statements of overriding considerations will be necessary, it is not contained within the EIR.

Further, it is difficult, if not impossible, to trace the analysis of impacts, the mitigation of such impacts, and the resulting significant impacts by a reading of this document. This is further complicated by the fact that the flexible nature of the Specific Plan makes it nearly impossible to conduct an appropriate Environmental Impact Report. For instance, the Environmental Impact Report has assumed a worst-case square footage and land use. However, the Specific Plan has no maximum limit (cap) on square footage

for any particular use. Thus, the entire project could consist of major shopping centers, or office buildings, or, light industry. Since these possibilities exist, this Environmental Impact Report cannot and does not cover such circumstances.

5. THE SPECIFIC PLAN HAS UNDERGONE NUMEROUS CHANGES WHICH REQUIRE MODIFICATION OF THE ENVIRONMENTAL IMPACT REPORT.

A comparison of the draft Specific Plan with the final Specific Plan which was made available on May 2, 1990, reveals there are no less than 98 changes in the document from the first draft. Admittedly, many of these changes are minor and duplicated. However, there are some significant changes which should be addressed in an Environmental Impact Report. Since the Specific Plan was revised after the Environmental Impact Report was prepared, the Environmental Impact Report no longer analyze the same Specific Plan that has now been modified.

The Environmental Impact Report, in some instances, requires a "major overhaul" to accommodate the changes which have been made recently in the Specific Plan.

We are informed by Palmdale City Staff that no revised or "final" Environmental Impact Report will be submitted to the Planning Commission or City Council prior to adoption but rather the Draft Environmental Impact Report together with public comments and the staff's response to comments will be presented for adoption.

6. THE REVISED SPECIFIC PLAN CONTAINS SOME OMISSIONS WHICH CREATE SIGNIFICANT ERRORS IN THE ENVIRONMENTAL ANALYSIS.

The revised Specific Plan contains some significant errors, not the least of which is the oversight of a major location of Joshua trees within the Specific Plan.

In reviewing Exhibit No. 5 entitled "Existing Natural Conditions" in the Specific Plan, the initial draft of the Specific Plan identifies 14 dead Joshua trees and 20 living Joshua trees in the southeast quadrant near the Antelope Valley Auto Center. Exhibit No. 5 "Existing Natural Conditions" of the revised draft indicates the Joshua trees have been eradicated. They are entirely missing from the final draft of the Specific Plan.

Contrary to both depictions, there is a stand of 17 living Joshua trees which are situated in a location further southwest from the depiction in the Exhibit 5 of the draft Specific Plan. The undersigned visited the site and personally counted these trees which were situated directly behind the La Posada Center on the corner of Avenue Q and 10th Street West.

These Joshua Trees did not appear on either the draft Specific Plan or the revised Specific Plan. An oversight of this magnitude indicates the preparers of the Specific Plan were not concerned with detail. Unfortunately, such detail has been omitted throughout the Specific Plan. This lack of detail and specificity therefore contaminates the Environmental Impact Report which was based upon the Specific Plan. These documents are not ready for adoption.

CONCLUSION:

It is clear from the proceeding comments, that these documents are not ready for adoption, nor have they apprised the public and the private property owners within the project with sufficient information to inform them of the environmental impacts. Since both documents are incomplete and deficient, any interested party may challenge the Specific Plan and Environmental Impact Report after the adoption by the City Council and halt the project until such time as litigation has been completed. These deficiencies are of a significant notice and cannot be remedied by comments from staff. The specific Plan and the EIR need restructuring and further analysis to properly inform this legislative body, the City Council and the public at large about the significance of this proposed project.

It is respectfully suggested that more time be taken to assure that the Environmental Impact Report complies with the requirements of CEQA and is in conformity with the Specific Plan which it is intended to support.

Respectfully submitted,

KESTLER & WALSH

By _____
TERENCE A. BAIRD

TAB:sh
cc: Bob Toone
Carol Lynch (via fax)
Clyde Evans

Response No. 18
Law Offices of Kestler & Walsh
Mr. Terence Baird

18.a As discussed in Section III of the Draft EIR, a number of conservative assumptions have been made to allow a reasonable, worst-case analysis of the proposed Specific Plan. The Draft EIR clearly indicates the flexible nature of the Specific Plan, and that further environmental review will be required as site specific proposals are submitted for parcels within the Specific Plan. This is considered consistent with the intent and requirements of the California Environmental Quality Act, as it pertains to full disclosure of potential environmental impacts and initiation of the environmental review process at an early enough stage in the project review process to afford the opportunity for modifying the project to mitigate potentially significant environmental impacts (CEQA Guidelines Sections 15146 - Degree of Specificity and 15168 - Program EIR). This early review and consideration of Specific Plan environmental effects has allowed for several substantive modifications to the Specific Plan, including provision of Avenue P-4 as a public roadway, and deleting the offsite detention basin and relocating it to Parcels 61 and 65 onsite.

18.b The quantitative portion of the cumulative impact analysis is based on the project traffic study, which includes Year 2010 cumulative traffic projections as contained in the City's Draft Circulation Element (the DKS City-wide traffic study). The Year 2010 traffic projections account for the referenced Regional Mall. The qualitative portion of the cumulative impact analysis is considered adequate, and notes that a number of surrounding projects will contribute to the trend of gradual urbanization in the City of Palmdale and surrounding communities.

18.c In response to this and other comments, the Planning Commission recommended deletion of the shaded right-of-way area from the Specific Plan Land Use Plan (a footnote will indicate the general location of a potential future interchange). However, as discussed at the Planning Commission hearing of May 14, 1990 (through testimony provided by the City traffic engineer and a representative of the Palmdale Regional Airport), the Avenue P-8 vicinity is a good candidate for the proposed State Route 138 alignment and interchange with State Route 14 (although no alignment or specific interchange plans have been adopted, this is considered to be at a sufficient stage in the planning process to be considered in the EIR, which is consistent with the intent of CEQA). Therefore, discussions of the potential freeway alignment and interchange will be retained in the Specific Plan text and in the Environmental Impact Report.

18.d The Unavoidable Adverse Impacts section of the Draft EIR identifies significant impacts remaining after mitigation measures. This is also stated in the required Findings and Statement of Overriding Considerations, which are not part of the EIR (they are required as part of the project approval). Refer to Response Nos. 11.c and 18.a for a discussion of the EIR assumptions relative to the flexible nature of the Specific Plan.

18.e Refer to Response No. 11.c.

JN 25957
5/16/90

18.f Natural conditions are shown in the Specific Plan for informational purposes. Omission of the referenced Joshua Trees from the Specific Plan does not have a relationship to the adequacy of the EIR, since an independent biological resources investigation was conducted to map vegetation for the project site. The referenced Joshua Trees are shown on Exhibit 21, EXISTING VEGETATION in the Draft EIR, and are discussed accordingly.

Comment and Response No. 19
Verbal Comments
Planning Commission Hearing
May 14, 1990

Although the 45-day public review period for the Draft EIR ended on May 14, 1990 (at 5 p.m.), the City has provided response to the following comments made at the May 14, 1990 Planning Commission hearing.

19.a **Forest City**
Mr. Simon Harton

Comment:

Mr. Simon presented testimony (provided by Mr. Ran Kumar of Barton Aschman Associates) suggesting that the traffic generation factors used in the project traffic study (as addressed within the Draft EIR) are too high. Mr. Kumar maintains that the traffic study did not adequately account for internal capture and Traffic Demand Management measures, which could reduce average daily traffic.

Response:

Refer to Response No. 12.

19.b Mr. Art Wallace

Comment:

The proposed drainage system should follow existing drainage patterns.

Response:

This comment will be considered by the City during the project review and approval process.

19.c **Law Offices of Kestler & Walsh**
Mr. Terence Baird

Comment:

Mr. Baird cited portions and summarized from his May 14, 1990 letter.

Response:

Refer to Response No. 18.

JN 25957
5/16/90

COMMENT NO. 20

ANTELOPE VALLEY ARCHAEOLOGICAL SOCIETY, INC.

Post Office Box 4514 • Lancaster, California 93539

RECEIVED MAY 15 1990

May 9, 1990

City of Palmdale
38306 Ninth Street East
Palmdale, CA 93550

ATTN: Mr. Robert Stanley

Dear Mr. Stanley

Thank you for the opportunity to review and comment on the Palmdale Trade and Commerce Center Specific Plan. Our interest is basically in the cultural resource technical report titled Cultural Resources Reconnaissance of the Freeway Business Park, Palmdale, 960 acres in Los Angeles County California (Becker and Bissell).

It appears to us that adequate efforts were made to identify potentially significant cultural resources within the project area. The proposed surface collection and monitoring program for site LAn 15544 will probably be adequate to prevent the loss of any significant information. We would, however, like to suggest additional measures that are implied but not clearly stated in the recommendations sections. Following the surface collection and monitoring activity, all the artifacts recovered and features found (if any) should be analyzed and described in a monitoring report. If it is determined that the site was a homestead, a title search should be done to determine associations with any historic persons, events or themes. The report should present the kind of descriptive and interpretive information usually found in Phase II evaluation reports. An updated form DPR-422 should also be filed with the Archaeological Information Center to include new data discovered as a result of mitigation.

We appreciate Palmdale's efforts to address impacts to cultural resources in the planning process.

Sincerely

Richard Norwood
Chairman, Environmental Review Committee

Response No. 20
Antelope Valley Archaeological Society
Mr. Richard Norwood, Chairman
Environmental Review Committee

20. The referenced additional mitigation measures will be added to the Final EIR.

JN 25957
5/16/90

#200, Lancaster, previously submitted two letters to Council dated May 22nd & 24th and asked that they be part of the original record, opposed to EIR; Mr. Victor Grgas, of Forest City Development presented a letter to Council, spoke in favor. The motion was made by Councilmember Davies and seconded by Councilmember Hamm to close the Public Hearing. There were no objections and it was so ordered.

RESOLUTION NO. 9 Certifying Envir mental Impact Re 90-1 for Plmd Trade & Commerce Specific Plan.

Mayor Knight presented Resolution No. 90-142, a Resolution of the City Council of the City of Palmdale Certifying Environmental Impact Report 90-01 for the Palmdale Trade and Commerce Center Specific Plan. The motion was made by Councilmember Hamm and seconded by Councilmember Davies to adopt Resolution No. 90-142. After discussion among Council and Director of Planning Evans, the motion carried by a unanimous vote.

PALMDALE TRADE & Commerce Center Specific Plan 90

Public Hearing Item 7B) Palmdale Trade and Commerce Center Specific Plan 90-1. Approval by Ordinance of a Specific Plan to serve as a means of managing the use of land, establishing provisions for detailed site development and provision of a comprehensive approach to infrastructure planning and financing. Subject site consists of approximately 756 acres bounded by Avenue P and the Antelope Valley Freeway to the North, Palmdale Boulevard to the South, Division Street to the East and 10th Street West to the West. Director of Planning Evans presented the staff report. Mayor Knight opened the public hearing. Wishing to give testimony: Mr. Richard Combs, 2716 Ocean Park Blvd., Santa Monica, Watt Commercial Development, in favor with modifications, presented folder to Council containing information, he also stated that representatives from Dean Whitter Realty were present to answer any questions; there was discussion among Council; Mr. James Colbert, Attorney specializing in Land Use Consulting representing Forest City Development, 400 So. Hope St., Los Angeles, presented to Council documentation on Dr. Kumar's credentials and presented a petition signed by homeowners in favor of street lay out and additional information on this item; Mr. John Hunter, President of Watt Commercial Development, 2716 Ocean Pacific Highway Blvd., Santa Monica; Mr. Ted Fiorito, 41843 N. 10th St. W., Lancaster, in favor of Planning Commission's recommendation; Ms. Diana Whitfield, 2025 E. Plmd. Blvd., representing Trichell Corporation, sent letter earlier in day to Council; Mr. Ron Ordin, 1211 E. Olympic Blvd., Los Angeles, stated, "I represent the owner of the parcels 45 and 46. It's annex 4 on this map and 45 and 46 on A and B. Our main concern is the detention basin and the enlargement of Division Street. (He

approached the maps.) There's approximately a little over 2,000 feet here (pointing to map) and about 2,000 feet here. What we propose is to move the detention basin against the freeway since that's where the water actually comes around here instead of diagonally on this land and across the property into the detention basin. Put it against the freeway as you have here (pointing to map) and as it's several miles north from Lancaster, L.A. County, this detention basin would be against the freeway and it is many miles out there. Also, you want to widen Division Street to make it a more major street and we've already given you 40 to 50 feet on my property. And my proposal today is to give you the land that you need, and we'll give it to you free. It's 150 feet here wide (pointing to map) and 100 feet wide here in addition to the 40 we've given you. You have a frontage road in for a bumper for these homes, so you have enough for a frontage road and another 100 feet for widening of Division Street. We have done a survey and got the majority of the homeowners here. We gave them a copy of your Exhibit 16, figure 7, according to your plans, and submitted it last week. They objected to having the detention basin across from their house. They would rather not. And what we propose is when and if we build this commercial center here (pointing to map), is to have two driveways only on Division Street and heavily landscaped as it is across the street." Further discussion. Councilmember Ledford asked, "So you are not in opposition to developing that secondary roadway? They're not going to be on Division as we see today?" Mr. Ordin, You'd want a frontage road and widen Division Street. We're prepared to give you whatever land you need free of charge." Councilmember Ledford, "So they're not going to get the increased traffic load on their neighborhood street." Mr. Ordin, "No, they'll have their frontage road. And then they'll have Division Street as separate." Councilmember Ledford, "Plus a wider buffer?" Mr. Ordin, "The frontage road would be 40?" Dir. of Planning Evans, "The frontage road is approximately 64 feet." Mr. Ordin, "Sixty-four. And Division Street right now is like 80 feet and you want it 100, so we would give you whatever else you need. Approximately half a million square feet is what we're proposing to give you free of charge and if you put a value of $10 a foot, we're talking $5,000,000. So we think it is an advantage to our property and an advantage to the City to get this place and these locations." Mayor Knight, "Were we previously aware of this proposal or is this the first time we've heard of it." Mr. Ordin, "The water to go to the retention basin you show on your figure, your Exhibit 16 is a diagonal across our property and

that makes it very difficult to build on the property. They're taking the water where it's not and trying to put it someplace else. This way it would be easy if it was against the freeway to put the water right into the detention basin." Mr. Toone, "The existing master plan for storm drainage calls for a pipe against the freeway. Is that correct?" City Engineer Mundweil, "Yes, the existing master plan calls for a 66 inch storm drain along the freeway and if I understand Mr. Ordin, he proposes to offer or dedicate a detention basin right-of-way of approximately 150 feet." Mr. Ordin, "By approximately 2,000 feet long across that whole property." Mr. Mundweil, "From a hydrolic standpoint and a drainage basin use standpoint, my first judgement is that, that is a feasible thing. I imagine having that right-of-way we could probably engineer a detention basin that can be incorporated into the overall master plan." Mr. Toone, "That would be consistent with the drainage that we are presently looking at for the auto mall. Is that correct?" Mr. Mundweil, "Yes. It could be just extended on up above Avenue Q and then carried on over easterly as shown on the proposed plan."; Mr. Mike Callfgy, Cornerstone Engineer, 2505 M St., Bakersfield presented maps to Council; Ms. Mehrshid Malakouti, 6407 E. Del Norte, Anaheim Hills; Mr. Allen ?, 180 Newport Center, Newport Beach; Mr. John Hunter, Watt Commercial; Mr. Terry Baird, Kestler & Walsh, 43770 15th St. West, #200, Lancaster, in favor of Planning Commission's recommendation, and read part of his recommendation: "The intersection of Avenue P-8 and State Route 14 is one of several alternatives which may be considered by Cal Trans as a future freeway interchange."; Mr. Kirk Lazarik, Concord Development, 1888 Century Pk. East. The motion was made by Councilmember Davies and seconded by Councilmember Hamm to close the public hearing. There were no objections and it was so ordered. Mayor Knight summarized: "What I am suggesting is that we approve the Resolution with the appropriate comments considering three different items. One being the off-ramp at P-8 to remove any shading associated with the P-8 off-ramp but maintain a notation indicating the possibility of a Cal Trans off-ramp at P-8. for the staff to continue evaluating the detention basin and to take into consideration Mr. Ordin's generous offer of this evening and see if that cannot be worked into the master flood plan; three, we adopt the P-4C as depicted on the board with staff working with both developers, because they are both interdependent, they both have agreed to work in support of each other and they both recognize the requirements of those particular developments. I think there is an aura of

cooperativeness there that we can satisfy the requirement from a traffic point of view; and I would suggest that we can approve the specific plan with those 3 items as still open if you will." Councilmember Hamm seconded Mayor Knight's motion. Councilmember Davies stated that, "It is with the complete understanding about the possibility of aligning the private road with P-4, that is apparently a good idea with the concurrence of the fire department. With those understandings I agree with the motion." Assistant Lynch suggested that if Council is definitely endorsing number C and is also definitely endorsing leaving a notation on the map as the Planning Commission suggested regarding the interchange, that those be defined and then leave the one issue open in respect to working with Mr. Ordin and determining the final lay out of the detention basin. Mayor Knight stated that he can define it in terms of understanding the specifics of the projects. He stated, "Specifically, we can indicate C is an easement, an access road of private access between the Watt Industries and the Otaka House." Mayor Knight asked Asst. Attorney Lynch if she had any additional words to add and she stated that was fine, she just wanted to make sure that Council was giving specific direction on that issue and the whole issue was not left open. She said, obviously as you suggested the final alignments will have to be worked on. Mayor Knight stated, yes and that is direction to staff in order to work with those two developments and the other one was just to remove the shading area and identification or specific identification of an off-ramp and leave a notation that there is that possibility of an off-ramp. Director of Planning Evans stated that staff would suggest in terms of the private accesses that the specific plan be so noted that there would be a private access, reciprocal access, between the properties and the width shall be determined by the City's traffic engineer to be able to adequately accommodate traffic. Councilmember Ledford stated two of his concerns regarding parcels 1266-A, 66-b and 5, "Number 1, what type of cut offs are we going to be utilizing to service those parcels, and number 2, how are we going to be guaranteed aesthetically those parcels are going to be built compatible with the Watt development and the regional mall corner. What I am looking for is something aesthetically somewhat compatible." Director of Planning Evans stated, "In response to your first question, the type of access the parcels will have will be a right in, right out only, kind of situation, there will not be the availability of a median break to allow left hand turn movements in that area because of the volume of traffic

and the short distance there is between the freeway interchange and 10th Street." He further explained, in terms of aesthetics, the specific plan has incorporated a very good development standards in terms of landscaping requirements; and also through the site plan review process, we can assure compatible with the surrounding development. There was further discussion. Council voted. The motion carried by a unanimous vote.

Resolution No. 90-152, a Resolution of the City Council of the City of Palmdale Adopting Specific Plan 90-1, (Palmdale Trade and Commerce Center) adopted as amended.

RESOLUTION NO. 90
Adopt Specific Pl
90-1, Plmd. Trace
Commerce Ctr.

Agenda Item 8) Public Comments. There was no one wishing to speak.

PUBLIC COMMENTS

Mayor Knight called for a recess at 9:43 p.m. and called the Council back to order at 9:48 p.m.

BREAK

Agenda Item 9) Closed Session. Mayor Knight recessed the Council at 9:49 p.m. to the Community Redevelopment Agency and called both back to order at 9:52 p.m. and recessed both to a closed session. The City Council and Community Redevelopment Agency were reconvened at 10:56 p.m. City Attorney Rudell stated that the City Council and the Redevelopment Agency adjourned to closed session to discuss pending litigation, namely the matter of Palmdale Redevelopment Agency vs. Germano, a personnel matter, and a matter involving a possible property acquisition which could involve the exercise by the Agency and/or the City Council of its powers of eminent domain.

CLOSED SESSION

Mayor Knight adjourned the Council at 10:57 p.m. to the next regular meeting of June 14, 1990 at 7:30 p.m. There were no objections.

ADJOURNMENT

Adopted this 11th day of October 1990 by the following vote:

AYES: Councilmembers Ledford, Davies, Hamm, Root & Mayor Knig

NOES: None

ABSENT: None ABSTAIN: None

Wm. J. Knight, Mayor

ATTEST:

Victoria L. Denham
City Clerk

XIII. Appendices

A. Initial Study/Notice of Preparation

CITY OF Palmdale
INCORPORATED AUGUST 24, 1962
FIRST CITY OF ANTELOPE VALLEY

CITY OF PALMDALE

RECEIVED
[illegible] - 4 1989
ROBERT [illegible], WM. FROST

Wm. J. "Pete" Knight
MAYOR
Thomas H. Smith
MAYOR PRO TEM
Daniel C. Becker
COUNCILMEMBER
Joseph P. "Joe" Davies, Jr.
COUNCILMEMBER
Janis C. Hamm
COUNCILMEMBER

TO: All Interested Parties

FROM: Planning Department

REVIEW DATE: August 28, 1989

SUBJECT: REQUEST FOR REVIEW OF THE INITIAL STUDY AND NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE FREEWAY BUSINESS PARK SPECIFIC PLAN IN THE CITY OF PALMDALE

The attached Initial Study and Notice of Preparation for the Freeway Business Park Specific Plan EIR has been forwarded to you for possible comment relating to your specific area of interest. Responses should be received by the Planning Department within 30 days of your receipt of this notice. Comments should be directed to:

City of Palmdale
Planning Department
38306 9th Street East
Palmdale, CA 93550
Attn.:Sonja Wilson
(805) 272-9613

Copies sent to:

<u>City of Palmdale</u>

- ✓City Council (5)
- ✓Planning Commission (5)
- ✓City Attorney's Office
- ✓City Manager
- ✓City Clerk
- ✓Planning Director
- ✓Case Planner
- ✓Environmental Planner
- ✓Counter Copy
- ✓Building and Safety
- ✓Engineering
- ✓Archaeological Survey Office, UCLA
- ✓Antelope Valley Union High School District
- ✓Department of the Air Force
- ✓City of Lancaster
- ✓Applicant
- ✓Southern California Association of Governments
- ✓Antelope Valley Archaeological Society

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CITY FAX 805/273-6368 PLANNING/ENGINEERING FAX 805/274-7613

✓Traffic Engineer
✓Parks and Recreation
✓Los Angeles County Sheriff's Dept.
✓Los Angeles County Fire Dept.
✓Los Angeles County Dept. of Public Works
✓Palmdale Water District
✓Los Angeles County Water Works District #34
✓Los Angeles County Regional Planning
✓Los Angeles County Sanitation District #20
✓Palmdale School District
✓Westside Union School District
✓Lahontan Regional Water Quality Control Board
✓Public Library - Palmdale

wp1053/SIW

NOTICE OF PREPARATION

TO:

State Clearinghouse
Project Review
Office of Planning Research
1400 Tenth Street
Sacramento, CA 95814

FROM:

Palmdale Planning Dept.
Attn: Sonja Wilson
38306 9th Street East
Palmdale, Ca 93550

SUBJECT: NOTICE OF PREPARATION OF A
DRAFT ENVIRONMENTAL IMPACT REPORT

The City of Palmdale will be the Lead Agency and will prepare an Environmental Impact Report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study _X_ is, ___ is not, attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Sonja Wilson at the address shown above or telephone (805) 272-9613. We will need the name for a contact person in your agency.

PROJECT TITLE: Freeway Business Park Specific Plan

PROJECT APPLICANT, if any: City of Palmdale

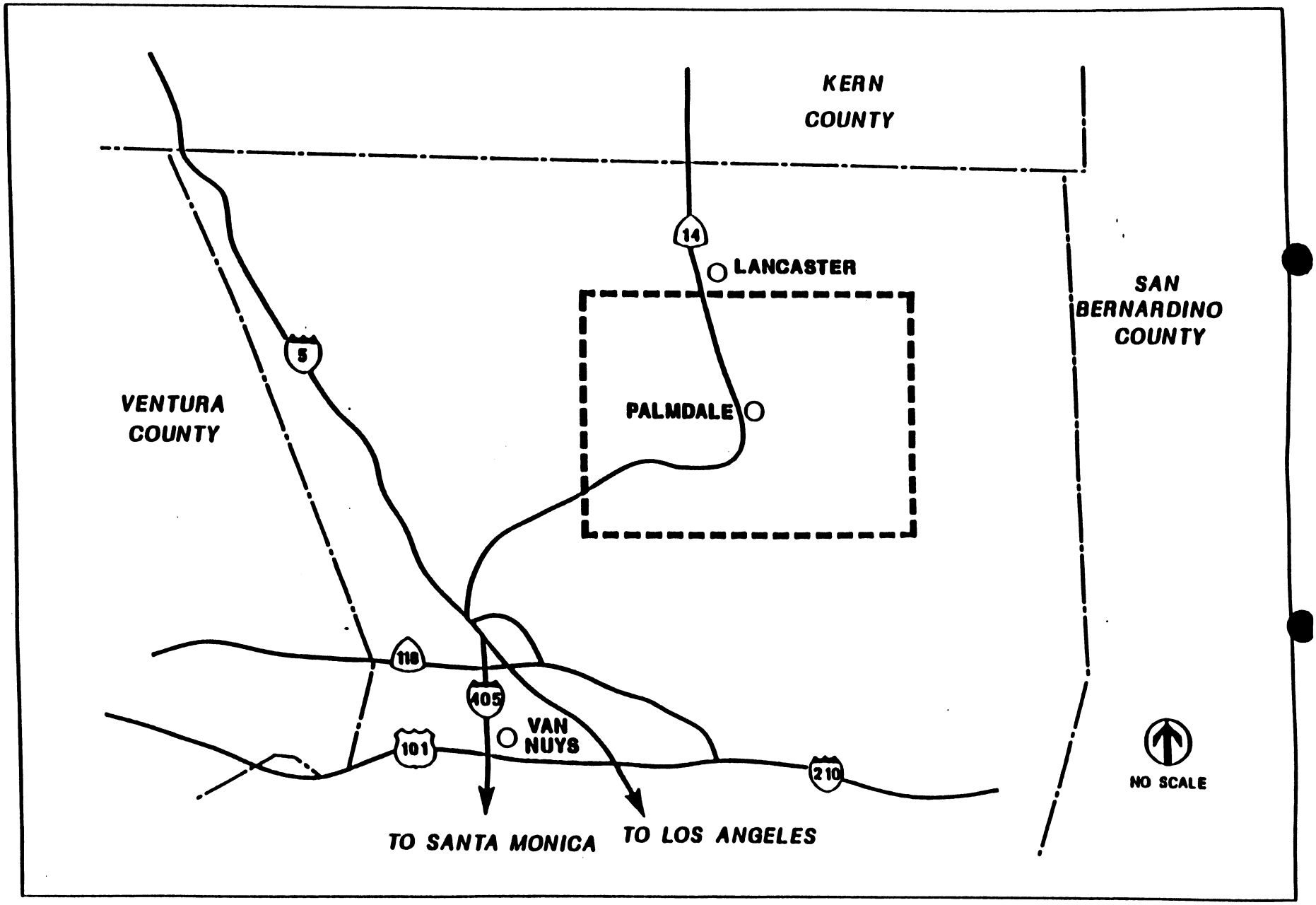
DATE: August 29, 1989

Signature Clyde E. Evans

Title Director of Planning

Telephone (805) 272-9613

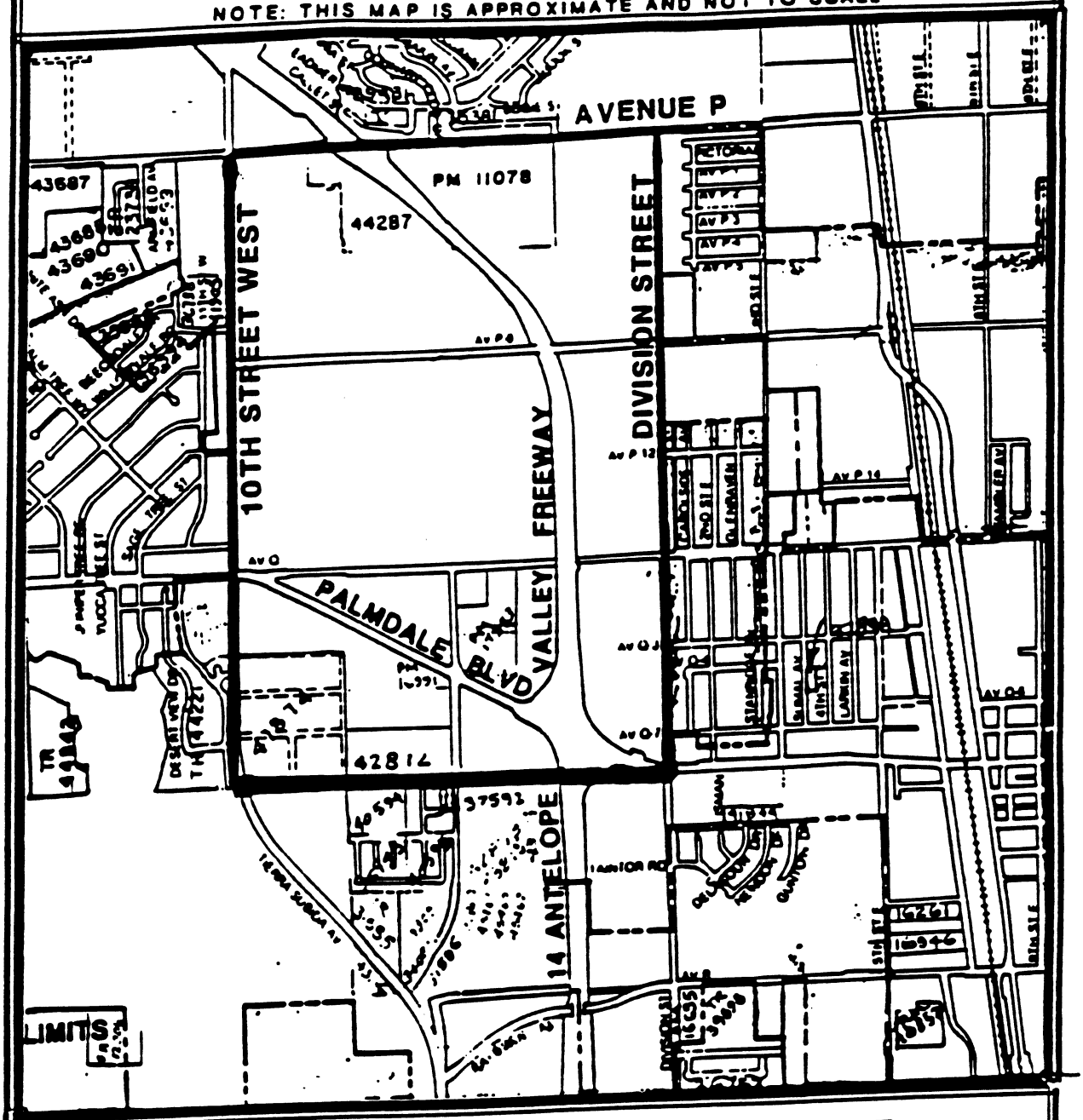
Reference: California Administrative Code, Title 14, Sections 15082(a), 15103, 15375.



REGIONAL SETTING

VICINITY MAP

NOTE: THIS MAP IS APPROXIMATE AND NOT TO SCALE



PLANNING DEPARTMENT

38306 9th Street East, Palmdale, CA 93550

THE CITY OF PALMDALE

CITY OF PALMDALE

PLANNING DEPARTMENT

INITIAL STUDY

APPLICATION NO: Freeway Business Park Specific Plan

NAME OF APPLICANT: City of Palmdale

LOCATION OF PROJECT: The project site includes 960 acres generally bounded by Avenue P to the north, Palmdale Boulevard to the south, Division Street to the east and 10th Street West to the west, exclusive of the Auto Mall area. The Antelope Valley Freeway bisects the site from north to south.

PROJECT DESCRIPTION: A Business Park Specific Plan for the 960 acre site.

SITE DESCRIPTION:

The project site is currently partly developed with travel-related services along both sides of Palmdale Boulevard including several hotels, restaurants, an auto dealership and gasoline service stations. A 68 acre auto mall is currently beginning construction on the west side of the freeway north of Avenue Q. It is not included as part of the specific plan. The Antelope Valley Regional Shopping Mall is located adjacent to the specific plan site at the northwest corner of Avenue P and 10th Street West.

The project site is located on the floor of the Antelope Valley within the City of Palmdale. The Antelope Valley Freeway bisects the site in a north-south direction. Topography is relatively flat. Vegetation communities include a few acres of Joshua tree/juniper woodland, sage brush scrub and disturbed grasslands. Two drainages cross the site from south-west to north-east. The site is vacant along the east side of the freeway and only partly developed on the west side.

SURROUNDING LAND USES:

North: Single Family Residential, Potential Hospital Site

East: Single Family Residential/Active Park

South: Single Family Residential

West: Multifamily Residential, Church, Commercial, Single Family Residential

IS THE PROPOSED PROJECT CONSISTENT WITH:

	Yes	No	N/A
The City's General Plan	X		
Applicable Specific Plan			X
The City's Zoning Ordinance	X		
Air Quality Management Plan	X		
Areawide (208) Wastewater Management Plan	X		

INITIAL STUDY QUESTIONNAIRE

A. Earth

A.1. Does the parcel contain slopes of 15% or greater?

No A.1.

The project site is relatively flat and there are no slopes over 15%. Therefore, this does not constitute the potential for a significant impact on the environment.

A.2. Is any portion of the project site in an area of medium or high land-slide risk and are there any known landslides on the subject property?

No A.2.

The site is relatively flat or has gentle slopes. There are no areas of potential landslides within the project site. Therefore, this does not constitute the potential for a significant impact on the environment.

A.3. Is any significant modification of major landforms proposed?

A.4. Does the site include any unique geological features or is it in a significant resource area?

No A.3 and A.4.

Unique geological features, major landforms and unique resource areas are not present within the project site. Therefore, impacts to unique geological features or major land forms do not constitute the potential for a significant impact on the environment.

A.5. Is the parcel in an area of high shrink/swell potential as shown on Plate 14.6 of the Palmdale Community General Plan?

No A.5.

The site has areas of low to medium shrink/swell potential. Soil studies are required in areas of potential shrink/swell conditions and standard mitigation measures are included in projects which will mitigate these conditions to a level of insignificance. Therefore, this does not constitute the potential for a significant impact on the environment.

A.6. If the sites are in an area of soils with high erosion potential according to Plate 14.7 of the Palmdale Community Plan, will the project result in a significant increase in wind or water erosion or siltation off, or on, the site beyond the construction phase?

Yes A.6.

The project site has areas of high soil erosion potential according to Exhibit 14.7 of the Palmdale Community Plan. The potential for soil erosion due to wind and water is a potentially significant impact that should be addressed in a soil study and analyzed in the environmental impact report.

A.7. Is the proposed project in an area of potential sub-sidence according to Exhibit 14.9 of the Palmdale Community General Plan or a special study?

Yes A.7.

The project site has areas within the high subsidence zone according to Exhibit 14.9 of the Palmdale Community Plan. This potentially significant impact should be addressed in the geotechnical study for the project area and discussed in an EIR.

A.8. Is the site in a fault-rupture hazard zone as defined in the Alquist-Priolo Special Studies Zones Act of 1972 and as shown on the City's General Plan Land Use Map or other special study?

A.9. Will the project include critical facilities such as high-rise buildings, hospitals or schools, etc.?

Yes. A.8 and A.9.

The project may include high rise buildings which are listed in the Alquist-Priolo Special Studies Zone Act of 1972 as critical facilities. However, no portions of the site area are in the Special Studies Zone and there are no known faults on the project site. Therefore, this does not constitute the potential for a significant effect on the environment.

B. Air

B.1. Will the project produce significant air pollutant emissions?

Yes B.1.

The City of Palmdale is within the northwestern portion of the South East Desert Air Basin. The SEDAB is separated from the South Coast Air Basin by the San Gabriel, San Bernardino, and San Jacinto mountain ranges. Present problems with air quality in the SEDAB are due primarily to interbasin transport of pollutants from the South Coast Air Basin (SOCAB) to the South East Desert Air Basin by prevailing winds. State and federal air quality requirements for the area are administered by the South Coast Air Quality Management District. The SEDAB exceeds state and federal standards for levels of ozone and particulates but overall air quality is better than that of the SOCAB.

The project will generate significant air quality impacts from mobile and stationary sources due to increased traffic and the construction and operation of the project, according to the criteria shown in the Air Quality Handbook for Preparing Environmental

Impact Reports prepared by the South Coast Air Quality Management District (Revised April 1987). These impacts should be analyzed in a air quality impact study and discussed in the EIR using the criteria in the above referenced source.

C. Water

C.1. Does the project involve a natural drainage course, a flood control channel or facility, or the California Aqueduct according to the City's Draft Drainage Master Plan, or the U.S.G.S. topographic maps?

C.2. Is the site in an area of flood hazard during the 100 year event as shown on the FIRM map, or other Public Works map?

Yes C.1. and C.2.

A small section of the Amargosa Creek crosses the northwest corner of the project site and an un-named drainage crosses the southcentral portion of the site. A portion of the site area is within the 100 year flood zone. The potential for on-site flooding should be analyzed in a hydrology study and discussed in the EIR.

The California Aqueduct is not located near the project site.

C.3. Will the project result in a significant increase in peak run-off?

C.4. Would the project increase flood hazard off-site?

C.5. Will the project require the construction of on or off-site drainage facilities as shown on the Master Plan of Drainage or as determined by the Department of Public Works?

Yes C.3., C.4. and C.5.

The development of the project site will create impervious surfaces resulting from the construction of structures, parking areas and roads, thus increasing site runoff and the potential for flooding off-site. Construction of on and off-site drainage facilities may be required to mitigate this impact. These issues should be addressed in the hydrology study noted above and discussed in the EIR.

D. Plant Life

D.1. Is a significant stand of Desert Vegetation present on the site?

D.2. Are any unique, rare or endangered species of plants present on the subject property?

D.3. Is a Desert Vegetation (or Joshua tree) Preservation Plan required?

Maybe D.1, 2 and 3.

A small stand of Joshua/juniper woodland is present within the site area. The balance of the site is covered with introduced grasslands and sage brush scrub. A very small drainage area has rushes (Scirpus sp.) and one tree of unidentified species (possibly introduced). The balance of the two drainages have no desert riparian vegetation. No rare, endangered or threatened plant species have been identified by the Department of Fish and Game database within the proposed project area, however two sensitive species, the Alkali Mariposa lily (Calochortus striatus) and the Mojave spineflower (Chorizanthe spinosa) may be found in the planning area. A biological survey that addresses the potential for rare and endangered species to be found on site, Joshua tree preservation and loss of desert vegetation should be completed and discussed in the EIR.

E. Animal Life

E.1. Will the project result in a reduction of the numbers of any unique, rare or endangered species of animals?

E.2. Will the project result in a deterioration of any significant wildlife habitat?

Maybe E.1 and 2.

There are limited areas of very disturbed sage brush vegetation and habitat in the site area. Two drainages cross portions of the site. A very limited potential for rare and endangered animal species to exist on site maybe present even though extensive development has taken place around the project site, the site has been used for illegal dumping of trash and the site is in a largely urbanized area. Sensitive, state protected or federal listing candidate species of reptiles, birds and mammals that may live within the study area include the San Diego

Horned Lizard (Phrynosoma coronatum blainvillei), Cooper's Hawk (Accipiter cooperii), LeConte's Thrasher (Toxostoma lecontei), Mohave Ground Squirrel (Sepmophilus mohavensis), Desert Tortoise (Gopherus agassizi), Desert Iguana (Dipsosaurus dorsalis), Collared Lizard (Crotaphytus collaris), Desert Horned Lizard (Phrynosoma platyrhinos) and Prairie Falcon (Falco mexicanus).

The biological study referenced above should address potential impacts to animal species and this should be discussed in the EIR.

E.3. Is consultation with the California Department of Fish and Game, as a trustee agency, required?

Yes E.3.

Consultation with the Department of Fish and Game may be required as there are two perennial streams present in the site area.

F. Noise

F.1. If the project is residential or noise sensitive, is it located adjacent to the Freeway, within 200 feet of the railroad, adjacent to an existing or future arterial street, within the Plant 42 AICUZ zone, or near any major source of industrial or other noise not covered above?

Maybe F.1.

The project site is adjacent to the Freeway, arterial streets, and the airport AICUZ zone. Some uses, such as hotels or motels, office uses, and some commercial uses, may be somewhat noise sensitive and require noise attenuation. Noise sensitive uses could be impacted by noise due to traffic on the Freeway and arterial streets. In addition, noise from airport use may impact the site, particularly in light of the proposed increase in flights (up to 400 per day) at the airport. Some uses proposed for the specific plan may not be compatible with the AICUZ zone. These issues, and noise impacts on adjacent uses, should be addressed in a noise impact study and discussed in the EIR.

F.2. Will the project generate a CNEL noise level exceeding 65dB(A) at the project boundary after construction?

Maybe F.2.

The proposed project could generate noise levels from increased vehicular trips which would exceed 65 dB(A) at the project boundary. These noise levels could impact neighboring land uses which are noise sensitive and those residents who live along adjacent arterial streets. Potential impacts, such as deliveries, trash pickup and entertainment at local commercial establishments, or operation of industrial uses, could impact adjacent residents. Therefore, the noise study discussed above, and the EIR, should consider these potential impacts.

F.3. Is the project site adjacent to a land use that will, or will the project generate unusual periodic concentrations of human activity?

No F.3.

The proposed project could result in unusual periodic concentrations of human activity, depending on the uses which are proposed in the specific plan. These potential impacts should be addressed in the EIR.

G. Light and Glare

G.1. Would on or off-site land users be subject to light or glare that would disturb those residents?

Yes G.1.

There is a potential for the project lighting to produce off site light and glare. The potential for impacts due to light and glare on neighboring residents and on travelers along the Freeway should be addressed in the EIR.

H. Land Use

H.1. Could the project serve to encourage development of presently undeveloped areas or increases in development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities and recreational activities)?

Yes H.1.

The proposed project will serve to encourage development of presently undeveloped areas or increase density of already developed areas by the

extension of improvements and provision of additional highway commercial and office facilities which can be expected to encourage development of adjacent areas. These impacts should be addressed in the EIR.

H.2. Are adjoining or planned land uses greatly different than that of the proposed project, so that a substantial or potentially substantial interface problem would be created?

Yes H.2.

Interface problems may occur between vehicles using roadways and sensitive land uses due to traffic noise and congestion, and operational conflicts could occur due to project proximity to residential uses. Conflicts between the potential land uses in the study area and the airport could also result. These should be addressed in the EIR.

I. Risk

I.1. Does the proposal involve, or would it be subject to, a risk of an explosion or the significant release of hazardous substances (including, but not limited to, explosives, pesticides, chemicals or radioactive materials) in the event of an accident or upset condition?

Maybe I.1.

The proposed project may include some small or large quantity generators of hazardous materials (such as dry cleaners or photographic labs, or industrial uses). Potential impacts due to the operation of these facilities are addressed through the regulations of the Air Quality Management District, the Water Quality Control Board, the Los Angeles County Fire Department, Department of Health Services, Sanitation District and the City of Palmdale's Department of Building and Safety, which require management plans for the storage, handling and disposal of hazardous materials. The potential problems associated with these uses should be addressed in the EIR and mitigation measures and monitoring programs developed to insure that no significant impacts occur.

I.2. Is the project in the airport potential crash zone?

No I. 2.

No portions of the project are in the airport potential crash zone. Therefore, this does not constitute the potential for a significant impact on the environment.

I.3. Is the project within or adjacent to a high fire hazard area as defined by the Palmdale Community Plan?

No. I.3

No portions of the proposed project will be within the wildfire hazard area. Therefore, this does not constitute the potential for a significant impact on the environment.

J. Housing

J.1. Will the project result in the displacement of people from the existing site?

No J.1.

The project does not include any sites with existing residential development. Therefore, this does not constitute the potential for a significant impact on the environment.

K. Population

K.1. If it is a residential project, how many new residents will the development house (2.7 persons per unit)?

Not Applicable K.1.

The proposed project does not include any residential uses.

L. Schools

L.1. Will the proposed project affect the city's schools?

Not Applicable L.1.

See K above.

M. Transportation and Circulation

M.1. Estimated average daily vehicle trips generated by the project (from the Institute of Transportation Engineers, Trip Generation or appropriate traffic study.) The project will produce varying numbers of vehicles trips per day depending on the mix of uses

included in the Specific Plan. Due to the 960 acre size of the project area, it is expected that a significant number of vehicle trips will be generated and that these trips will have significant impacts on circulation in the region and within the City. A traffic study should be completed on the specific plan to determine the exact mix of mitigation measures that will be required to reduce project impacts and the results of the study should be discussed in the EIR.

M.2. Will the project result in traffic congestion?

M.3. Does the project require the construction of off-site road-way or signalization improvements or contribution of traffic mitigation fees?

Maybe M.2.and M.3.

See M.1. above.

M.4. Does circulation within the project provide an acceptable level of safety required for the orderly flow of people and their vehicles?

M.5. Will the project create or experience access problems as designed?

Maybe M.4. and M.5.

The specific plan has not been completed. Because of the magnitude of the project there is a potential for significant impacts due to interior project circulation and external access that should be discussed in an EIR.

N. Emergency Services

N.1. Roadway distance and number of the nearest fire station: A county fire station is located adjacent to the project site west of 10th Street West on Avenue P. There is the potential for a significant impact on the environment due to impacts on facilities and personnel from the development of a project of this size that should be discussed in the EIR.

O. Aesthetics

O.1. Is a major ridgeline or hillside area which is visible from the valley floor involved in the project?

No O.1.

There are no ridgelines or hillsides within the project site. Therefore, this does not constitute the potential for a significant impact on the environment.

O.2. Will the proposal result in the creation of an aesthetically negative site open to public view or obstruction of any significant view vista?

Maybe O.2.

The development within the proposed project site will be highly visible from the Freeway and other areas of the City and could be aesthetically unattractive from the freeway or other sites. This should be discussed in the EIR.

Archaeological/Historical/Paleontological

P.1. Has the site been inspected for archaeological, paleontological and historical resources?

P.2. Does the project include any resources of archaeological, paleontological, or historical significance and would the proposal result in an impact on a significant site, structure, object or building?

Maybe P. 1.and 2.

The project site encompasses 960 acres. Some portions of the site have been surveyed for historic and archaeological resources as part of the work completed for Assessment District 88-1 and the Auto Mall EIR. The balance of the project area is considered sensitive in regard to historic and prehistoric resources, and paleontological resources. The whole site should be surveyed for paleontological resources and the portion which has not been surveyed for archaeological and historical resources should be subject to such a survey. One historic site has been identified within the project area. The survey report provides mitigation recommendations. No prehistoric archaeological sites or paleontological resources have been identified. The results of the surveys should be analyzed in the EIR.

Q. Public Controversy

Q.1. Is the project or action environmentally controversial in nature, or can it reasonably be expected to become controversial upon disclosure to the public?

No Q.1.

The environmental impacts of the proposed project are not expected to be controversial. Therefore, this does not constitute the potential for a significant impact on the environment.

R. Utilities

R.1. Are utilities adequate and available to serve the proposed project?

Maybe R.1.

The construction and operation of the proposed project will result in increased use of utilities. Utilities such as gas, electricity and telephone are available. Therefore, the impact upon these utilities is not considered significant. However, development of the project site may have significant impacts on water quantities, wastewater systems, solid waste disposal facilities and police and fire services. These potential impacts should be addressed in the EIR.

S. Mandatory Findings of Significance

S.1. Does the project have the potential to degrade the quali of the environment or curtail the diversity in t environment?

Yes

S.2. Does the project have the potential to achieve short-ter to the disadvantage of long-term environmental goals?

No

S.3. Does the project have impacts which are individual limited, but cumulatively considerable on traffic, wate wastewater, schools, flooding or other services? (A proje may impact on two or more separate resources where t impact on each resource is relatively small, but where t

effect of the total of those impacts on the environment significant.) In addition, "cumulatively considerabl means that the incremental effects of an individual proje are considerable when viewed in connection with the effec of the past projects, the effects of other current project and the effects of probable future projects.)

Yes

The project has the potential for cumulative impacts t traffic, water, wastewater, solid waste, flooding, histori resources, air quality, noise, fire services, polic services, and biological resources.

S.4. Does the project have environmental effects which will caus substantial adverse effects on human beings, either directl or indirectly?

Maybe

IX. Determination

On the basis of this initial evaluation:

____I find the proposed project COULD NOT have a significan effect on the environment, and a NEGATIVE DECLARATION wil be prepared.

____I find that although the proposed project could have significant effect on the environment, there will not be significant effect in this case because of the mitigatio measures described on the MITIGATED NEGATIVE DECLARATION.

__X__I find the proposed project MAY have a significan effect on the environment, and an ENVIRONMENTAL IMPAC REPORT is required.

____Subsequent use of Program EIR.

____Use of Tiered EIR.

August 18, 1989
Date

Sonja I. Wilson, Senior Planner
(Environmental)

8/18/89
Date

Clyde E. Evans, Director of Planning

wp961sw
8/18/89

TE OF CALIFORNIA—OFFICE OF THE GOVERNOR GEORGE DEUKMEJIAN, Governor

FFICE OF PLANNING AND RESEARCH
D TENTH STREET
RAMENTO, CA 95814

RECEIVED
SEP 11 1989

DATE: September 7, 1989

TO: Reviewing Agencies

RE: The Palmdale Planning Department's NOP for the Freeway Business Park Specific Plan
SCH# 89090618

Attached for your comment is the Palmdale Planning Department's Notice of Preparation of a draft Environmental Impact Report (EIR) for the Freeway Business Park Specific Plan Project.

Responsible agencies must transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Ms. Sonja Wilson
Paldale Planning Department
38306 9th Street East
Palmdale, CA 93550

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call Garrett Ashley at 916/445-0613.

Sincerely,

David C. Nunenkamp
Chief
Office of Permit Assistance

Attachments

cc: Sonja Wilson

F: Sent by Lead *T: Sent by SCH*

- [x] Bob Fletcher, Air Resources Board, 1102 Q Street, Sacramento, CA 95814, 916/323-2037
- [ ] Steve Cagle, Dept. of Boating & Waterways, 1629 S Street, Sacramento, CA 95814, 916/445-4388
- [ ] Gary L. Holloway, California Coastal Commission, 631 Howard Street, 4th Floor, San Francisco, CA 94105, 415/543-8555
- [ ] Terry Mathews, California Energy Commission, 1516 Ninth Street, Rm. 200, Sacramento, CA 95814, 916/653-2237
- [ ] Sandy Hamond, Caltrans - Division of Aeronautics, P.O. Box 942874, Sacramento, CA 94274-0001, 916/654-4959
- [ ] George Smith, Caltrans - Planning, P.O. Box 942874, Sacramento, CA 94274-0001, 916/445-5570
- [x] Dennis O'Bryant, Dept. of Conservation, 1416 Ninth Street, Room 1326-2, Sacramento, CA 95814, 916/323-2973
- [ ] Div. of Mines and Geology
- [ ] Div. of Oil and Gas
- [ ] Land Resources Protect. Unit
- [ ] Verdell Cornelius, Dept. of Food and Agriculture, 1220 N Street, Room 104, Sacramento, CA 95814, 916/654-1257
- [ ] Douglas Whitlatch, Dept. of Forestry, 1416 Ninth Street, Room 1506-3, Sacramento, CA 95814, 916/653-6128
- [ ] Robert Sleppy, Dept. of General Services, 400 P Street, Suite 3400, Sacramento, CA 95814, 916/324-6314
- [x] Arlene Chiesa, Dept. of Health, 714 P Street, Room 1255, Sacramento, CA 95814, 916/323-6111
- [ ] Long Range Planning Section, Planning and Analysis Division, 2150 First Avenue, Sacramento, CA 95818, 916/445-1561
- [x] William A. Johnson, Native American Heritage Comm., 915 Capitol Mall, Room 288, Sacramento, CA 95814, 916/653-7551
- [ ] Steve Greenberg, Office of Historic Preservation, P.O. Box 942896, Sacramento, CA 94296-0001, 916/653-8021
- [x] Mike Engle, Dept. of Parks and Recreation, P.O. Box 942896, Sacramento, CA 94296-0001, 916/324-6421
- [ ] George Hanks, Public Utilities Commission, 505 Van Ness Avenue, San Francisco, CA 94102, 415/557-1313 (F-552)
- [ ] Anne Lenore Bronzan, Reclamation Board, 1416 Ninth Street Room 704, Sacramento, CA 95814, 916/653-3760
- [ ] Sherb Milliken, S.F. Bay Conservation & Dev't. Comm., 30 Van Ness Avenue, Room 2011, San Francisco, CA 94102, 415/557-3686
- [ ] Jeanette Diskenbo, Calif. Waste Management Board, 1020 Ninth Street, Room 300, Sacramento, CA 95814, 916/323-3454
- [ ] Ted Pokorkiewicz, State Lands Commission, 1807 - 13th Street, Sacramento, CA 95814, 916/653-7813
- [ ] Mahdi Gayen, Dept. of Water Resources, 1416 Ninth Street, Room 213-4, Sacramento, CA 95814, 916/445-7466
- [ ] Rand Stakhouse, State Council Conservancy, 1330 Broadway, Suite 1100, Oakland, CA 94612, 415/464-1325
- [ ] OTHER: _____
- [ ] Brent Smith, Caltrans, District 1, 1656 Union Street, Eureka, CA 95501, 707/445-6330 (F-539)
- [ ] Michelle Gallagher, Caltrans, District 2, 1657 Riverside Drive, Redding, CA 96001, 916/225-3230 (F-443)
- [ ] John J. Smith, Caltrans, District 3, 703 B Street, Marysville, CA 95901, 916/741-4277 (F-452)
- [ ] Gary Adams, Caltrans, District 4, P.O. Box 7310, San Francisco, CA 94120, 415/557-0971 (F-539)
- [ ] Jerry Lemmer, Caltrans, District 5, P.O. Box 8114, San Luis Obispo, CA 93403-8114, 805/549-3101 (F-452)
- [ ] Nathan Smith, Caltrans, District 6, P.O. Box 12616, Fresno, CA 93778, 209/445-6333 (F-452)
- [x] Dale Hollenberg, Caltrans, District 7, 120 South Spring Street, Los Angeles, CA 90012, 213/620-2230 (F-452)
- [ ] Harvey Sawyer, Caltrans, District 8, 247 West Third Street, San Bernardino, CA 92401, 714/383-4333 (F-452)
- [ ] Andy Zellmer, Caltrans, District 9, 500 South Main Street, Bishop, CA 93514, 619/873-8253 (F-452)
- [ ] Al Johnson, Caltrans, District 10, P.O. Box 2048, Stockton, CA 95201, 209/948-7320 (F-452)
- [ ] Jim Cheatham, Caltrans, District 11, P.O. Box 85406, 2829 Juan Street, San Diego, CA 92138-5406, 619/237-6335 (F-452)
- [ ] Robert Joseph, Caltrans, District 12, 2501 Pullman St., Santa Ana, CA 92705, 714/724-2044 (F-452)
- [ ] A. Taylor, Regional Manager, Department of Fish and Game, 601 Locust, Redding, CA 96001, 916/225-2300 (F-443)
- [ ] Jim Mazzenello, Regional Manager, Department of Fish & Game, 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95670, 916/358-2900 (F-452)
- [ ] B. Hunter, Regional Manager, Department of Fish and Game, P.O. Box 47, Yountville, CA 94599, 707/944-2281 (F-557)
- [ ] G. Hulsen, Regional Manager, Department of Fish and Game, 1234 East Shaw Avenue, Fresno, CA 93710, 209/255-2061 (F-452)
- [x] Fred A. Worthing, Jr., Reg. Manager, Department of Fish and Game, 330 Golden Shore, Suite 50, Long Beach, CA 90802, 213/590-5113 (F-452)
- [ ] Ruff E. Hall, Marine Resources Region, 330 Golden Shore, Suite 50, Long Beach, CA 90802, 213/590-5130 (F-452)

State Water Resources Control Board

- [ ] Allen Hitchcock, State Water Resources Control Board, Division of Lands & Grants, P.O. Box 942832, Sacramento, CA 94244-2320, 916/739-4224
- [ ] Ed Anchor, State Water Resources Control Board, Division of Water Quality, P.O. Box 100, Sacramento, CA 95801, 916/445-9352
- [ ] Steve Herbinger, State Water Resources Control Board, Delta Unit, P.O. Box 2000, Sacramento, CA 95810, 916/323-9230
- [ ] Mike Fullerton, State Water Resources Control Board, Division of Water Rights, 901 P Street, Sacramento, CA 95814, 916/324-3326
- [ ] OTHER: _____
- [ ] NORTH COAST REGION (1), 1440 Guerneville Rd., Santa Rosa, CA 95403, 707/576-2220 (F-394)
- [ ] SAN FRANCISCO BAY REGION (2), 1111 Jackson Street, Room 6040, Oakland, CA 94607, 415/464-1255 (F-391)
- [ ] CENTRAL COAST REGION (3), 1102-A Laurel Lane, San Luis Obispo, CA 93401, 805/549-3147 (F-452)
- [ ] LOS ANGELES REGION (4), 107 South Broadway, Room 4027, Los Angeles, CA 90012, 213/620-4460 (F-452)
- [ ] CENTRAL VALLEY REGION (5), 3443 Routier Road, Suite A, Sacramento, CA 95827-3098, 916/255-3033
- [ ] Fresno Branch Office, 3614 East Ashlan Avenue, Room 50, Fresno, CA 93726, 209/445-5116 (F-452)
- [ ] Redding Branch Office, 415 East Cypress Avenue, Redding, CA 96002, 916/225-3303 (F-443)
- [ ] LAHONTAN REGION (6), 2092 Lake Tahoe Boulevard, P.O. Box 9428, South Lake Tahoe, CA 95729, 916/544-3481
- [x] Victorville Branch Office, 15428 Civic Drive, Suite 100, Victorville, CA 92392-2359, 619/241-6583
- [ ] COLORADO RIVER BASIN REGION (7), 73-271 Highway 111, Suite 21, Palm Desert, CA 92260, 619/346-7491
- [ ] SANTA ANA REGION (8), 6809 Indiana Avenue, Suite 200, Riverside, CA 92506, 714/782-4130 (F-452)
- [ ] SAN DIEGO REGION (9), 9771 Clairemont Mesa Blvd., Suite B, San Diego, CA 92124-1331, 619/265-5114 (F-452)
- [x] ANCHORAGE South Coast

RECEIVED
NOV 27 1989

City of Los Angeles Department of Airports
Tom Bradley, Mayor

Board of Airport Commissioners

Jerry B. Epstein
President
Jonnie L. Cochran, Jr.
Vice President
Robert A. Chick
Samuel Greenberg
Maria D. Hummer

Clifton A. Moore
Executive Director

November 15, 1989

FILE /SHARON/
SOLA
2

Mr. Clyde Evans, Director of Planning
City of Palmdale
Planning Department
712 East Palmdale Boulevard
Palmdale, California 93550

Dear Mr. Evans:

The Los Angeles City Department of Airports (DOA) Environmental Management Bureau has reviewed the Notice of Preparation (NOP) of an EIR for the Freeway Business Park Specific Plan in the City of Palmdale. The Bureau is in general agreement with the scope of the environmental assessment.

The NOP identifies transportation and circulation issues which will be addressed in the EIR. DOA's future development plans for Palmdale Airport proposes a major expressway corridor into Palmdale Airport from Route 14 along Avenue P-8. The scope of the proposed EIR evaluation should include consideration of a 300-foot right-of-way along Avenue P-8. A freeway on and off ramp at Avenue P-8 is being planned. The proposed Business Park could affect Avenue P-8 and have regional circulation implications.

Thank you for providing the Department of Airports an opportunity to comment on the NOP. We look forward to reviewing the Draft EIR on the proposed project as soon as it is completed.

Sincerely,

Maurice Z. Laham

Maurice Z. Laham, AICP
Airport Environmental Coordinator

MZL:GB:rps

cc: C. A. Moore
D. A. Miller
W. M. Schoenfeld

1 World Way, P.O. Box 92216, Los Angeles, California 90009-2216 • (213) 646-5252 • Telex 65-3413 • FAX (213) 646-0523

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director
CECIL E. BUGH, Chief Deputy Director
MAS NAGAMI, Assistant Director

RECEIVED
OCT 16 1989

ADDRESS ALL CORRESPONDENCE
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91803-1

October 12, 1989

IN REPLY PLEASE REFER TO FILE. P-6

Ms. Sonja Wilson
Planning Department
City of Palmdale
38306 9th Street East
Palmdale, CA 93550

Dear Ms. Wilson:

RESPONSE TO A NOTICE OF PREPARATION

Thank you for the opportunity to review the Notice of Preparation (NOP) for the Freeway Business Park Specific Plan. We have reviewed the NOP and have the following comments:

Traffic/Circulation

We agree with the initial study that a traffic study is needed to identify the traffic impacts and ensure that appropriate mitigation measures are proposed. The study should also address the cumulative impacts generated by this and nearby developments and include level of service analysis for affected intersections and freeway interchanges. If traffic signals or other mitigation measures are warranted at the affected intersections, the developer should determine his proportionate share of signal or other mitigation costs and submit his determinations to this Department for review and approval as it relates to roadways and intersections in the unincorporated area.

If you have any questions regarding Traffic/Circulation, please call our Traffic Studies Unit at (818) 458-5909.

Waste Management

Current estimates indicate that shortfall in the solid waste disposal capacity within Los Angeles County may be experienced as early as 1991. Any increase in development resulting in the additional generations of solid waste will negatively impact existing solid waste management facilities in the County and should be discussed. The report should address the feasibility of providing an opportunity for commercial recycling programs.

The existing hazardous waste management facilities in the County are inadequate to handle the hazardous waste currently being generated. The proposed project will generate additional hazardous waste. The measures that will be taken to mitigate the project's hazardous waste impact should be discussed.

If you have any questions regarding Waste Management, please contact Mr. Ken Swanson of our Waste Management Division at (818) 458-3562.

If you have any questions regarding the environmental reviewing process of this Department, please contact Ms. Clarice Nash at (818) 458-4334.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

for Brian T. Sasaki
CARL L. BLUM
Assistant Deputy Director
Planning Division

CRN:mz/238

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road / Whittier, California
Mailing Address: / P. O. Box 4998, Whittier, California 90607-4998
Telephone: (213) 699-7411 / From Los Angeles (213) 685-5217

CHARLES W. CARR
Chief Engineer and General Manager

RECEIVED
OCT - 4 1989

September 29, 1989
File No: 20-00.04-00

City of Palmdale
Planning Department
708 East Palmdale Boulevard
Palmdale, CA 93550

Attn: Ms. Sonja Wilson

Ladies and Gentlemen:

Environmental Impact Report for the Freeway Business Park

The County Sanitation Districts received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on September 5, 1989. The Districts have no objection to the project as proposed. However, we offer the following comments:

1. Please keep the Districts updated in the development and changes in the plans of the business park, so that the Districts may provide a proper response in the future when necessary.

2. Depending upon the location of the facilities in the business park the wastewaters generated by the proposed project would discharge into the following trunk sewers:

TRUNK SEWER	SIZE	TYPE	LOCATION
"C" Trunk Sewer	12"	NRC	Avenue P
"D" Trunk Sewer	10"	NRC	Avenue P-15
Division Street Trunk Sewer	12"	VCP	Division Street
5th Street West Trunk Sewer	10"	VCP	5th Street West

VCP - Vitrified Clay Pipe
NRC - Non Reinforced Concrete Pipe or Extra Strength VCP

3. Because of the project's location, the flow originating from the proposed project would have to be transported to the Districts' sewer by local sewer which are not maintained by the County Sanitation Districts.

4. The wastewater generated by the proposed project will be treated at the Palmdale Water Reclamation Plant (WRP). The Districts are currently planning an expansion of the Palmdale WRP which will meet the future demand upon the District No. 20 sewerage system.

5. The Sanitation Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting to the Sanitation Districts' sewerage system or increasing the existing strength and/or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is required to construct an incremental expansion of the sewerage system to accommodate the proposed project which will mitigate the impact of this project on the present sewerage system. Payment of a connection fee will be required before a permit to connect to the sewer is issued.

If you have any further questions, please contact the undersigned at (213) 699-7411, extension 2719.

Very truly yours,

Charles W. Carry

Paul A. Prestia
Project Engineer
Financial Planning &
Property Management Section

PAP:jm

ENVASE2\EIRFWYBP.LTR

Converse Cons_ _nts Pasadena

_sulting Engineers
and Geologists

67 West Bellevue Drive
Suite A
Pasadena, California 91105-2501

Telephone 818 / 440-0800

September 28, 1989

RECEIVED
- 3 1989

Mr. John Mundweil, City Engineer
Department of Public Works
City of Palmdale
38306 9th Street East
Palmdale, California 93550

Subject: Geotechnical Feasibility Review 1.

Project Identification: Freeway Park Specific Plan; CCP project 89-31-243-01.

City Planner: Sonja Wilson.

Project Size and Location: 960-acre parcel bounded by Avenue P to the north, Palmdale boulevard to the south, Division Street to the east and 10th Street West to the west. The Antelope Valley Freeway bisects the site from north to south.

Reference: City of Palmdale, Freeway business Park Specific Plan EIR, dated August 28, 1989.

Background: Freeway Park Specific Plan proposes construction of a business park. Portions of the site have already been developed. The site is in an alluvial soil zone outside an established Alquist-Priolo Special Studies Zone. Site topography slopes approximately 2% to the north.

Recommendations: Based on the referenced documents and our understanding of the area, there are no extraordinary geotechnical conditions at the site. From our perspective, the project is feasible and may go to the design phase.

The condition of feasibility approval is that a thorough geotechnical study be performed for our review. This can be done in the design phase. The design geotechnical study should be based on the grading or construction plan to be used for earthwork or foundation design. A geotechnical report should be prepared that considers pertinent soils engineering, geologic, and hydrogeologic conditions. It

A Wholly Owned Subsidiary of
The Converse Professional Group

should present recommendations including site grading, collapsible soil distribution and treatment, foundation geotechnical design, location and effects of nuisance water disposal, and evaluation of site seismicity.

If you have any questions regarding this review, please contact the undersigned.

CONVERSE CONSULTANTS PASADENA

Robert W. Rogers

Robert W. Rogers, RCE 29647
Vice President

DCP/RWR:WP

Dist: 2/City of Palmdale
Attn: Mr. John Mundweil
1/City of Palmdale
Attn: Ms. Sonja Wilson

CITY OF PALMDALE
OFFICE OF THE
CITY ENGINEER

M E M O R A N D U M

TO: Planning Department
(Attn: Sonja Wilson, Senior Planner)

FROM: John Mundweil, Acting City Engineer

SUBJECT: Freeway Business Park Specific Plan, Comments for Initial Study and Preparation of an E.I.R.

DATE: September 20, 1989

In response to your request dated August 28, 1989 concerning subject, please refer to the following items as our area of concern:

1. A small area at the northeasterly tip of the plan is included in the Amargosa Creek Petition Map. Currently, Conditional Use Permit CUP 89-6 is being processed for the Mobil Oil Corporation at the southeasterly corner of 10th Street East and Avenue P. Conditions of approval for this project include requirements to mitigate flooding problems of the Creek. An option to join the Amargosa Creek Assessment District is given to the developer versus doing all the required constructions affecting the project himself. Similar requirements will be imposed on the remaining areas affected by the Petition Map within this development.

2. All regional and lateral lines of the Palmdale Master Drainage Plan shall be included and shown on the specific plans. Temporary retention basins shall be located within the project boundaries. The size of the basins shall be determined by the project Civil Engineer, who should make a preliminary hydrology study to be reviewed and approved by the City Engineer. These basins shall be utilized until the master drainage system for this segment is completed and operational.

3. Existing sewer and water lines shall be identified and shown on the plans. Also include proposed extensions of these utilities.

4. Geotechnical report is required to identify any potential soil problems that may impact the project. The City Geologist, Converse Consultants, Pasadena (Attn: Greg Rzonca), shall be able to review and recommend approval. As the area is developed, soil reports may be required prior to approval of grading permit for each project.

JM/tw

STATE OF CALIFORNIA—BUSINESS AND TRANSPORTATION AGENCY GEORGE DEUKMEJIAN, Gove

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, 120 SO. SPRING ST.
LOS ANGELES, CA 90012
TDD (213) 620-3550
(213) 620-2376

RECEIVED
SEP 22 1989

September 15, 1989

IGR/CEQA
County of Los Angeles
NOP; Freeway Business Park
Vic. LA-14-R59.74
SCH # N/A

Ms. Sonja Wilson
Palmdale Planning Department
38306 9th Street East
Palmdale, CA 95814

Dear Ms. Wilson:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. Items which should be covered for the project include, but are not limited to:

a. Trip generation, distribution including the method used to develop the percentages and assignment.

b. ADT, AM and PM peak hour volumes for both existing and future conditions. This should include the Antelope Valley Freeway (SR 14) and the effected local interchanges.

c. Analyze future conditions with project traffic and the cumulative traffic generated for all approved developments in the area.

d. Any mitigation proposed should be fully discussed in the document. Those discussions should include, but not be limited to, the following:

* financing
* scheduling considerations
* implementation responsibilities
* monitoring

We look forward to reviewing the DEIR. We expect to receive a copy from the State Clearinghouse. However, to expedite the review process, you may send two copies in advance to the undersigned at the following address:

Gary McSweeney
District 7 IGR/CEQA Coordinator
Transportation Planning and Analysis Branch
120 South Spring Street
Los Angeles, CA 90012

Thank you for this opportunity to comment. If you have any questions regarding this reply, contact Gary McSweeney at (213) 620-2376.

Sincerely,

GARY MCSWEENEY
IGR/CEQA Coordinator
Transportation Planning and
Analysis Branch

cc: State Clearinghouse

DEPARTMENT OF THE AIR FORCE
DET 1, AERONAUTICAL SYSTEMS DIVISION (AFSC)
PRODUCTION FLIGHT TEST INSTALLATION, AF PLANT 42
2503 EAST AVE P, PALMDALE, CA 93550-2196

REPLY TO ATTN OF DE

11 Sep 89

SUBJECT Initial Study and Notice of Preparation of an EIR for the Freeway Business Park Specific Plan

TO City of Palmdale
Planning Department
ATTN: Sonya Wilson
38306 9th Street East
Palmdale CA 93550

1. I have reviewed the above subject document and have the following comments.

a. Item H-2: It should be noted that the residential areas east of the project site are non-conforming uses under the existing and updated Palmdale general plan.

b. Item I-2: Contrary to this statement a portion of the project site does fall within the Accident Potential Zone for the AF Plant 42. This area will require special consideration so that large numbers of people are not exposed to aircraft hazards. (See attached map)

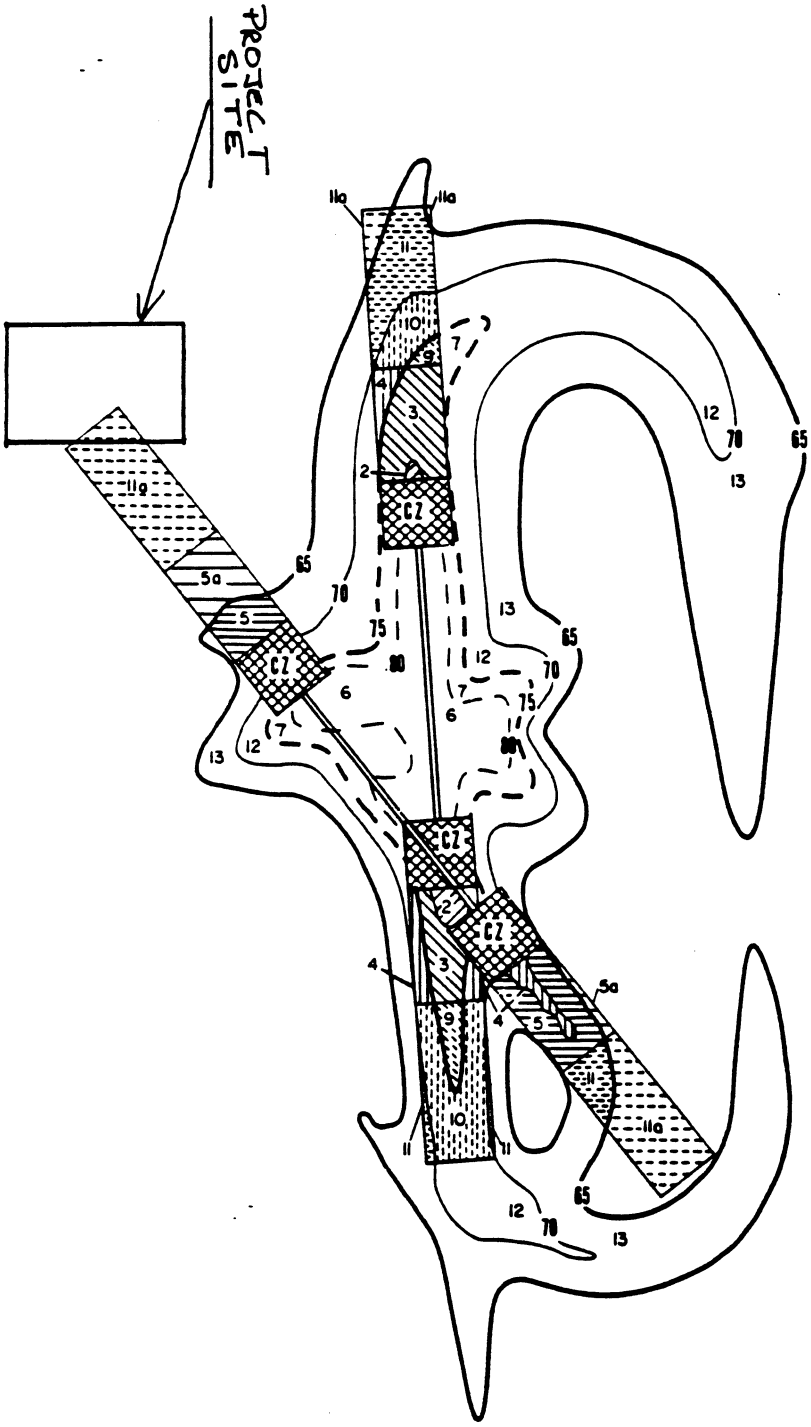
c. General: It should be noted that height restrictions will apply over the entire project site. These restrictions are contained in Federal Aviation Regulation Part 77, Objects Affecting Navigable Airspace.

2. Please do not hesitate to contact me at 272-6720 if you have any questions.

MICHAEL J. GRAZIANO
Chief Facility Engineer

1 Atch
AICUZ Map

RECEIVED
SEP 13 1989



COMPATIBLE USE DISTRICT (C.U.D.)

LEGEND

CLEAR ZONE
CUD 1
CUD 2
CUD 3
CUD 4
CUD 5
CUD 5a
CUD 6
CUD 7
CUD 8
CUD 9
CUD 10
CUD 11
CUD 11a
CUD 12
CUD 13
(IF APPLICABLE)

DEPARTMENT OF THE AIR FORCE

AFSC
MASTER PLAN
AIR INSTALLATION
COMPATIBLE USE ZONE "MCUZ"
AF PLANT 42

CITY OF PALMDALE
OFFICE OF THE
TRAFFIC/TRANSPORTATION ENGINEER

M E M O R A N D U M

TO: Sonja Wilson, Senior Planner
FROM: Doug Dykhouse, Traffic/Transportation Engineer
RE: Initial Study and Notice of Preparation of an Environmental Impact Report for the Freeway Business Park
DATE: September 8, 1989

I have reviewed the initial study and notice of preparation of an environmental impact report for the Freeway Business Park. I concur with the conclusions reached in Section M, Transportation and Circulation.

I will want to be closely involved with the preparation of the proposed traffic study.

DJD/glb2868

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SEP 1 1989

B. Traffic Study

Palmdale Trade and Commerce Center Traffic Study

(Revised March 21, 1990)

Kunzman Associates

Transportation Planning • Traffic Engineering

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Palmdale Trade and Commerce Center Traffic Study

This report contains the traffic impact analysis for the proposed Palmdale Trade and Commerce Center. The 593 developable acres are planned with retail, office, industrial and hotel land uses.

The traffic report contains documentation of existing traffic conditions, traffic generated by the project, distribution of the project traffic to roads in the vicinity of the site, an analysis of existing plus project conditions, an analysis of existing plus project plus the Antelope Valley Auto Mall, and a discussion of future traffic conditions. Each of these topics is contained in a separate section of the report. The first section is "Findings", and subsequent sections expand upon the findings. In this way, information on any particular aspect of the study can be easily located by the reader.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided in Appendix A.

1. Findings

This section summarizes the existing traffic conditions, project traffic impacts, and the proposed mitigation measures.

Existing Traffic Conditions

a. This analysis is based on existing streets and intersections and the following improvements which are under construction or have been funded:

   1. Widening of 10th Street West to 4 lanes north of the SR-14 Freeway.

   2. Widening of 10th Street West to 6 lanes between the SR-14 Freeway and the future Avenue P-8.

   3. Widening of 10th Street West to 5 lanes (3 northbound and 2 southbound) between the future Avenue P-8 and Elizabeth Lake Road.

   4. Widening of Avenue P to 6 lanes between SR-14 and 15th Street West.

   5. Construction of Avenue P-8 as a 4 lane street between 10th Street West and Division Street.

   6. Widening of Avenue Q to 4 lanes between Palmdale Boulevard and Division Street.

   7. Completion of 5th Street West as a 4 lane street between Palmdale Boulevard and Avenue P-8.

   8. Provision of double left turn lanes on all approaches at Avenue P/10th Street West.

b. After the completion of these improvements, roadways in the vicinity of the site will operate at Level of Service A.

c. Existing intersections in the vicinity of the site are currently operating at Level of Service B or better. After completion of the above improvements, intersections will continue to operate at Level of Service B or better.

Traffic Impacts

a. The proposed land uses for the 593 developable acres include commercial, office, industrial, and hotel uses.

b. The project is estimated to generate approximately 169,400 daily vehicle trips, 9,000 and 15,770 of which will are expected to occur during the morning and evening peak hours, respectively.

c. The proposed internal circulation network for the site will adequately service cumulative daily traffic volumes.

d. The following improvements will be required to accommodate existing plus project traffic:

1. Widen the SR-14 Freeway to 6 lanes south of Palmdale Boulevard.

2. Widen Avenue P to 6 lanes between the SR-14 Freeway and Sierra Highway.

3. Provide 8 through lanes on 10th Street West between Avenue P and Avenue P-8.

4. Upgrade Street B to a 4 lane divided street.

5. Widen Palmdale Boulevard to 6 lanes from west of 5th Street West to Division Street.

6. Provide separate right turn lanes on the northbound, eastbound, and westbound approaches at 10th Street West/Avenue P.

7. Widen the northbound SR-14 off-ramp at Avenue P to provide 2 left and 1 right turn lane.

8. Widen the northbound SR-14 off-ramp at Palmdale Boulevard to provide 2 left and 1 right turn lane.

9. At the future intersection of 5th Street West/Avenue P-8, provide 2 through, 2 left and 1 right turn lane on the southbound 5th Street West approach and 2 through and 2 left turn lanes on the eastbound Avenue P-8 approach.

10. On the northbound Street B approach at Avenue P, provide 2 left and 1 right turn lane.

11. Provide a second southbound left turn lane on 5th Street West at Palmdale Boulevard.

12. Provide a southbound right turn lane on Sierra Highway at Avenue P.

13. Provide 2 left and 1 right turn lane on Avenue P-8 at Sierra Highway.

14. Provide 2 left and 1 right turn lane on southbound Street A at Palmdale Boulevard (needed to minimize the possibility of the vehicle queue blocking the intersection at Street A/Avenue Q).

e. Figure 21 shows the locations where the volumes will satisfy the traffic signal warrants for existing plus project conditions. In addition, traffic signals are expected to be needed at the following freeway ramps:

SR-14 Southbound Off Ramp/10th Street West
SR-14 Northbound Off Ramp/Avenue P
SR-14 Southbound Off Ramp/Palmdale Boulevard
SR-14 Northbound Off Ramp/Palmdale Boulevard

f. The following additional improvements will be needed to accommodate existing plus project plus Antelope Valley Auto Mall traffic.

1. Provide a second eastbound left turn lane on Avenue P at Sierra Highway.

2. Provide a fourth northbound through lane on 10th Street West at Avenue P.

3. Provide a second southbound left turn lane on 10th Street West at Avenue P-4.

4. Provide a second westbound left turn lane on Palmdale Boulevard at 5th Street West.

5. Widen Palmdale Boulevard to 8 lanes between 5th Street West and the SR-14 Freeway.

g. The proposed project is estimated to generate approximately 1,219,680 vehicle miles of travel daily, once completed.

<u>Mitigation Measures</u>

The following measures are recommended to mitigate the impact of the project on traffic circulation:

a. Construct the internal street system as identified on Figure 19.

b. Install traffic signals, when warranted, at the intersections shown on Figure 21.

c. Contribute the project's fair share to the improvements listed in items d. and f. of the Traffic Impacts section. (Note: the future traffic signals at the SR-14 ramps with 10th Street West, Avenue P, and Palmdale Boulevard are in the City of Palmdale's Master Plan of Traffic Signals and will be funded through impact fees).

2. Project Description

This section discusses the project's location, the proposed development, and the traffic characteristics of the proposed development.

Location

The project site is located in the area bounded by 10th Street West, Avenue P, Division Street, and Palmdale Boulevard. Figure 1 shows the location of the Palmdale Trade and Commerce Center.

Proposed Development

The project site is proposed to be developed with commercial, office, industrial and hotel land uses. The commercial uses will include warehouse retail and discount centers.

The following describes the proposed land uses from a traffic engineering viewpoint:

Commercial: Commercial developments are characterized by a large number of short duration trips throughout the day. Their typical opening times produce minor traffic volumes during the morning peak hour. During the evening peak hour, people driving home from work stop to shop, creating a minor peak in commercially generated traffic volumes.

Office: Offices will have pronounced peak traffic during the morning and evening peak hour periods as employees arrive and leave.

Industrial: Industrial land use will characteristically have fewer employees per acre than most other business or commercial uses, and fewer non-employee visits. There are pronounced traffic peaks as employees arrive in the morning and depart in the evening.

Hotel: Hotel traffic peaks with normal traffic and occurs all through the day and into the evening.

The project has been divided into 13 traffic zones to facilitate analysis. Figure 2 shows the zone boundaries. The area identified as the Antelope Valley Auto Mall is a previously approved project. The cumulative impacts of the Trade Center and the Auto Mall are discussed in Section 6. Table 1 lists the land uses in each traffic zone.

Table 1

LAND USE QUANTITIES BY ZONE

Zone Number	Land Use	Acres
1	OP/PC (1)	19.9
	Retail	7.3
	Office	49.0
2	OP/PC	24.2
	Retail	54.7
	Office	50.5
3	OP/PC	19.5
	Retail	19.6
	Office	32.7
4	OP/PC	9.7
	Retail	9.5
	Industrial	10.8
5	Industrial	21.6
6	Industrial	56.7
7	OP/PC	9.7
	Retail	16.4
	Industrial	10.8
8	Retail	12.0
	Industrial	18.0
9	Retail	6.0
	Industrial	10.8
10	Retail	29.4
11	Retail	11.3
	Office	14.8
	Hotel	9.4(2)
12	Industrial	47.0
13	Retail	12.3
Total		593.2

(1) Off-Price/Promotion Centers (i.e. warehouse retail and discount centers).

(2) Assumed to have 80 guest rooms.

Figure 1
Project Location

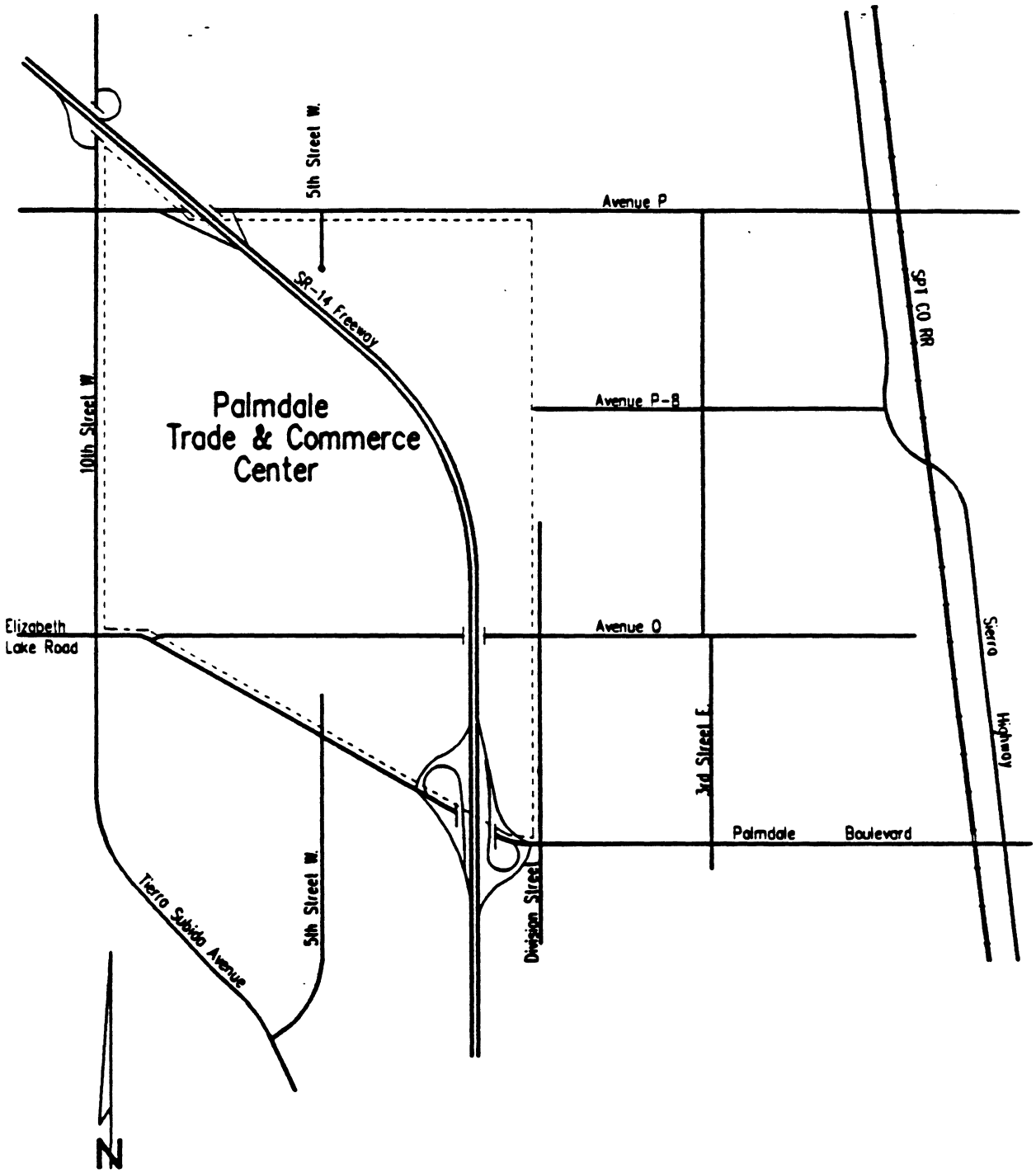

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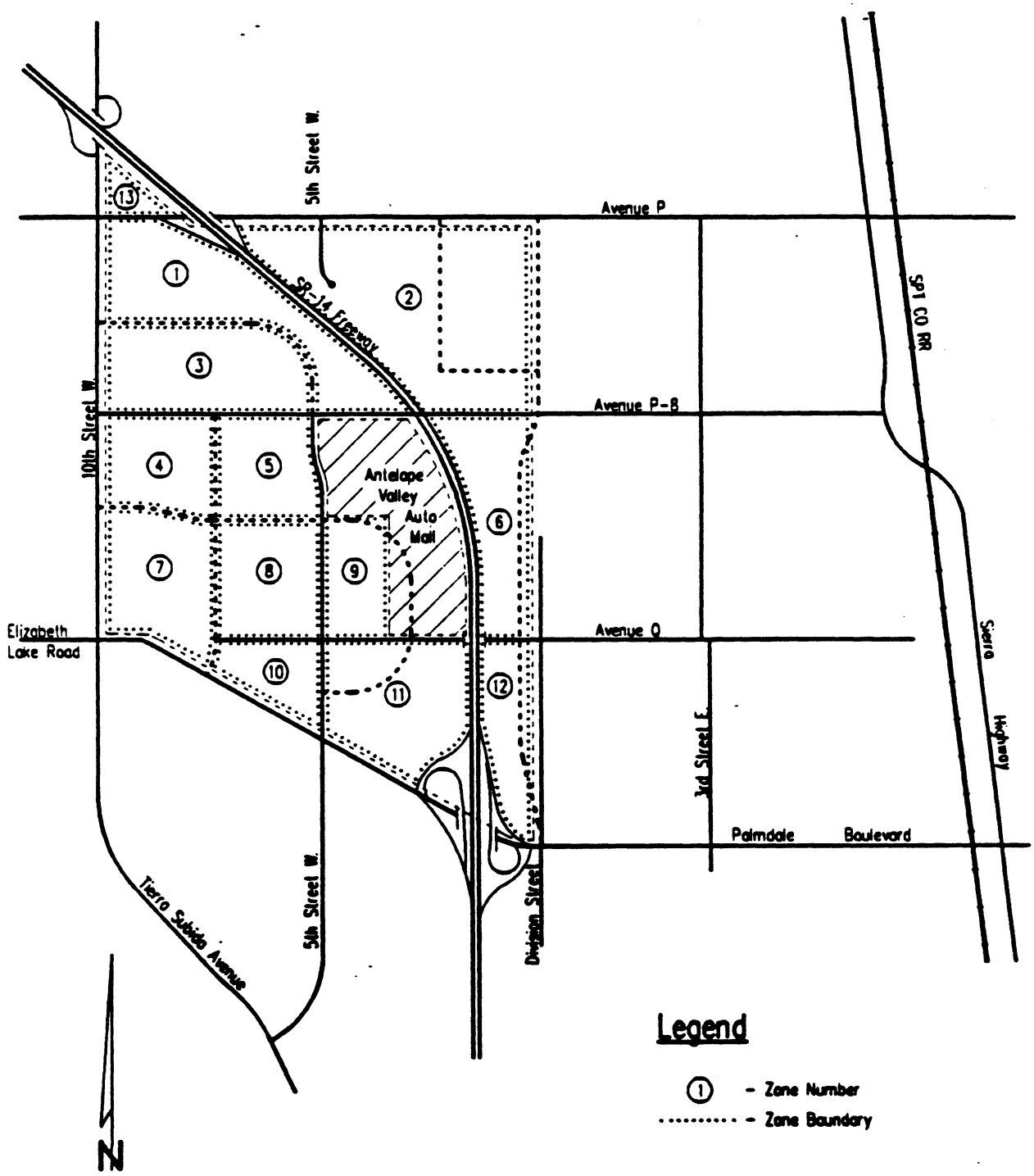
Figure 2
Traffic Analysis Zones



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3. Existing Traffic Conditions

This section discusses existing traffic conditions and planned improvements to the street system in the vicinity of the project site.

Surrounding Street System

Existing roadways that provide access to the development include 10th Street West, Avenue P, Avenue P-8, Avenue Q, Palmdale Boulevard, Division Street, and the SR-14 Freeway. In the vicinity of the project site, the following roadway conditions exist.

10th Street West: This road is a two lane street in the vicinity of the site. It is a key north-south street providing access to Lancaster to the north. 10th Street West has a partial interchange with the SR-14 Freeway (southbound off and northbound on-ramps).

Avenue P: This east-west arterial provides access to the employment and residential facilities to the east of the site and to the developing residential areas to the west. Avenue P has a partial interchange with the SR-14 Freeway (southbound on and northbound off ramps).

Avenue P-8: Avenue P-8 exists as a 4 lane divided street between the Division Street alignment and Sierra Highway.

Avenue Q: Avenue Q extends easterly from Palmdale Boulevard and provides access to the existing residential areas to the east of the SR-14 Freeway. At present, Avenue Q does not connect with the Sierra Highway.

Palmdale Boulevard: This 4 lane divided street is the major east-west arterial in Palmdale. It has a full interchange with the SR-14 Freeway and connects with Elizabeth Lake Road to the west of the site.

Division Street: This street currently exists as a two lane road between Palmdale Boulevard and the future Avenue P-12 alignment. Division Street has direct residential frontage on the east side of the street. An element of the project's circulation system shown on Figure 19 is the reconstruction of Division Street west of its present alignment.

SR-14 Freeway: The freeway has 6 lanes north of Palmdale Boulevard and 4 lanes south of Palmdale Boulevard.

Existing Travel Lanes and Intersection Controls

Figure 3 identifies the existing conditions for roadways near the site. The number of through lanes and the existing intersection controls are shown.

The following improvements have been funded for roadways in the vicinity of the site:

1. Widening of 10th Street West to 4 lanes north of the SR-14 Freeway.

2. Widening of 10th Street West to 6 lanes between the SR-14 Freeway and the future Avenue P-8.

3. Widening of 10th Street West to 5 lanes (3 northbound and 2 southbound) between the future Avenue P-8 and Elizabeth Lake Road.

4. Widening of Avenue P to 6 lanes between the SR-14 Freeway and 15th Street West.

5. Construction of Avenue P-8 as a 4 lane street between 10th Street West and Division Street.

6. Widening of Avenue Q to 4 lanes between Palmdale Boulevard and Division Street.

7. Completion of 5th Street West as a 4 lane street between Palmdale Boulevard and the future Avenue P-8.

8. Provision of double left turn lanes on all approaches at 10th Street West/Avenue P.

The roadway conditions at the completion of these planned improvements are shown on Figure 4.

Since these improvements will be complete before the project is constructed, subsequent analyses in this report are based on the widened street sections.

Daily Traffic Volumes

Figure 5 depicts the average daily two-way traffic volumes. Traffic volumes were obtained from the City of Palmdale Circulation Element prepared by DKS Associates and from CalTrans 1988 Traffic Volumes on State Highways.

Existing Daily Volume to Capacity Ratios

Roadway capacity is generally defined as the number of vehicles which can be reasonably expected to pass over a given section of road in a given time period. Congestion, high accident rates, the quality of traffic flow (Level of Service), and environmental acceptability all come into play in defining a particular roadway's effective capacity. It is possible to identify the maximum desirable volumes for typical roadway types based on the number of roadway travel lanes. These daily volumes reflect estimates of the amount of daily traffic which will result in peak hour traffic volumes equal to the maximum desirable for each roadway type. The following daily capacities are from the City of Palmdale's Circulation Element (except as noted) and were used in this report for consistency of analysis:

6 lane freeway	- 138,000
4 lane freeway	- 86,000
6 lane divided arterial	- 56,000*
5 lane divided arterial	- 46,000**
4 lane divided arterial	- 36,000
3 lane divided arterial	- 24,000
4 lane undivided arterial	- 24,000
2 lane undivided collector	- 12,000

* Based on Kunzman Associates experience with other jurisdictions.

** Interpolation between 4 lane and 6 lane arterial.

By dividing the existing daily traffic volumes by the capacities listed above, daily volume to capacity ratios have been calculated and are shown in Figure 5. The ratios at the completion of the funded improvements are also shown. Table 2 equates the volume to capacity ratios to level of service. Figure 5 shows that roadways in the vicinity of the site are operating at Level of Service D or better for existing street segments. After completion of funded improvements, roadways are expected to operate at Level of Service A.

Existing Intersection Capacity Utilization

The technique used to assess intersection operation is Intersection Capacity Utilization (ICU). To calculate an ICU the volume of traffic using the intersection is compared to the capacity of the intersection. ICU is usually expressed as a percent which represents that portion of the hour required to provide sufficient capacity to accommodate intersection traffic if all approaches operate at capacity. The ICU's for existing geometrics at intersections in the vicinity of the project are shown in Table 3. The information on Table 3 shows that intersections are operating at Level of Service B or better for

existing peak hour traffic conditions. An explanation of ICU and Level of Service and the ICU worksheets are included in Appendix B.

Comparison of daily volume to capacity ratios and the corresponding Levels of Service, and peak hour Intersection Capacity Utilization and the corresponding Levels of Service reveals differences. The differences between daily volume to capacity ratios and peak hour Intersection Capacity Utilization is particularly pronounced when cross traffic is light. Daily volume to capacity ratios assume that all cross streets require 50 percent of the time to satisfy their demand, and assume that the subject street has 50 percent of the time available to it. The daily volume to capacity ratios are a generalized indicator while peak hour Intersection Capacity Utilization actually represents what can be expected in the peak hour at intersections. Of the two indicators, the peak hour Intersection Capacity Utilization and corresponding Level of Service is the better measure of roadway performance.

Table 2

LEVEL OF SERVICE DESCRIPTION

Level of Service	Description	Volume to Capacity Ratio
A	Level of Service A occurs when progression is extremely favorable and vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0.60 and below
B	Level of Service P generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	0.61 to 0.70
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	0.71 to 0.80
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	0.81 to 0.90
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	0.91 to 1.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with over-saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	1.01 and up

Source: "Highway Capacity Manual" Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 1985, Pages 9-4 to 9-5.

Table 3

EXISTING INTERSECTION CAPACITY UTILIZATION AND LANE GEOMETRICS

Intersection	Intersection Approach Lanes (1)												Peak Hour ICU-LOS (2)	
	North-bound			South-bound			East-bound			West-bound				
	T	R	L	T	R	L	T	R	L	T	R	L	AM	PM
10th Street West (NS) at														
SR-14 SB Off Ramp (EW)	1	*	*	1	*	*	*	1	1	*	*	*	32-A	48-A
Avenue P (EW)	2	0	1	2	1	1	2	1	1	1	1	1	46-A	70-B
Palmdale Boulevard (EW)	2	1	1	2	1	1	2	1	1	2	1	1	32-A	39-A
SR-14 NB Off Ramp (NS) at Avenue P (EW)	*	1	1	*	*	*	2	*	*	2	*	*	22-A	37-A
Sierra Highway (NS) at														
Avenue P (EW)	2	1	1	2	0	2	2	1	1	2	1	1	39-A	63-B
Avenue P-8 (EW)	2	*	1	2	1	*	*	1	1	*	*	*	32-A	45-A
SR-14 SB Off Ramp (NS) at Palmdale Boulevard (EW)	*	*	*	*	1	1	2	1	*	2	*	*	32-A	51-A
SR-14 NB Ramps (NS) at Palmdale Boulevard (EW)	*	1	1	*	*	*	2	*	*	2	1	*	23-A	39-A

(1) When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

(2) Intersection Capacity Utilization (ICU) - Level of Service (LOS)

T = Through
R = Right
L = Left
NB = Northbound
SB = Southbound
* = Movement not possible

Table 4

EXISTING TRAFFIC INTERSECTION
CAPACITY UTILIZATION AFTER PLANNED IMPROVEMENTS

Intersection	Peak Hour ICU-LOS (1)	
	AM	PM
10th Street West at SR-14 SB Off Ramp	15-A	21-A
10th Street West at Avenue P	32-A	49-A

(1) Intersection Capacity Utilization (ICU) - Level of Service (LOS)

Figure 3
Existing Conditions

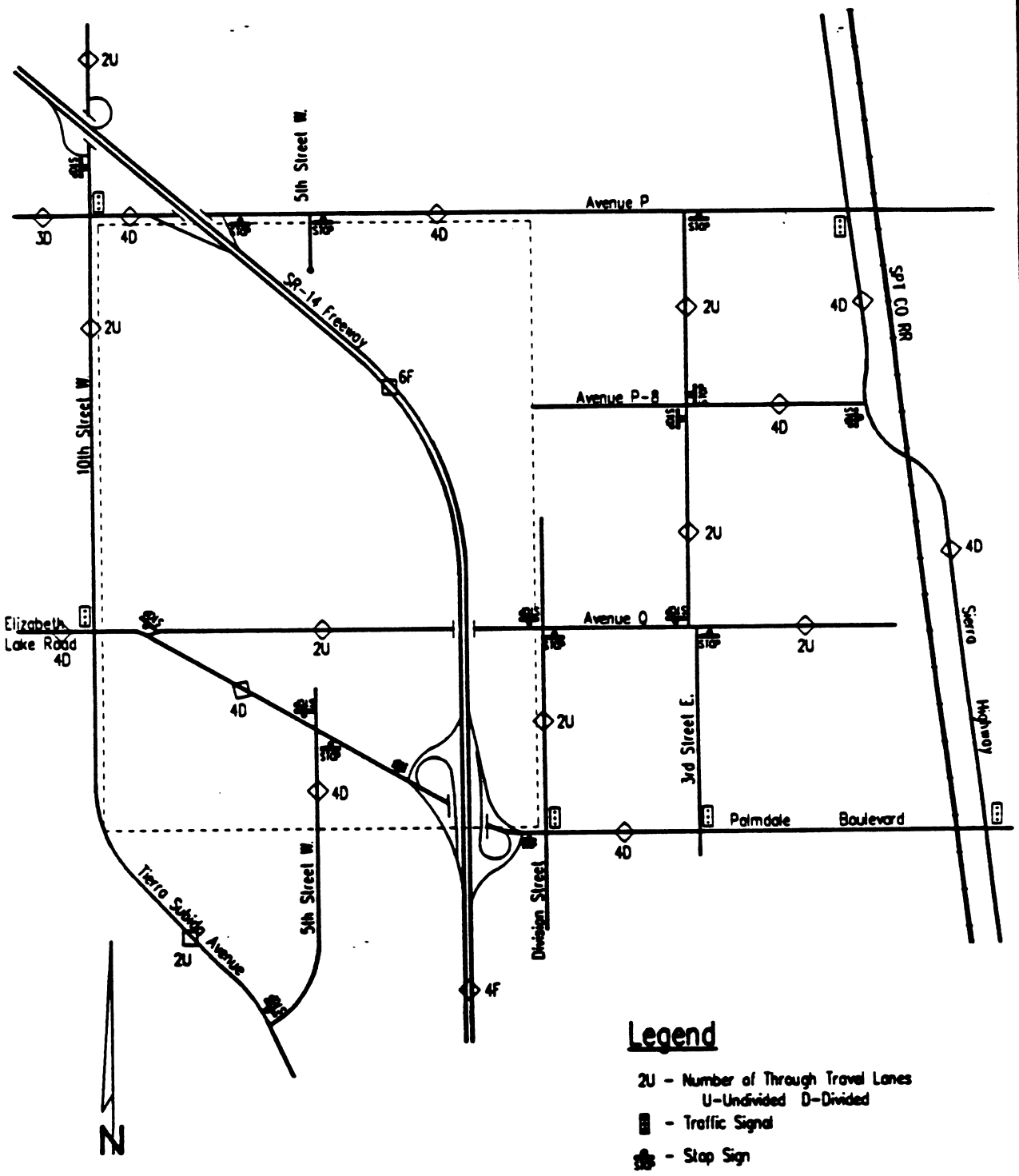

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Figure 4
Conditions Upon Completion of Planned Improvements

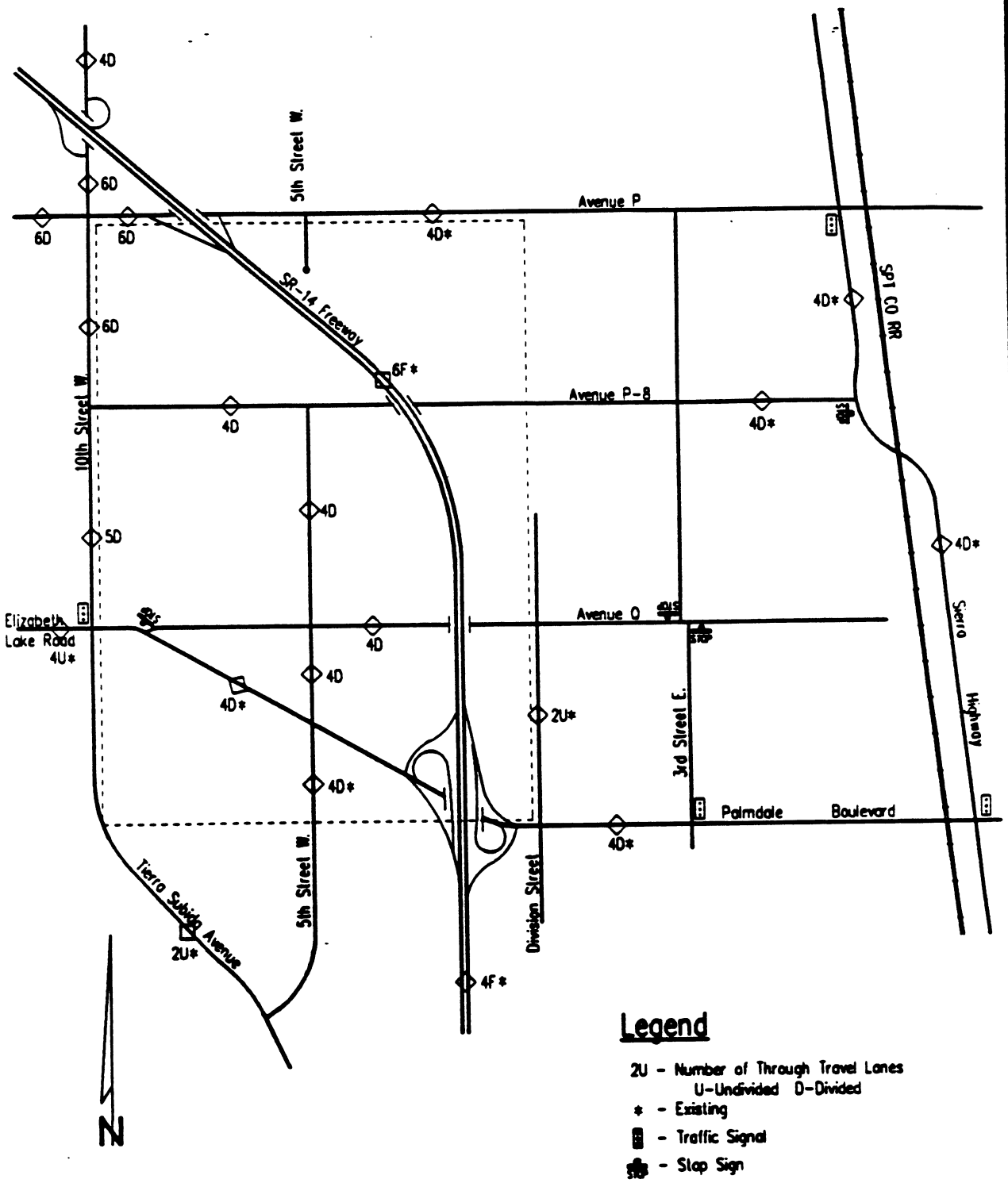

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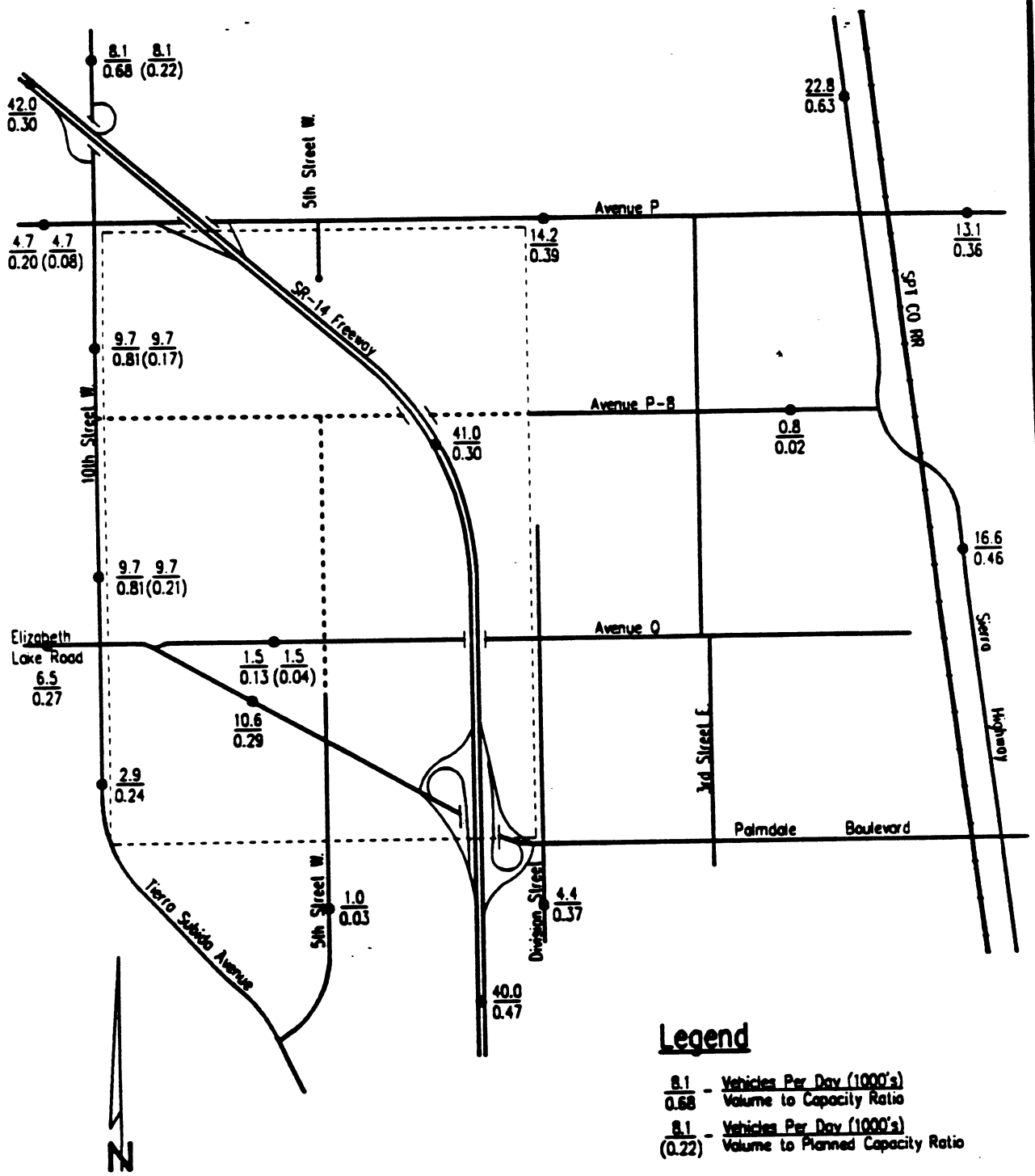
Figure 5
Existing Daily Traffic Volumes and Volume to Capacity Ratios



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4. Project Traffic

To estimate project-related traffic volumes at various points on the street network, a three step process is utilized. First, the traffic which will be generated by the proposed development is determined. Secondly, the traffic volumes are geographically distributed to major attractions of trips, such as employment centers, commercial centers, recreational areas or residential areas. Finally, the trips are assigned to specific roadways and the project-related traffic volumes are determined on a route-by-route basis.

Traffic Generation

The traffic generated by the project is determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are expressed in terms of trip ends per person, trip ends per employee, trip ends per acre, trip ends per dwelling, or trip ends per thousand square feet of floor space. For instance, if a particular land use generates six outbound trips per acre in the morning peak hour, then six vehicles are expected to leave the site in the morning peak hour for each acre of development.

Significant research efforts have been made by CalTrans, the Institute of Transportation Engineers (ITE), Kunzman Associates, and others to establish the correlation between trips and land use. From this body of information, trip generation rates can be estimated with reasonable accuracy for various land uses. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and our life styles remain similar to what we know today. A major change in these variables may affect trip generation rates.

Table 5 lists the morning inbound and outbound, afternoon inbound and outbound and daily trip generation rates used in this study. The trip generation rates for commercial, office and industrial uses documented in the City of Palmdale Circulation Study prepared by DKS Associates are the basis for the rates shown on Table 5. The citywide study used trip rates per gross acre. These rates were modified by the ratio of the total project area to developable acres (767.2/593.2) to obtain trip rates per net acre. The rates for the off price/promotion centers land uses are twice the commercial rates and are based on trip generation studies for warehouse retail and discount center facilities. The trip generation rates for the hotel use are from ITE.

Traffic Distribution and Assignment

Traffic distribution is the determination of the directional orientation of traffic. For this project, it is primiarly based on the geographical location of existing and future residential area concentrations.

Traffic assignment is the determination of which specific route project traffic will use, once the generalized traffic distribution is determined. The basic factors affecting route selection are minimum time path and minimum distance path.

Figures 6-18 contain the directional distribution and assignment of the project traffic for Zones 1-13, respectively.

Table 5

TRIP GENERATION RATES

Land Use	Units	Morning Peak Hour		Evening Peak Hour		Daily
		In	Out	In	Out	
Commercial (1)	Acre	5.81	2.50	14.40	15.02	350.83
OP/PC (2) (3)	Acre	11.61	5.01	28.80	30.03	701.66
Office (1)	Acre	26.35	4.63	5.64	21.54	249.90
Industrial (1)	Acre	7.20	1.61	1.90	7.29	66.04
Hotel (4)	Room	0.34	0.24	0.37	0.25	7.27

(1) As used in City of Palmdale Circulation Study.

(2) Off Price/Promotional Center

(3) Rates are twice the commercial based on data collected at warehouse retail/discount center facilities.

(4) Source: Institute of Transportation Engineers, Trip Generation, Fourth Edition, 1987, Land Use Category 312.

Note: Trip generation rates per acre are for net acres for each land use.

Table 6

ESTIMATED PROJECT TRAFFIC GENERATION

Zone Number	Morning Peak Hour		Evening Peak Hour		Daily
	In	Out	In	Out	
1	1,560	340	940	1,750	28,500
2	1,930	490	1,770	2,630	48,800
3	1,200	300	1,030	1,580	28,700
4	250	90	440	510	10,900
5	160	30	40	160	1,400
6	410	90	110	410	3,700
7	290	110	540	620	13,300
8	200	60	210	310	5,400
9	110	30	110	170	2,800
10	170	70	420	440	10,300
11	480	110	280	510	8,200
12	340	80	90	340	3,100
13	70	30	180	180	4,300
Total	7,170	1,830	6,160	9,610	169,400

Note: Trips generated are rounded to nearest 10 for peak hour and 100 for daily.

Figure 6
Project Traffic Distribution – Zone 1

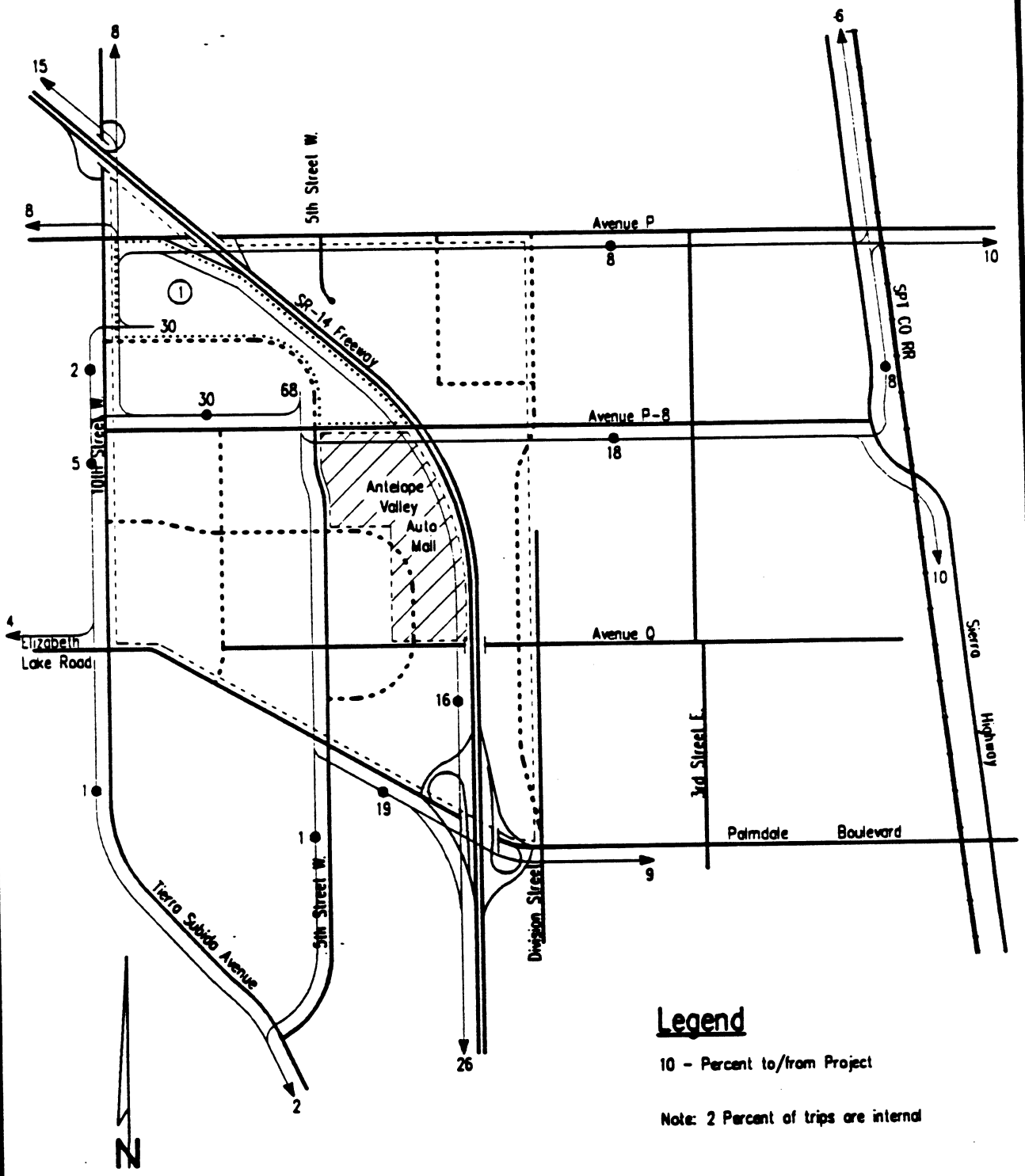

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Figure 7
Project Traffic Distribution – Zone 2

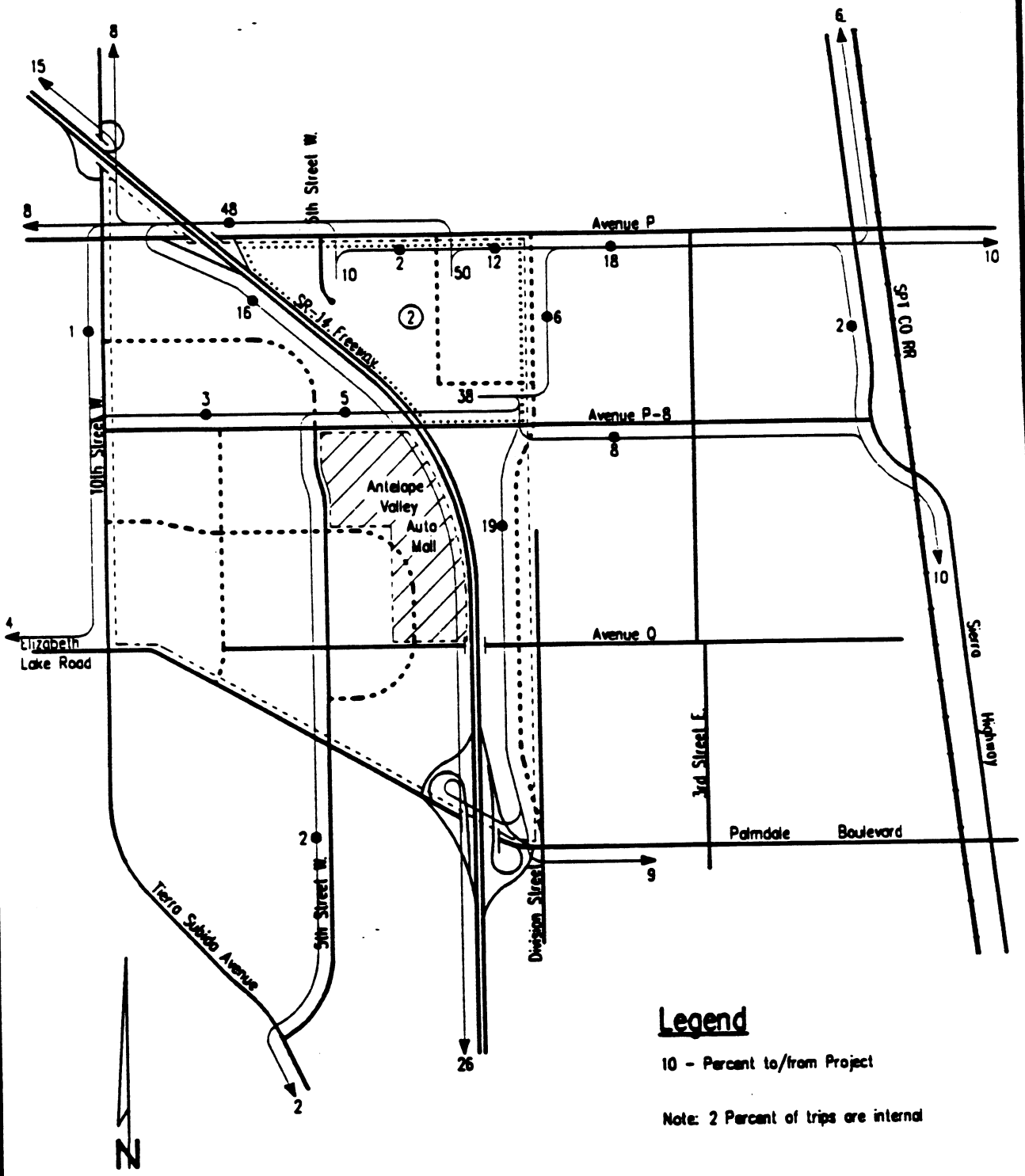

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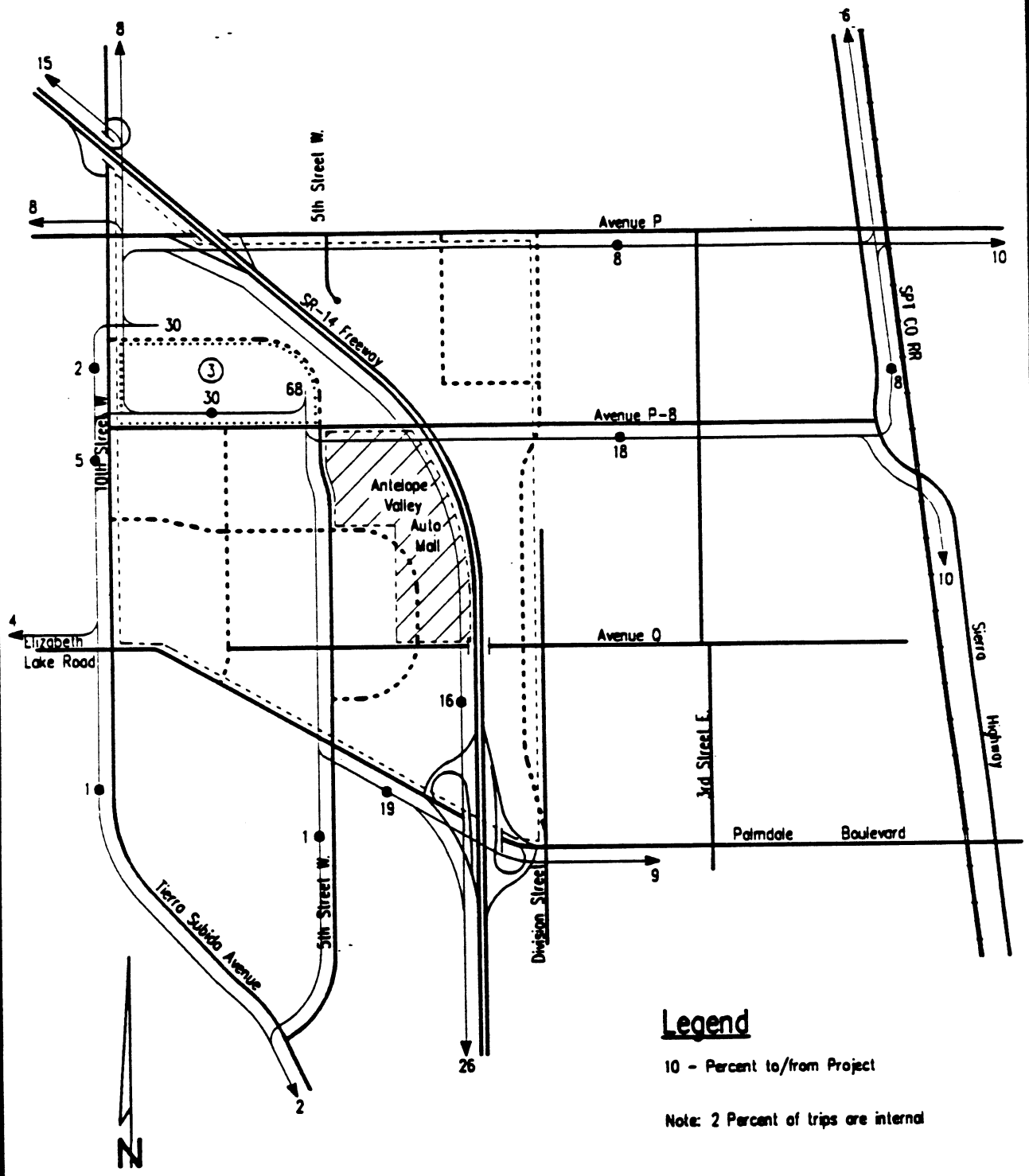
Figure 8
Project Traffic Distribution – Zone 3



Legend

10 - Percent to/from Project

Note: 2 Percent of trips are internal

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Figure 9
Project Traffic Distribution – Zone 4

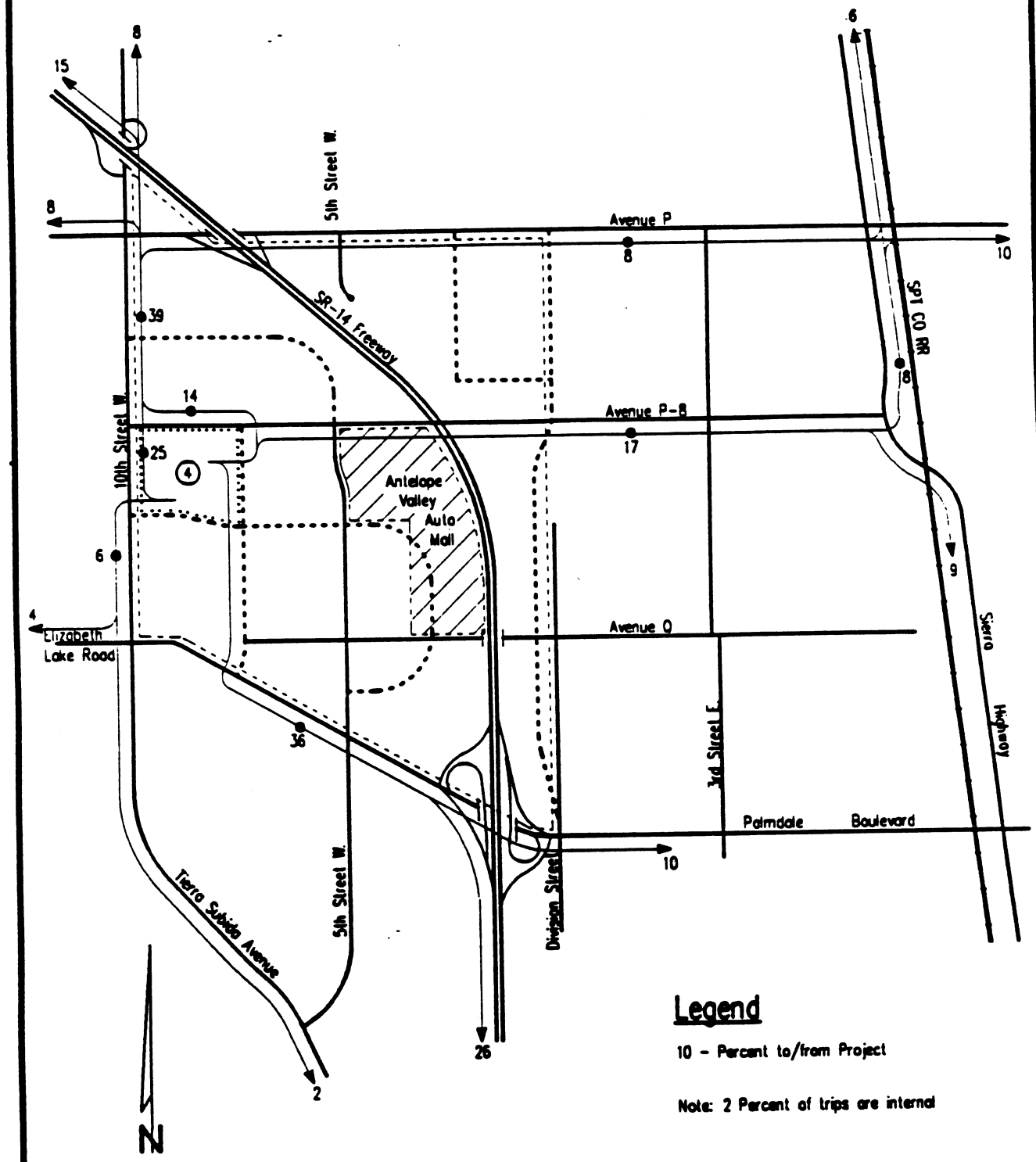

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Figure 10
Project Traffic Distribution – Zone 5

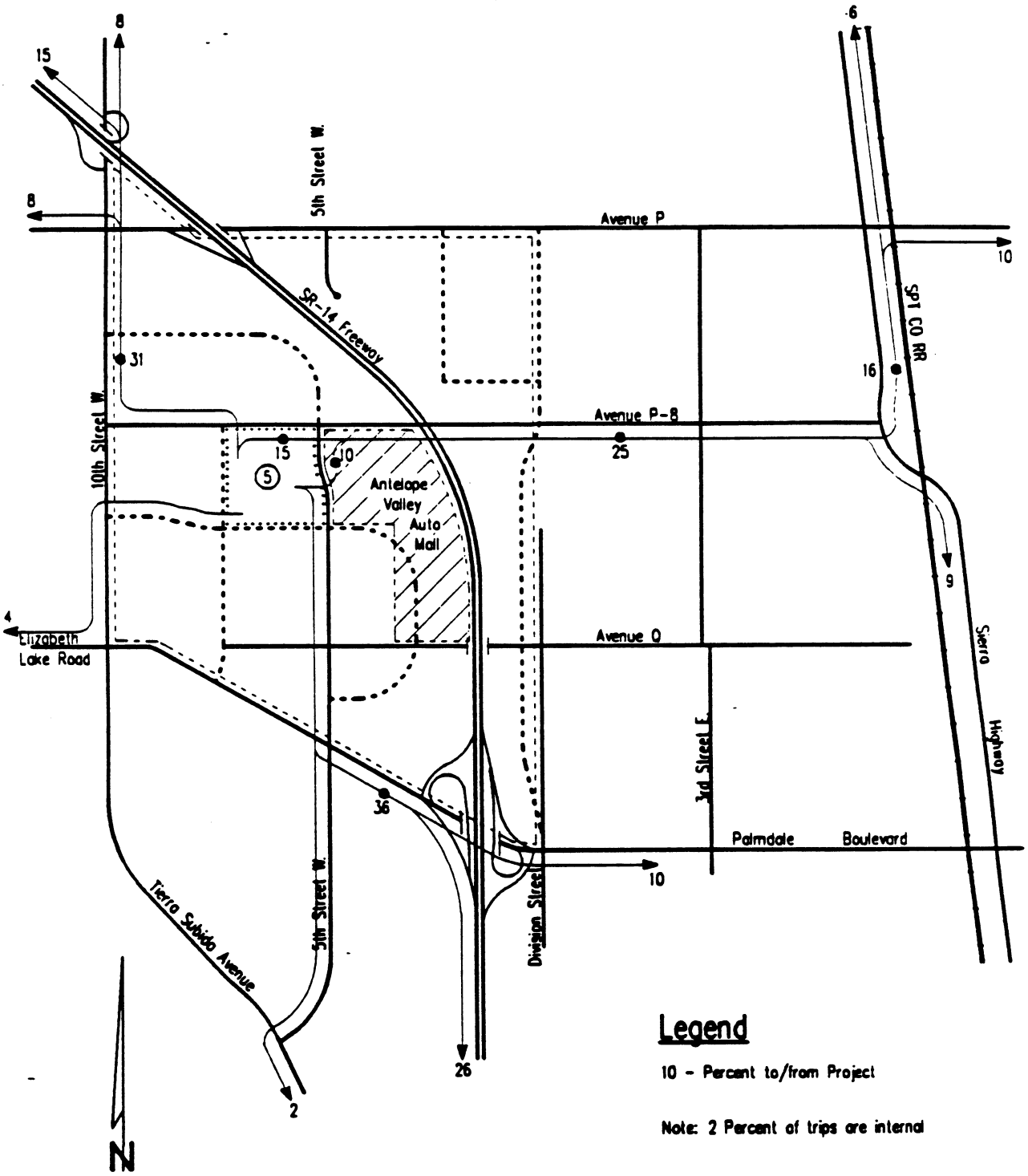

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Figure 11
Project Traffic Distribution – Zone 6

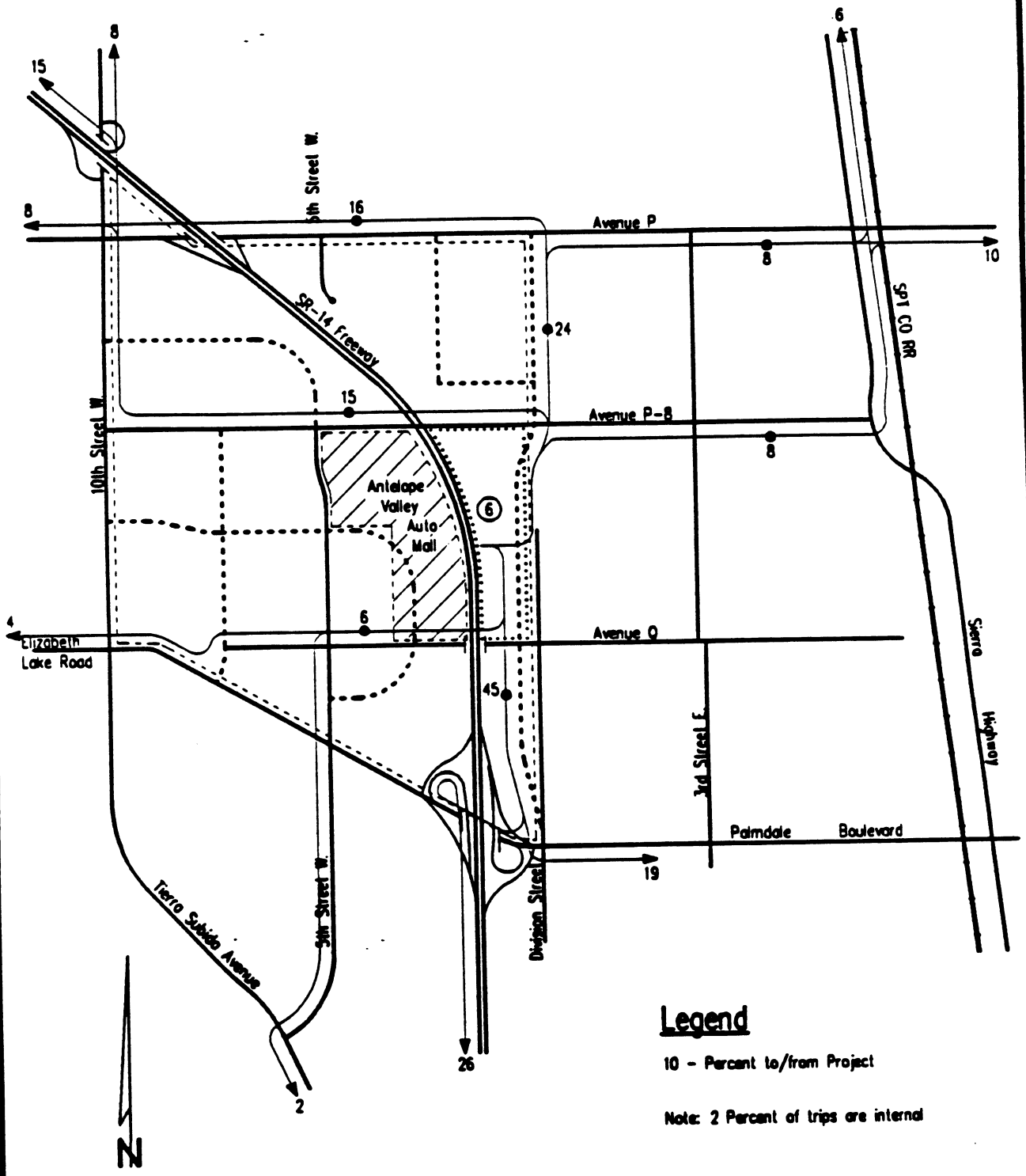

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Figure 12
Project Traffic Distribution – Zone 7

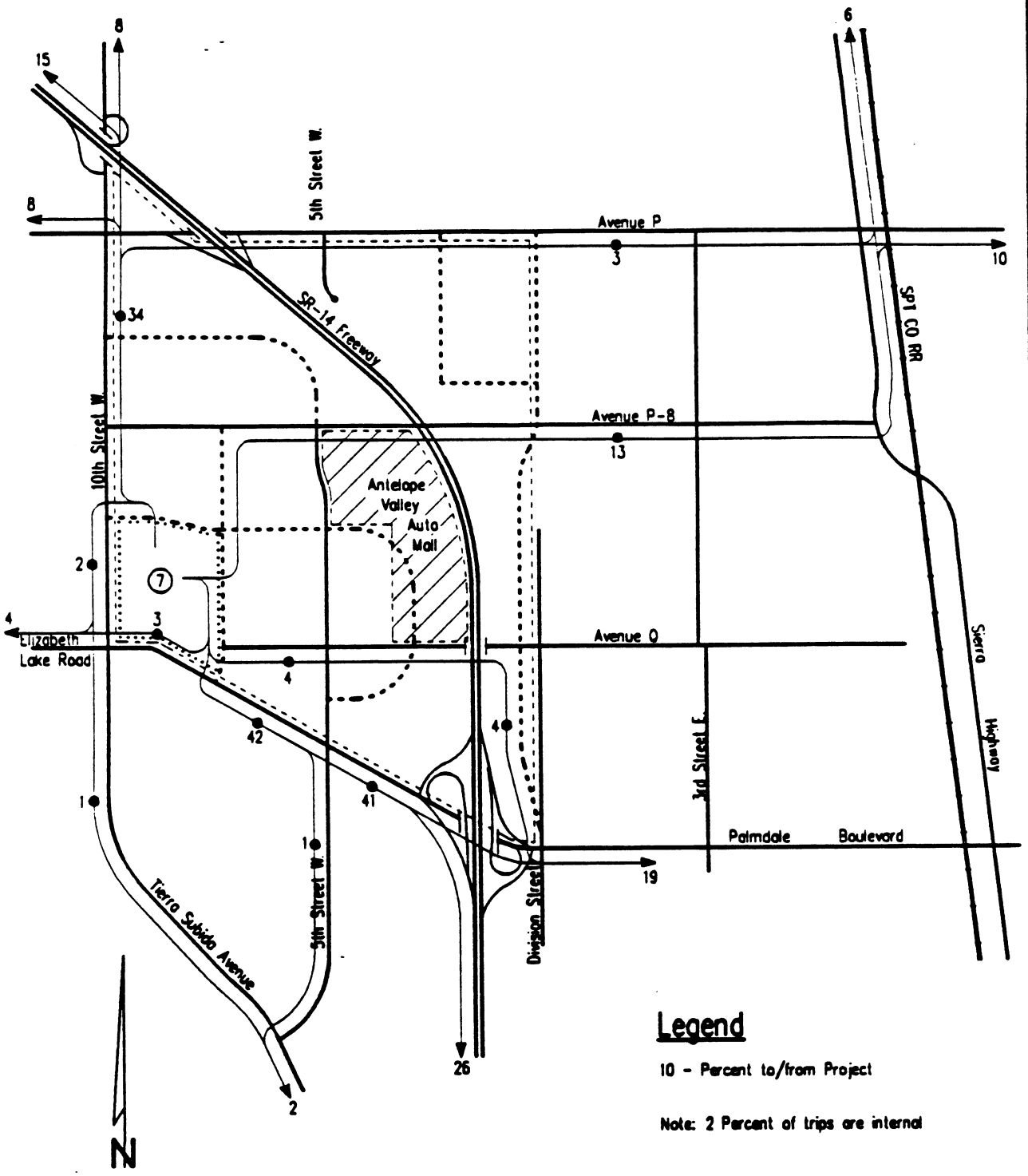

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Figure 13
Project Traffic Distribution – Zone 8

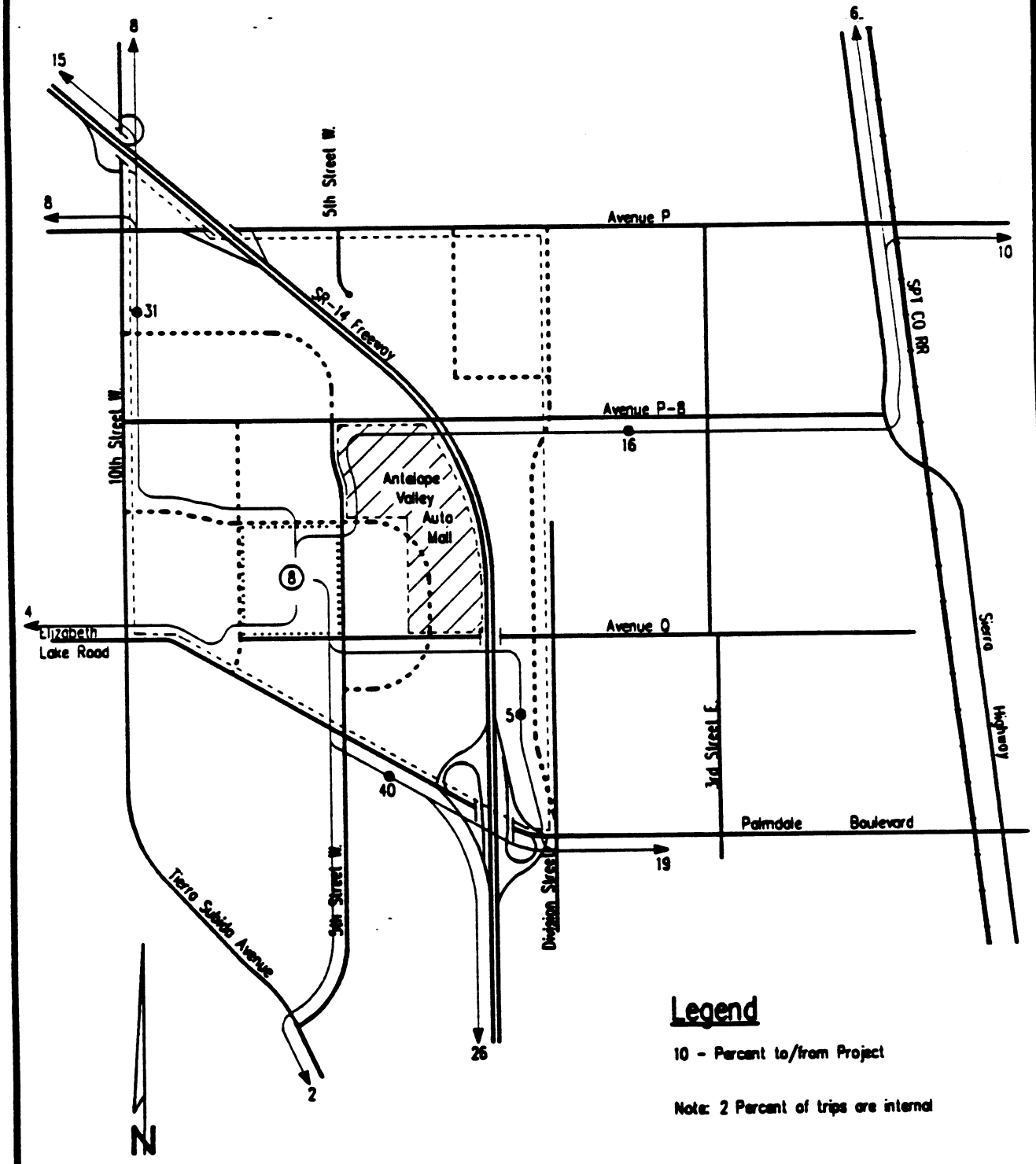

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Figure 14
Project Traffic Distribution – Zone 9

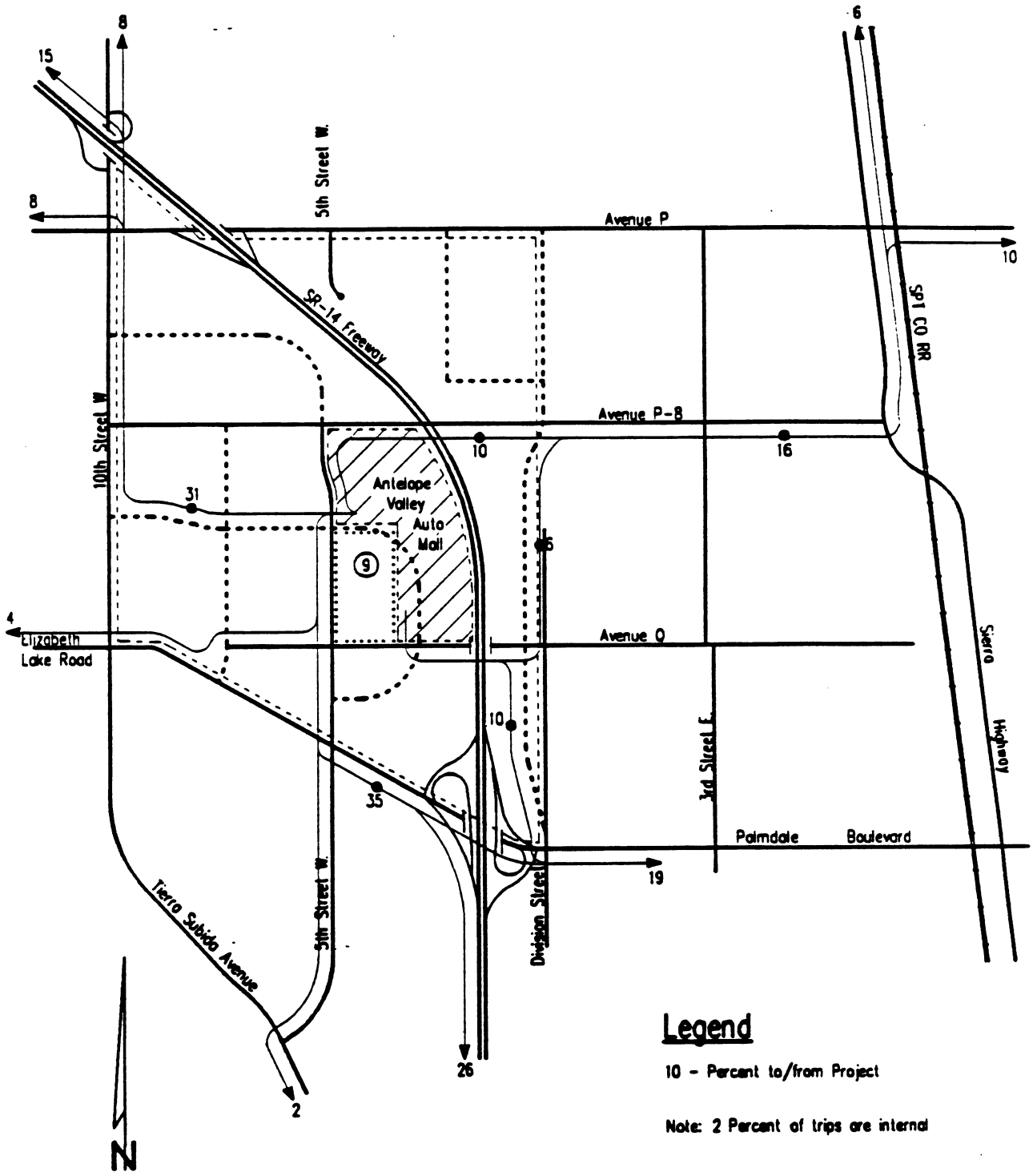

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Figure 15
Project Traffic Distribution – Zone 10

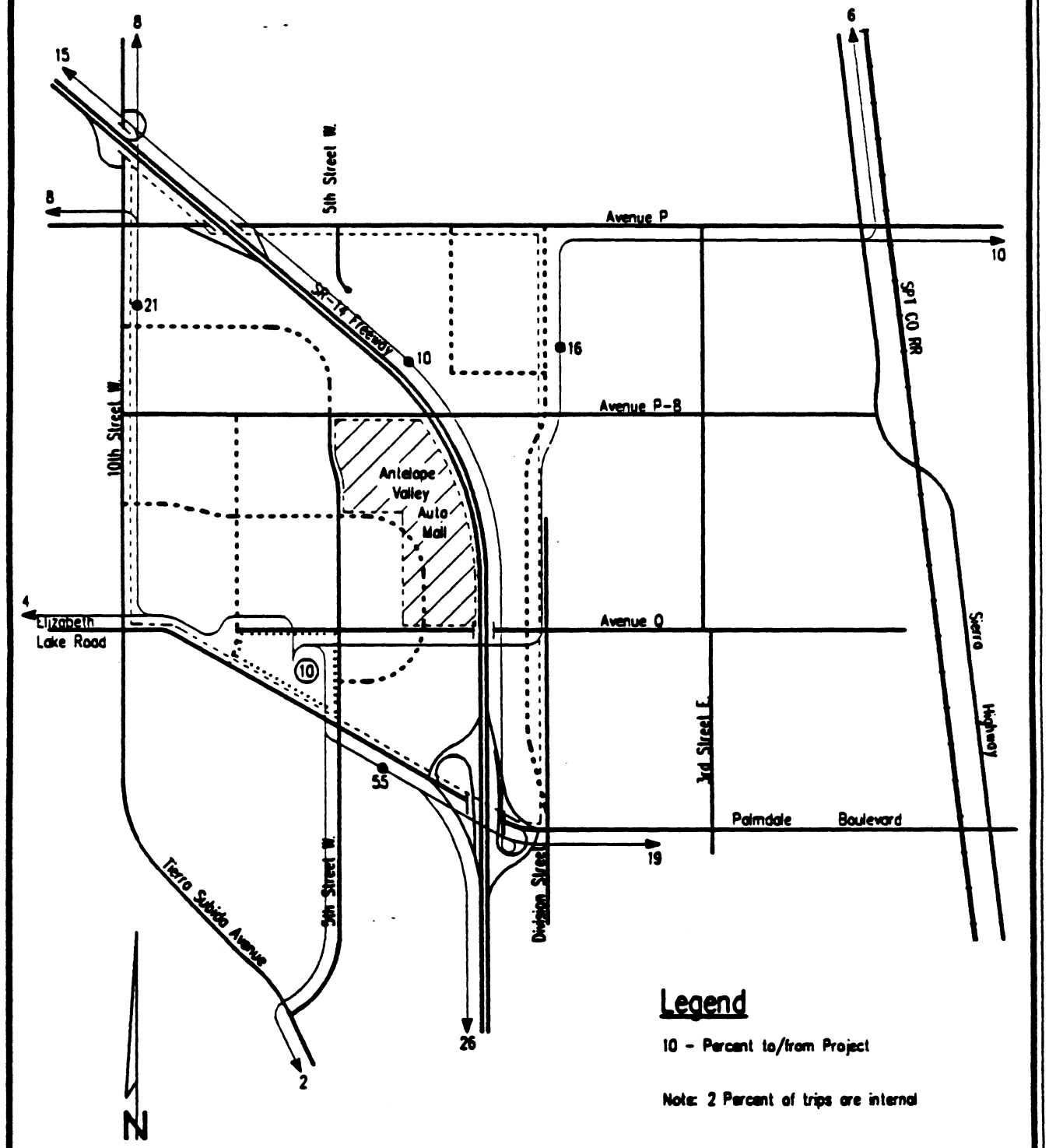

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Figure 16
Project Traffic Distribution – Zone 11

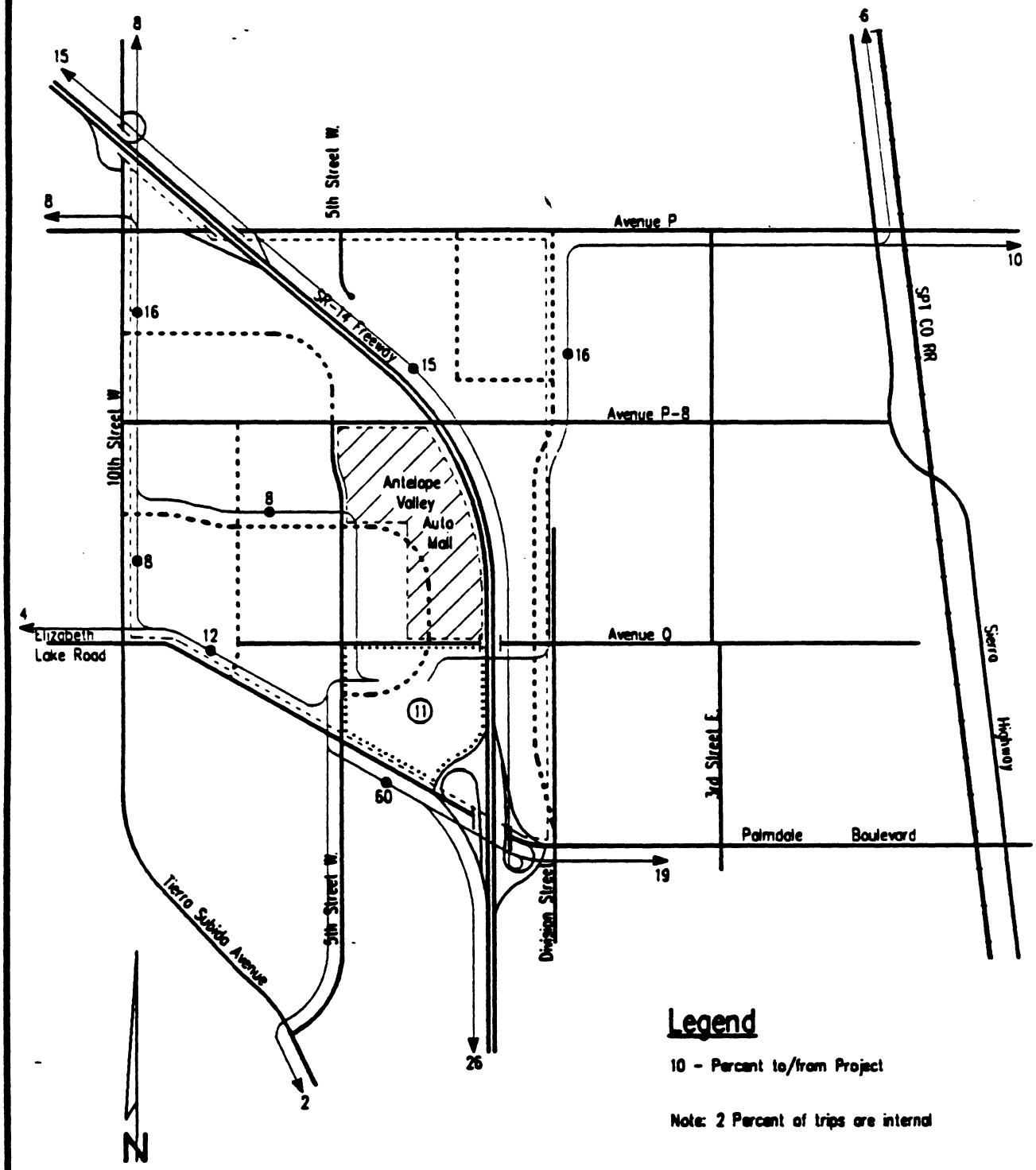

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Figure 17
Project Traffic Distribution – Zone 12

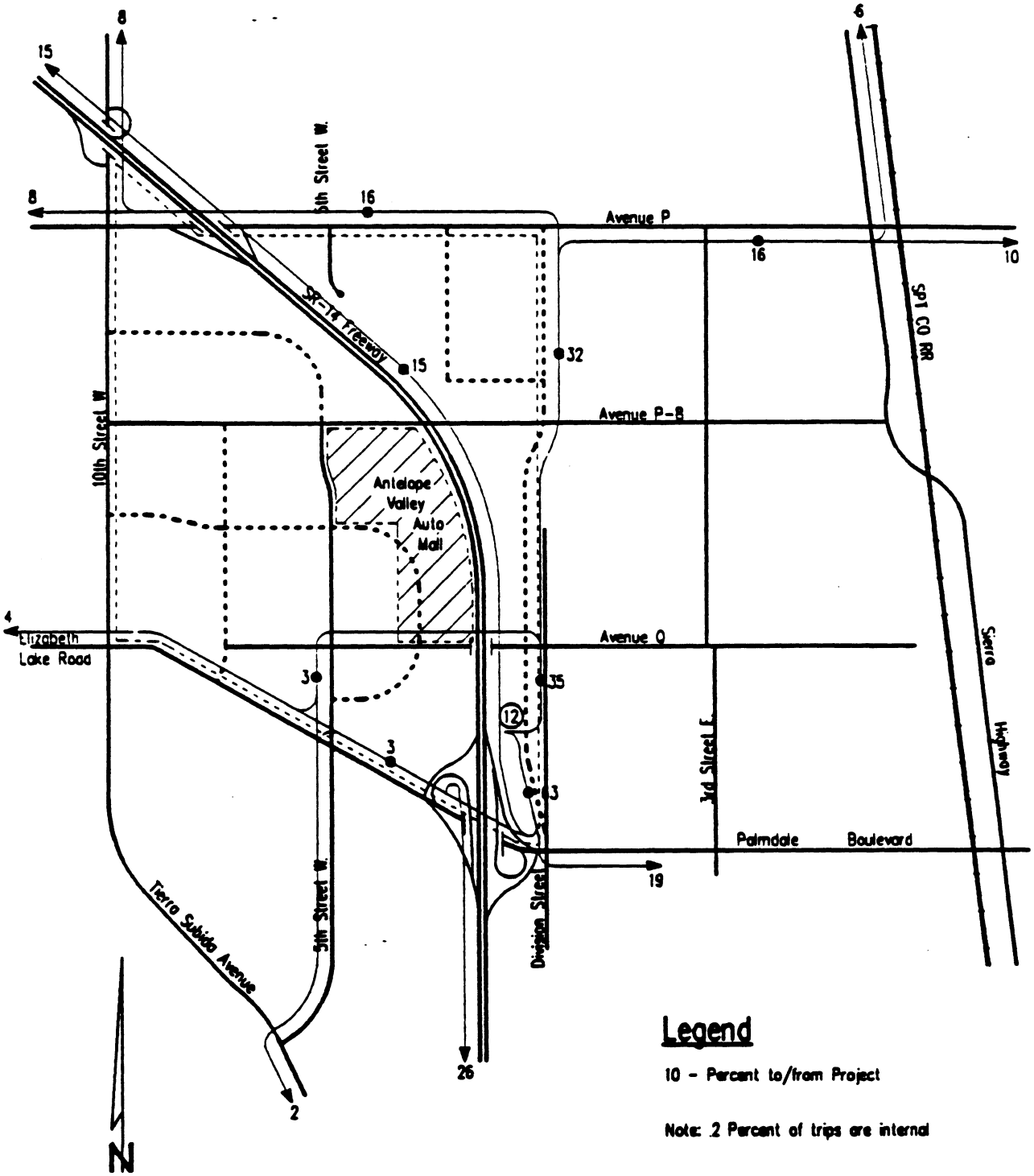

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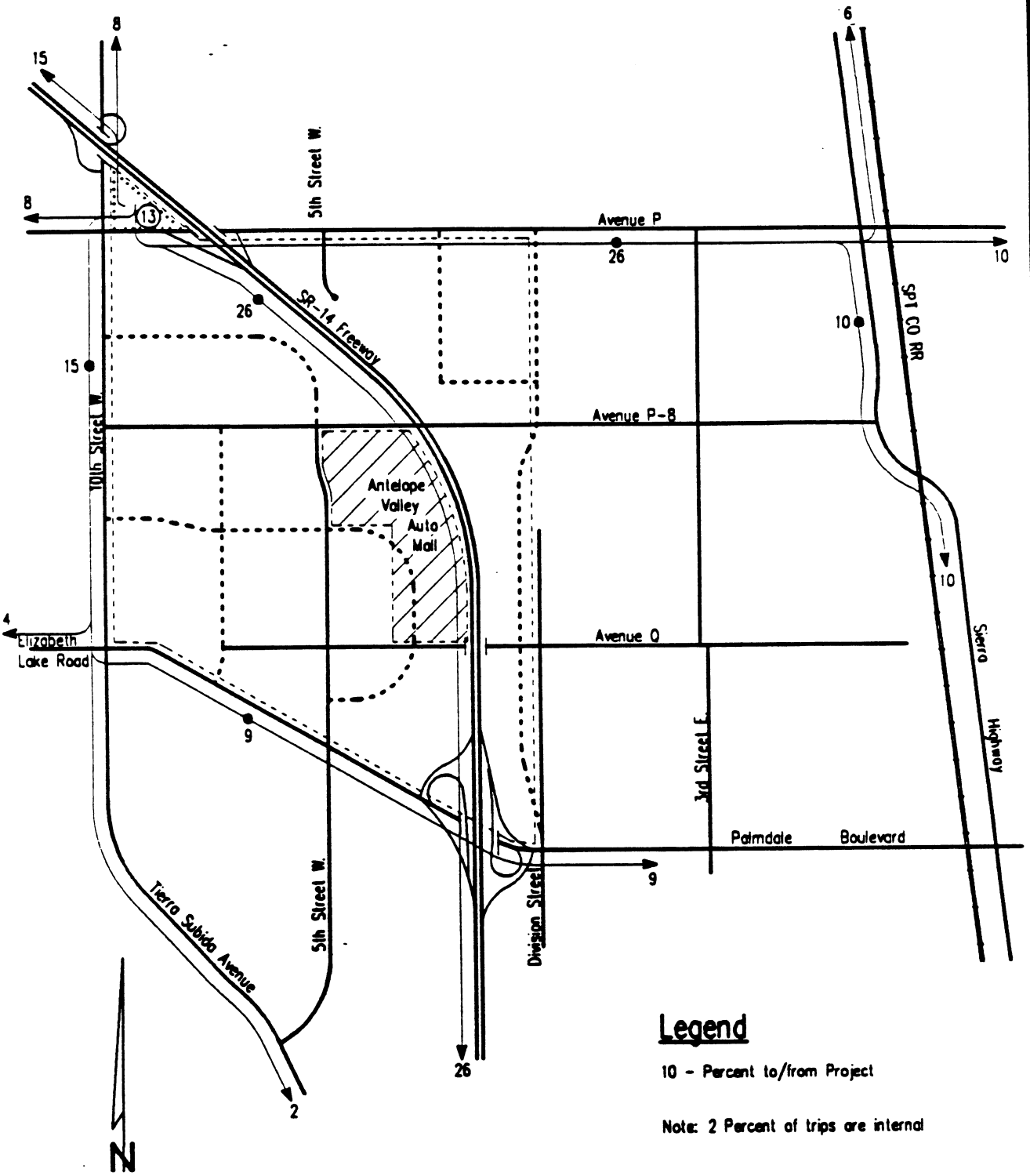
Figure 18
Project Traffic Distribution – Zone 13



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5. Existing Plus Project Traffic Conditions

This section discusses the impact of project traffic on the planned circulation system which includes improvements to 10th Street West, Avenue P, Avenue P-8, Avenue Q, and 5th Street West as listed in Section 3. Figure 19 illustrates the street sections and alignments which are planned to be constructed in the Palmdale Trade and Commerce Center. The project circulation system includes elimination of the existing intersection of Palmdale Boulevard/Avenue Q and construction of a new intersection at Street A/Palmdale Boulevard.

The new intersection will accommodate existing traffic on Avenue Q as well as some of the future traffic generated by the Palmdale Trade and Commerce Center. The circulation system shown on Figure 19 was taken from the Specific Plan for the project. The distance between intersections on Street A at Avenue Q and at Palmdale Boulevard is approximately 400 feet. This proposed modification will have the following impacts:

1. The north-south alignment of Street A allows for a better intersection design and approach at Palmdale Boulevard than does the east-west alignment of Avenue Q.

2. The maximum queue of vehicles southbound on Street A at Palmdale Boulevard is expected to extend approximately 480 feet. This estimate is based on the projected evening peak hour southbound left turn volume of 480 vehicles, 1 right and 1 left turn lane, a 90 second signal cycle and a factor of two which accounts for the maximum arrival rate/minute during the peak hour.

   Since the projected queue of vehicles (480 feet) exceeds the estimated distance between intersections (400 feet), it will be necessary to provide a second southbound left turn lane on Street A at Palmdale Boulevard so as to not create a queue which has the potential to block the intersection at Avenue Q.

Existing Plus Project Daily Traffic Volumes

Figure 20 shows the expected daily traffic volumes for existing plus project traffic conditions.

Existing Plus Project Daily Volume to Capacity Ratios

For existing plus project traffic volumes, daily volume to capacity ratios have been calculated and are shown in Figure 20. The ratios are based on the capacities listed in Section 3 and the street sections shown on Figures 4 and 19.

Existing Plus Project Intersection Capacity Utilization

Intersection Capacity Utilization (ICU) values for the existing plus project traffic conditions have been calculated and are shown in Table 7.

The geometrics at improved/new intersections are also listed on Table 7 and unless otherwise stated are based on the following relationships:

Street Section	Intersection Approach Lanes
6 lanes divided	3 through 1 left
4 lanes divided	2 through 1 left
4 lanes undivided	2 through 1 left

Traffic Signal Warrants

Traffic signal warrants have been adopted by CalTrans and are based upon the eight highest hour volumes in a day. If it is assumed that the eighth highest hour is 62.5 percent of the peak hour, and the peak hour is generally 10 percent of the daily traffic, the signal warrants can also be expressed in terms of daily traffic volumes. Table 8 shows the signal warrants in terms of daily traffic volumes. Rural traffic volume warrants are utilized when the 85th percentile speed of the major street traffic exceeds 40 miles per hour.

In order to satisfy the signal volume warrants, the volumes of both the major and minor street must meet or exceed those listed in Table 8. Determining the major street daily signal warrant volume involves calculating the number of daily vehicles approaching the intersection on both major street legs; usually the daily approach volume is 50 percent of the street's daily two-way volume on each leg. Finding the minor street daily signal warrant volume involves calculating the number of daily vehicles approaching the intersection on only the highest volume

leg; usually the daily approach volume is 50 percent of the street's two-way daily volume. If the minor street forms a tee intersection with the major street, then the minor street volume is the highest volume because there is no other volume.

Existing Plus Project Impacts

The information on Figure 20 and in Table 7 indicates that there will be some street and intersection improvements needed (beyond the existing and planned circulation system) to accommodate existing plus project traffic volumes. The following improvements will be required to provide Level of Service D or better operation:

1. Widen the SR-14 Freeway to 6 lanes south of Palmdale Boulevard.

2. Widen Avenue P to 6 lanes between the SR-14 Freeway and Sierra Highway.

3. Provide 8 through lanes on 10th Street West between Avenue P and Avenue P-8.

4. Upgrade Street B to a 4 lane divided street.

5. Widen Palmdale Boulevard to 6 lanes from west of 5th Street West to Division Street.

6. Provide separate right turn lanes on the northbound, eastbound, and westbound approaches at 10th Street West/Avenue P.

7. Widen the northbound SR-14 off-ramp at Avenue P to provide 2 left and 1 right turn lane.

8. Widen the northbound SR-14 off-ramp at Palmdale Boulevard to provide 2 left and 1 right turn lane.

9. At the future intersection of 5th Street West/Avenue P-8, provide 2 through, 2 left and 1 right turn lane on the southbound 5th Street West approach and 2 through and 2 left turn lanes on the eastbound Avenue P-8 approach.

10. On the northbound Street B approach at Avenue P, provide 2 left and 1 right turn lane.

11. Provide a second southbound left turn lane on 5th Street West at Palmdale Boulevard.

12. Provide a southbound right turn lane on Sierra Highway at Avenue P.

13. Provide 2 left and 1 right turn lane on Avenue P-8 at Sierra Highway.

14. Provide 2 left and 1 right turn lane on southbound Street A at Palmdale Boulevard (needed to minimize the possibility of the vehicle queue blocking the intersection at Street A/Avenue Q).

Figure 21 shows the locations where the volumes will satisfy the traffic signal warrants for existing plus project conditions. In addition, traffic signals are expected to be needed at the following freeway ramps:

SR-14 Southbound Off Ramp/10th Street West
SR-14 Northbound Off Ramp/Avenue P
SR-14 Southbound Off Ramp/Palmdale Boulevard
SR-14 Northbound Off Ramp/Palmdale Boulevard

Table 7

EXISTING PLUS PROJECT INTERSECTION CAPACITY UTILIZATION - EXISTING/PLANNED GEOMETRICS

Intersection	Intersection Approach Lanes (1)												Peak Hour ICU-LOS (2)	
	Northbound			Southbound			Eastbound			Westbound				
	T	R	L	T	R	L	T	R	L	T	R	L	AM	PM
10th Street West (NS) at														
SR-14 SB Off Ramp (EW)	3	*	*	2	*	*	*	1	1	*	*	*	30-A	63-B
Avenue P (EW)	3	0	2	3	0	2	3	0	2	3	0	2	82-D	128-F
Avenue P-4 (EW)	3	0	*	2	*	1	*	*	*	*	1	1	70-C	90-D
Avenue P-8 (EW)	3	0	*	2	*	1	*	*	*	*	1	1	76-C	79-C
Avenue P-12 (EW)	3	0	*	2	*	1	*	*	*	*	1	1	38-A	50-A
Palmdale Boulevard (EW) (3)	2	1	1	2	1	1	2	1	1	2	1	1	48-A	57-A
SR-14 NB Off Ramp (NS) at Avenue P (EW)	*	1	1	*	*	*	2	*	*	2	*	*	94-E	123-F
Street A (NS) at														
Avenue P-8 (EW)	*	1	1	*	*	*	2	0	*	2	*	1	46-A	44-A
Avenue Q (EW)	2	0	*	2	*	1	*	*	*	*	1	1	22-A	28-A
Palmdale Boulevard (EW) (3)	*	*	*	*	1	2	2	*	1	2	1	*	26-A	41-A
5th Street West (NS) at														
Avenue P-8 (EW)	2	0	1	2	0	1	2	0	1	2	0	1	99-E	116-F
Avenue P-12 (EW)	2	0	1	2	0	1	2	0	1	2	0	1	43-A	46-A
Avenue Q (EW)	2	0	1	2	0	1	2	0	1	2	0	1	46-A	67-B
Palmdale Boulevard (EW)	1	1	1	2	0	1	2	1	1	2	1	1	48-A	139-F
Street B (NS) at Avenue P (EW)	*	1	1	*	*	*	2	0	*	2	*	1	74-C	137-F
SR-14 SB Off Ramp (NS) at Palmdale Boulevard (EW) (3)	*	*	*	*	1	1	2	*	*	2	*	*	62-B	110-F

(1) When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

(2) Intersection Capacity Utilization (ICU) - Level of Service (LOS)

(3) Existing Geometrics

T = Through
R = Right
L = Left
NB = Northbound
SB = Southbound
* = Movement not possible

Table 7 (Continued)

EXISTING PLUS PROJECT INTERSECTION CAPACITY UTILIZATION - EXISTING/PLANNED GEOMETRICS

Intersection	Intersection Approach Lanes (1)												Peak Hour ICU-LOS (2)	
	North-bound			South-bound			East-bound			West-bound				
	T	R	L	T	R	L	T	R	L	T	R	L	AM	PM
SR-14 NB Off Ramps (NS) at Palmdale Boulevard (EW) (3)	*	1	1	*	*	*	2	*	*	2	*	*	78-C	118-F
Division Street (NS) at														
Avenue P (EW)	*	1	1	*	*	*	2	0	*	2	*	1	52-A	69-B
Avenue P-6 (EW)	2	*	1	2	0	*	*	1	1	*	*	*	28-A	67-B
Avenue P-8 (EW)	2	0	1	2	0	1	2	0	1	2	0	1	53-A	71-C
Avenue Q (EW)	2	0	1	2	0	1	2	0	1	2	0	1	40-A	53-A
Sierra Highway (NS) at														
Avenue P (EW) (3)	2	1	1	2	0	2	2	1	1	2	1	1	68-B	110-F
Avenue P-8 (EW)	2	*	1	2	0	*	*	1	1	*	*	*	68-B	103-F

(1) When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

(2) Intersection Capacity Utilization (ICU) - Level of Service (LOS)

(3) Existing Geometrics

T = Through
R = Right
L = Left
NB = Northbound
SB = Southbound
* = Movement not possible

Table 8

TRAFFIC SIGNAL WARRANTS

(Based on Estimated Average Daily Traffic - See Note 2)

URBAN ..... RURAL	Minimum Requirements EADT			
1. Minimum Vehicular Satisfied _____ Not Satisfied _____	Vehicles per day on major street (total of both approaches)		Vehicles per day on higher-volume minor-street approach (one direction only)	
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 ..... 1	8,000	5,600	2,400	1,680
2 or more 1	9,600	6,720	2,400	1,680
2 or more ..... 2 or more	9,600	6,720	3,200	2,240
1 ..... 2 or more	8,000	5,600	3,200	2,240
2. Interruption of Continuous Traffic Satisfied _____ Not Satisfied _____	Vehicles per day on major street (total of both approaches)		Vehicles per day on higher-volume minor-street approach (one direction only)	
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 ..... 1	12,000	8,400	1,200	850
2 or more 1	14,400	10,080	1,200	850
2 or more ..... 2 or more	14,400	10,080	1,600	1,120
1 ..... 2 or more	12,000	8,400	1,600	1,120
3. Combination Satisfied _____ Not Satisfied _____ No one warrant satisfied but following warrants fulfilled 80% or more ..... _____ 1 _____ 2	2 Warrants		2 Warrants	

NOTE:

1. Heavier left turn movement from the major street may be included with minor street volume if a separate signal phase is to be provided for the left-turn movement.
2. To be used only for NEW INTERSECTIONS or other locations where actual traffic volumes cannot be counted.

Source: CalTrans, Traffic Manual, page 9-8

Figure 19
Palmdale Trade and Commerce Center Circulation System

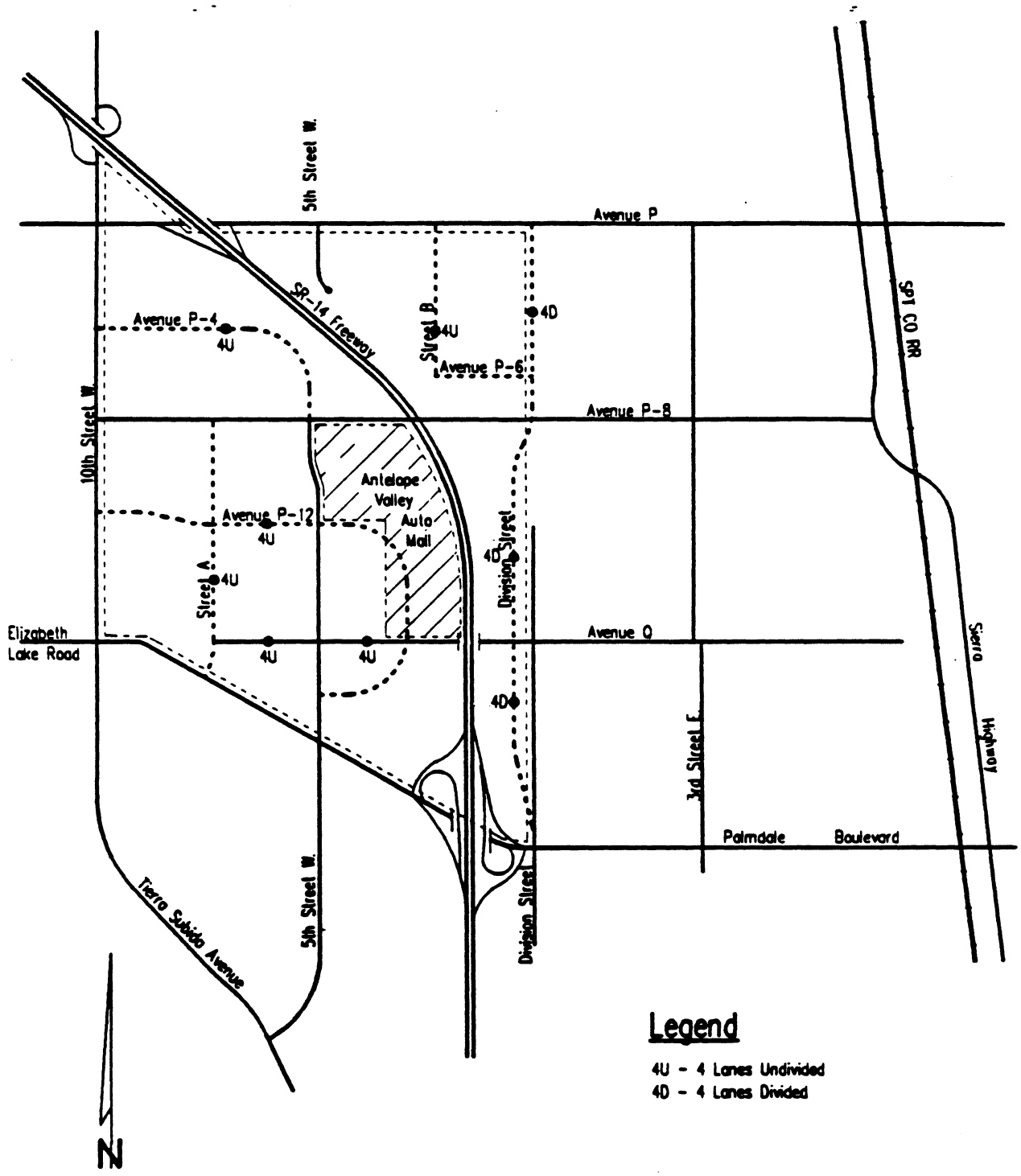

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Figure 20
Existing Plus Project Daily Volumes and Volume to Capacity Ratios

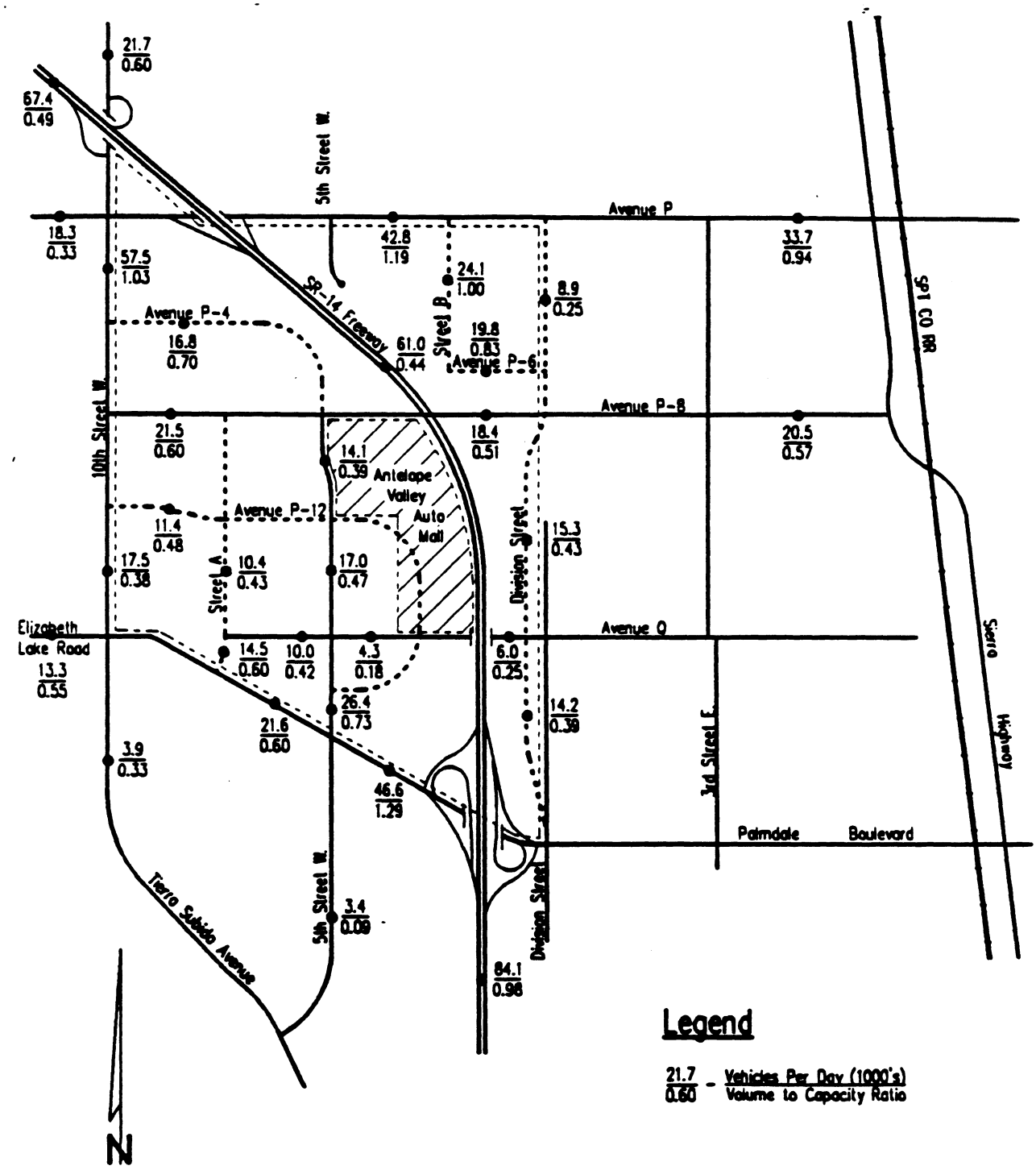

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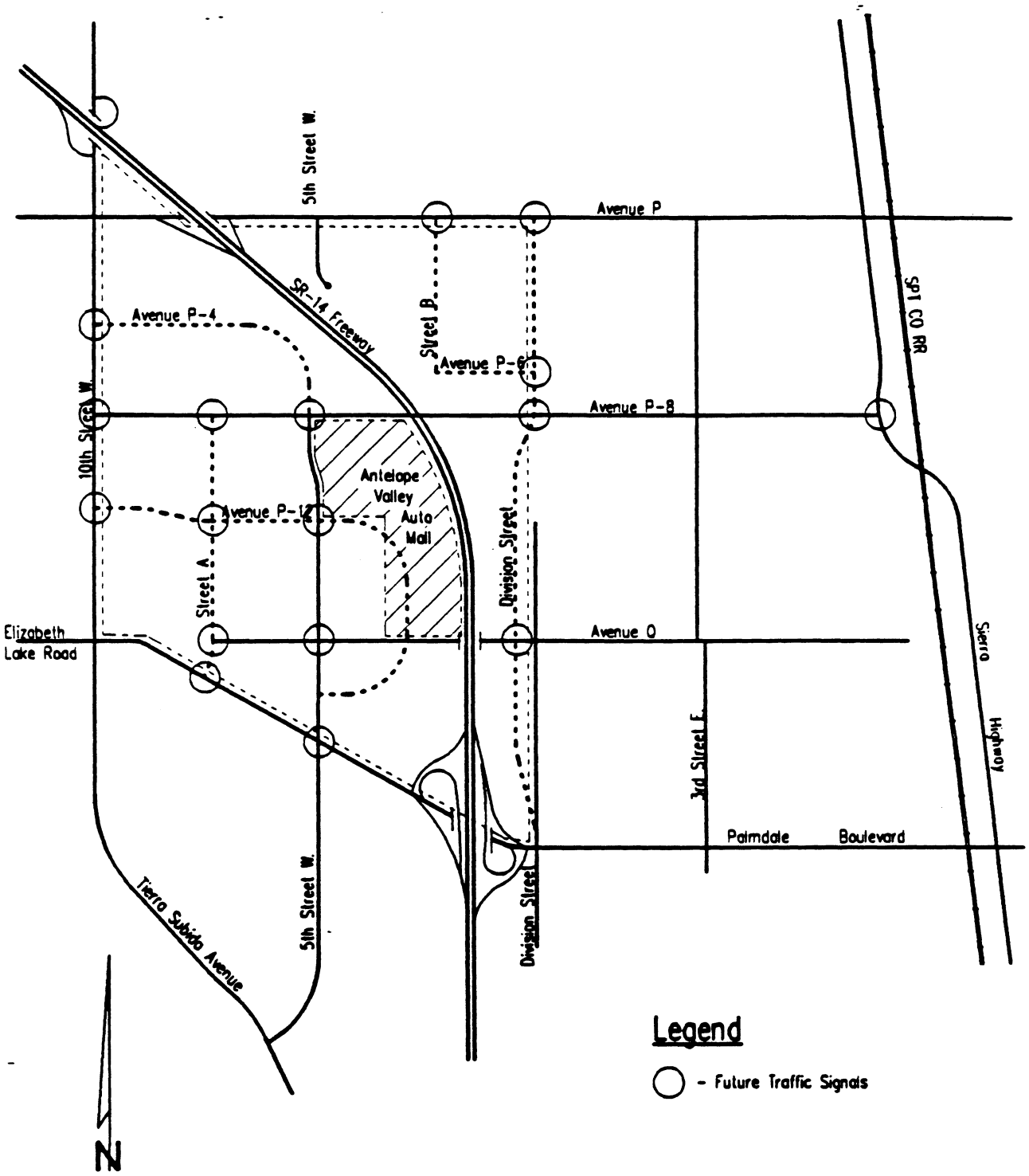
Figure 21
Future Traffic Signal Locations



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6. Existing + Project + Antelope Valley Auto Mall Traffic Conditions

The Antelope Valley Auto Mall shown on Figure 2 between Avenue P-8 and Avenue Q has been previously approved. This section assesses traffic conditions when project traffic is combined with existing traffic and traffic from the Antelope Valley Auto Mall.

Antelope Valley Auto Mall

The traffic information in the EIR[1] prepared for the auto mall was the basis for estimating the traffic on the streets in the vicinity of the Palmdale Trade and Commerce Center. The following adjustments and assumptions were made:

1. The EIR addressed a project which encompassed the entire area between Avenues P-8 and Q and between 5th Street West and the SR-14 Freeway. The approved project boundaries shown on Figure 2 are approximately 75 percent of this original area. Therefore the 1988 traffic volumes were reduced by 25 percent. Table 9 lists the estimated peak hour and daily traffic volumes generated by the Antelope Valley Auto Mall.

2. Figure 22 shows the traffic distribution for this project. The distributions were extrapolated from the project traffic volumes at the intersections of 10th Street West/Avenue P, 10th Street West/SR-14 ramps, Avenue Q/Palmdale Boulevard and Palmdale Boulevard/SR-14 ramps as shown in the EIR.

Existing Plus Project Plus Auto Mall Daily Traffic Volumes

Figure 23 displays the estimated daily traffic volumes when the project traffic and the Antelope Valley Auto Mall traffic are added to existing traffic volumes.

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1 "Environmental Impact Report #88-4, Antelope Valley Auto Center", LSA Associates, October, 1988.

Existing Plus Project Plus Auto Mall Daily Volume to Capacity Ratios

For existing plus project plus auto mall traffic volumes, the daily volume to capacity ratios have been calculated and are shown in Figure 23. The ratios are based on the daily capacities discussed in Section 3 and the street improvements required to accommodate existing plus project traffic discussed in Section 5.

Existing Plus Project Plus Auto Mall Intersection Capacity Utilization

Intersection Capacity Utilization values for existing plus project plus auto mall conditions for intersections in the vicinity of the site are shown in Table 10. The ICU calculations are based on the intersection geometrics required to accommodate existing plus project traffic discussed in Section 5.

Existing Plus Project Plus Auto Mall Impacts

The improvements required for existing plus project traffic volumes listed in Section 5 will be able to accommodate the addition of traffic generated by the Antelope Valley Auto Mall, except where these additional improvements will be needed:

1. Provide a second eastbound left turn lane on Avenue P at Sierra Highway.

2. Provide a fourth northbound through lane on 10th Street West at Avenue P.

3. Provide a second southbound left turn lane on 10th Street West at Avenue P-4.

4. Provide a second westbound left turn lane on Palmdale Boulevard at 5th Street West.

5. Widen Palmdale Boulevard to 8 lanes between 5th Street West and the SR-14 Freeway.

Table 9

ESTIMATED ANTELOPE VALLEY AUTO MALL
TRAFFIC GENERATION

Land Use	Morning Peak Hour		Evening Peak Hour		Daily
	In	Out	In	Out	
Antelope Valley Auto Mall	530	240	440	630	10,400

Notes:

Trips generated are rounded to nearest 10 for peak hour and 100 for daily.

Volumes are approximately 75 percent of traffic stated in the EIR for this project.

Table 10

EXISTING PLUS PROJECT PLUS AUTO MALL
INTERSECTION CAPACITY UTILIZATION -
EXISTING PLUS PROJECT GEOMETRICS

Intersection	Peak Hour ICU-LOS	
	AM	PM
10th Street West (NS) at		
SR-14 SB Off Ramp (EW)	30-A	66-B
Avenue P (EW)	68-B	91-E
Avenue P-4 (EW)	71-C	92-E
Avenue P-8 (EW)	83-D	84-D
Avenue P-12 (EW)	38-A	50-A
Palmdale Boulevard (EW)	48-A	58-A
SR-14 NB Off Ramp (NS) at		
Avenue P (EW)	54-A	74-C
Street A (NS) at		
Avenue P-8 (EW)	46-A	44-A
Avenue Q (EW)	30-A	35-A
Palmdale Boulevard (EW)	27-A	42-A
5th Street West (NS) at		
Avenue P-8 (EW)	72-C	74-C
Avenue P-12 (EW)	51-A	55-A
Avenue Q (EW)	54-A	76-C
Palmdale Boulevard (EW)	38-A	95-E
Street B (NS) at		
Avenue P (EW)	52-A	84-D
SR-14 SB Off Ramps (NS) at		
Palmdale Boulevard (EW)	52-A	87-D
SR-14 NB Off Ramps (NS) at		
Palmdale Boulevard (EW)	52-A	77-C
Division Street (NS) at		
Avenue P (EW)	54-A	69-B
Avenue P-6 (EW)	29-A	67-B
Avenue P-8 (EW)	54-A	71-C
Avenue Q (EW)	40-A	55-A
Sierra Highway (NS) at		
Avenue P (EW)	52-A	92-E
Avenue P-8 (EW)	68-B	87-D

(1) Intersection Capacity Utilization (ICU) - Level of Service (LOS)

Figure 22
Antelope Valley Auto Mall Traffic Distribution

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Figure 23
Existing Plus Project Plus Antelope Valley Auto Mall
Daily Volumes and Volume to Capacity Ratios

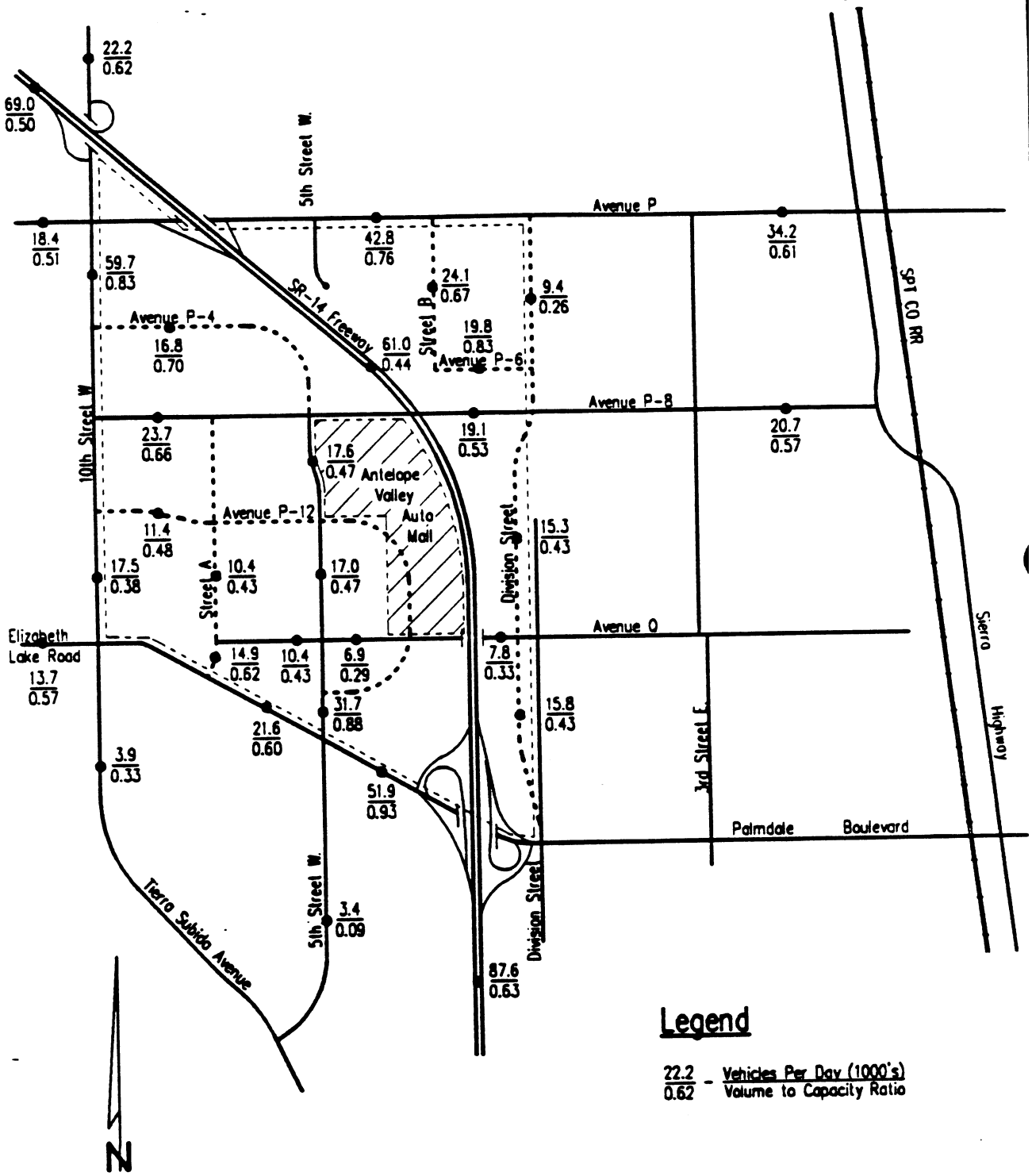

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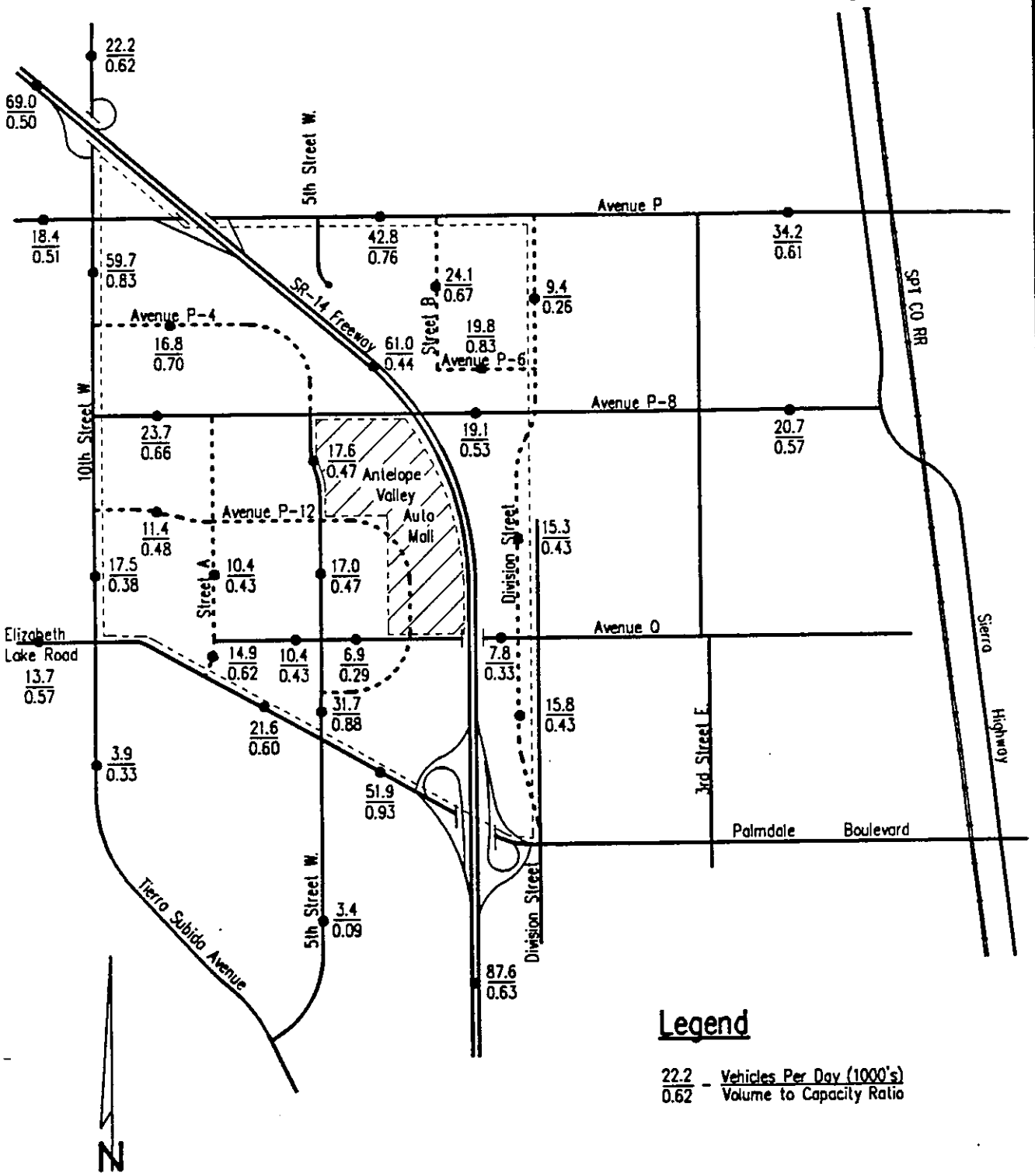
Figure 23
Existing Plus Project Plus Antelope Valley Auto Mall
Daily Volumes and Volume to Capacity Ratios



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7. Future Traffic Conditions

In this section, traffic projections for the year 2010 which were obtained from the circulation study prepared for the City of Palmdale by DKS Associates are discussed.

Future Daily Traffic Volumes

Figure 24 shows the projected daily traffic volumes for the year 2010 on streets in the vicinity of the site.

Future Intersection Operation

Table 11 lists the required geometrics to accommodate the 2010 traffic volumes and the resulting volume to capacity ratios at intersections in the vicinity of the site.

Impact of Proposed Project on Future Traffic Volumes

The 2010 daily and peak hour volumes are based on existing and future land uses in Palmdale and estimated through traffic. The area of the Palmdale Trade and Commerce Center occupies parts of 4 traffic zones (73, 74, 83, and 84) used in the traffic model to develop future volumes. Table 12 compares the estimated traffic from the project site used in the Circulation Study with the project traffic volumes developed in this report. It can be seen that the proposed project is expected to generate approximately 27 percent more trips than was used in the Citywide study.

In order to analyze the impact of this increase in traffic, the model would have to be rerun. However, two observations can be made:

1. The existing plus project plus auto mall daily volumes on Figure 23 are higher than the Year 2010 volumes on Figure 24 at the following locations:

    a. On Avenue P east of the SR-14 Freeway.

    b. On Palmdale Boulevard between 5th Street West and the SR-14 Freeway.

    c. On Avenue P-8 between 5th Street West and 10th Street West.

2. Table 13 compares the intersection geometrics needed to accommodate existing plus project plus auto mall traffic,

with the geometrics needed for 2010 traffic. The information indicates that the geometrics needed for existing plus project plus auto mall conditions are generally compatible with those for 2010 conditions (i.e. existing plus project plus auto mall geometrics can be upgraded as needed for 2010 traffic) except at 10th Street West/Avenue P and at 5th Street West/Avenue P-8.

Table 11

YEAR 2010 LEVEL OF SERVICE VALUES WITH MITIGATIONS

Intersection	Intersection Approach Lanes												Peak Hour V/C - LOS (1)	
	North-bound			South-bound			East-bound			West-bound				
	T	R	L	T	R	L	T	R	L	T	R	L	AM	PM
10th Street West (NS) at														
SR-14 SB Off Ramp (EW)	3	0	0	3	0	0	0	1	1	0	0	0	0.18-A	0.49-A
Avenue P (EW)	3	1	2	3	1	2	3	1	2	3	1	1	0.76-C	0.93-E
Avenue P-8 (EW)	3	0	0	3	0	1	0	0	0	0	1	1	0.80-C	0.89-D
Palmdale Boulevard (EW)	3	0	1	3	0	2	3	1	2	3	1	1	0.89-D	0.85-D
SR-14 NB Off Ramp (NS) at														
Avenue P (EW)	0	1	1	0	0	0	3	0	0	3	0	0	0.47-A	0.62-B
5th Street West (NS) at														
Avenue P-8 (EW)	0	1	2	0	0	0	2	0	0	2	0	2	0.55-A	0.77-C
Avenue Q (EW)	2	1	1	2	0	2	2	0	1	2	1	1	0.67-B	0.88-D
Palmdale Boulevard (EW)	2	0	2	2	0	2	3	0	1	3	0	1	0.72-C	0.86-D
SR-14 SB Off Ramp (NS) at														
Palmdale Boulevard (EW)	0	0	0	0	1	2	3	0	0	3	0	0	0.52-A	0.94-E
SR-14 NB Off Ramp (NS) at														
Palmdale Boulevard (EW)	0	1	1	0	0	0	3	0	0	3	0	0	0.50-A	0.70-B
Division Street (NS) at														
Avenue P (EW)	3	1	1	3	0	1	3	1	1	3	0	1	0.86-D	0.88-D
Avenue P-8 (EW)	3	0	1	3	0	1	2	0	2	2	0	1	0.66-B	0.87-D
Avenue Q (EW)	2	0	1	2	1	1	2	0	1	2	0	1	0.64-B	0.85-D
Sierra Highway (NS) at														
Avenue P (EW)	3	1	1	3	1	2	3	1	2	3	1	2	0.80-C	1.00-E
Avenue P-8 (EW)	3	0	2	3	0	0	0	1	1	0	0	0	0.86-D	0.52-A

(1) Volume to Capacity - Level of Service

Source: City of Palmdale Circulation Study

T - Through
R - Right
L - Left
NB - Northbound
SB - Southbound

Table 12

COMPARISON OF PALMDALE TRADE & COMMERCE CENTER
TRAFFIC VOLUMES - CITY OF PALMDALE
CIRCULATION ELEMENT VS PROPOSED PROJECT

Circulation Study Traffic Zone	Daily Volumes	
	Palmdale Trade & Commerce Center Area	
	Circulation Element	Proposed Project
73	107,000 (1)	105,700 (2)
74	20,300	52,500
83	10,900	18,500
84	3,000	3,100
Total	141,200	179,800

(1) Includes 17,700 daily trips from Antelope Valley Auto Mall

(2) Includes 10,400 daily trips from Antelope Valley Auto Mall

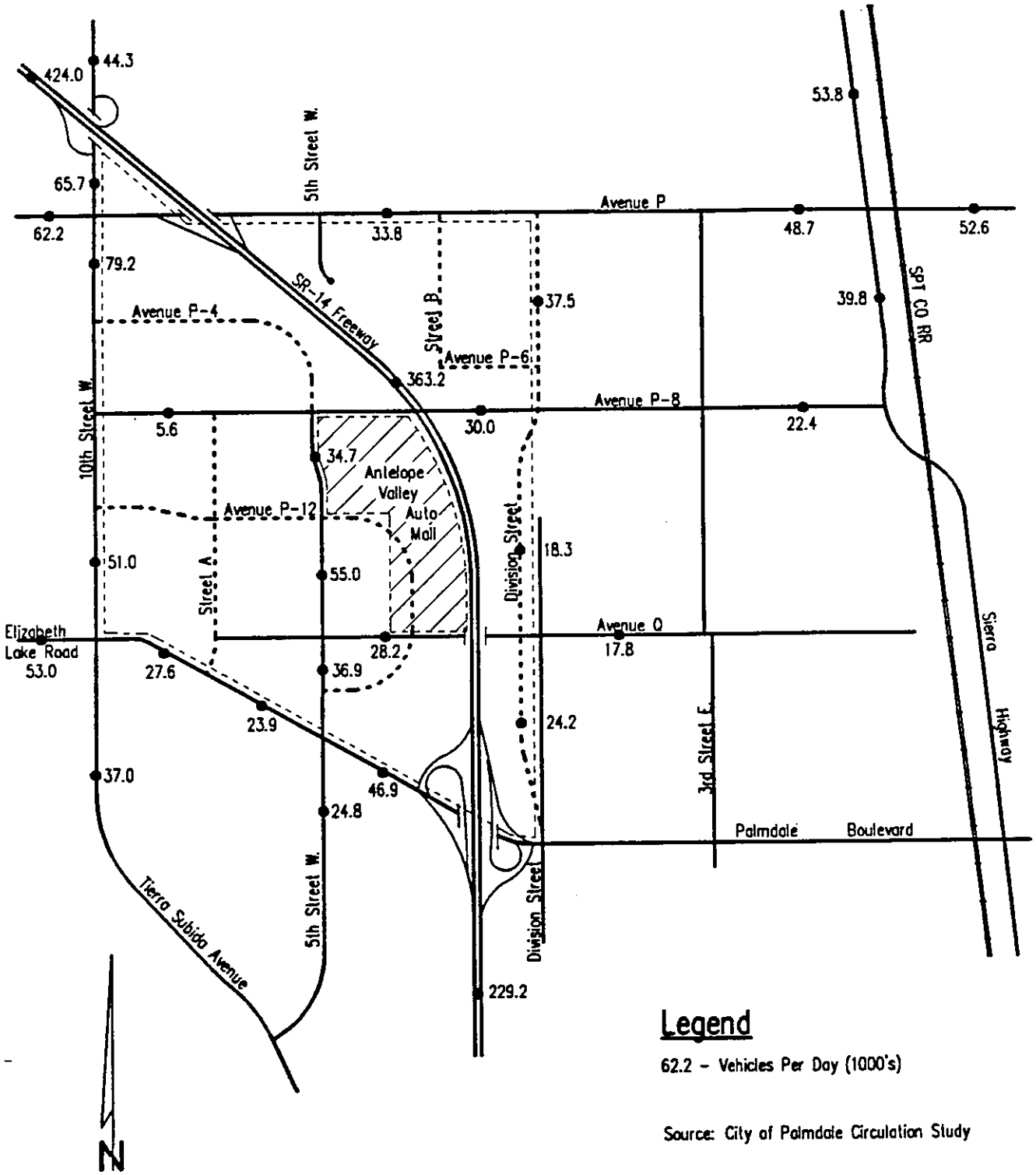
Table 13

COMPARISON OF EXISTING PLUS PROJECT PLUS AUTO MALL GEOMETRICS AND 2010 GEOMETRICS

Intersection	Intersection Approach Lanes												
	North-bound			South-bound			East-bound			West-bound			
	T	R	L	T	R	L	T	R	L	T	R	L	
10th Street West/SR-14 SB Off Ramp	3	0	0	2	0	0	0	1	1	0	0	0	E + P + AM
	3	0	0	3	0	0	0	1	1	0	0	0	2010
10th Street West/Avenue P	4	1	2	3	0	2	3	1	2	3	1	2	E + P + AM
	3	1	2	3	1	2	3	1	2	3	1	2	2010
10th Street West/Avenue P-8	3	0	0	2	0	1	0	0	0	0	1	1	E + P + AM
	3	0	0	3	0	1	0	0	0	0	1	1	2010
10th Street West/Elizabeth Lake	2	1	1	2	1	1	2	1	1	2	1	1	E + P + AM
	3	0	1	3	0	2	3	1	2	3	1	2	2010
SR-14 Off Ramp/Avenue P	0	1	2	0	0	0	3	0	0	3	0	0	E + P + AM
	0	1	1	0	0	0	3	0	0	3	0	0	2010
5th Street West/Avenue P-8	2	0	1	2	1	2	2	0	2	2	0	1	E + P + AM
	0	2	1	0	0	0	2	0	0	2	0	2	2010
5th Street West/Avenue Q	2	0	1	2	1	0	2	0	1	2	0	1	E + P + AM
	2	1	1	2	0	2	2	0	1	2	1	1	2010
SR-14 SB Off Ramp/Palmdale Boulevard	0	0	0	0	1	1	3	0	0	3	0	0	E + P + AM
	0	0	0	0	1	2	3	0	0	3	0	0	2010
SR-14 NB Off Ramp/Palmdale Boulevard	0	1	2	0	0	0	3	0	0	3	0	0	E + P + AM
	0	1	1	0	0	0	3	0	0	3	0	0	2010
Division Street/Avenue P	0	1	1	0	0	0	3	0	0	3	0	1	E + P + AM
	3	1	1	3	0	1	3	1	1	3	0	1	2010
Division Street/Avenue P-8	2	0	1	2	0	1	2	0	1	2	0	1	E + P + AM
	3	0	1	3	0	1	2	0	2	2	0	1	2010
Division Street/Avenue Q	2	0	1	2	0	1	2	0	1	2	0	1	E + P + AM
	2	0	1	2	1	1	2	0	1	2	0	1	2010
Sierra Highway/Avenue P	2	1	1	2	1	2	3	1	2	3	1	1	E + P + AM
	3	1	1	3	1	2	3	1	2	3	1	2	2010
Sierra Highway/Avenue P-8	2	0	1	2	0	0	0	1	2	0	0	0	E + P + AM
	3	0	2	3	0	0	0	1	1	0	0	0	2010

T - Through
R - Right
L - Left
NB - Northbound
SB - Southbound
E + P + AM = Existing Plus Project Plus Auto Mall

Figure 24
Daily Traffic Volume Projections – Year 2010



Kunzman Associates

8. Other Traffic Considerations

This section discusses average trip length and vehicle miles of travel.

Average Trip Length

LARTS data by CalTrans suggests a 7.2 mile per trip average for all trips as can be seen in Table 14. This estimate appears to be appropriate for the project site.

Vehicle Miles of Travel

Based upon the 7.2 mile average trip length discussed above, the proposed project is estimated to generate approximately 1,219,680 vehicle miles of travel daily. It should be noted that the vehicle miles of travel estimated above are not directly indicative of the air pollutant loading that will result from this project. The future users of this site exist today and probably live in this air basin. By relocating, their current pollutant emissions will probably remain almost constant, on an overall basis, and simply be displaced. Additionally, vehicle miles of travel are not directly proportional to air pollutant emissions. Other factors including cold starts, speed of travel, congestion, and vehicle age and maintenance strongly influence emission rates.

Table 14

ONE-WAY TRIP LENGTHS BY LAND USE

Land Use	Trip Lengths Miles
Residential	6.9
Commercial	3.5
Employment	9.8 (estimated)*
High School	2 (estimated)
Elementary School	1 (estimated)
All Trips	7.2

Source: Los Angeles Regional Transportation (LARTS) Base Year Report with the "estimated" numbers furnished by Kunzman Associates.

* LARTS data indicated the home-to-work trip is 10.5 miles and all "other" trips to place of employment is 8.3 miles. The 9.8 assumes two work trips for each "other" trip.

Appendices for the Traffic Study are available at the City of Palmdale Planning Department

C. Preliminary Hydrology Study

FREEWAY BUSINESS PARK
DRAINAGE STUDY

Prepared For:

THE CITY OF PALMDALE

Prepared By:

Robert Bein, William Frost & Associates
PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS
P.O. BOX 19739 • 14725 ALTON PARKWAY, IRVINE, CALIFORNIA 92718
(714) 472-3505

Contact Persons:
Bruce Phillips, RCE 38635
Novin Rashedi

JN 25957

March 6, 1990

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I. INTRODUCTION

The following study is a preliminary drainage investigation for the Freeway Business Park located in the Amargosa Creek watershed basin in Northern Los Angeles County. This study is performed as part of the Environmental Impact Report (EIR) preparation for the Freeway Business Park, herein called the "project site", which consists of about 780 acres of mostly open land with some development such as an Auto Mall, a Public Storage, and retail stores located within the City of Palmdale jurisdictional boundaries. The general project site location is shown on Exhibit A.

The primary objectives of this drainage study are the following:

1. Research and review existing drainage criteria, previous drainage studies, downstream storm drain improvement plans, and local drainage requirements. Investigations shall include discussions with local jurisdictional agencies regarding drainage criteria.

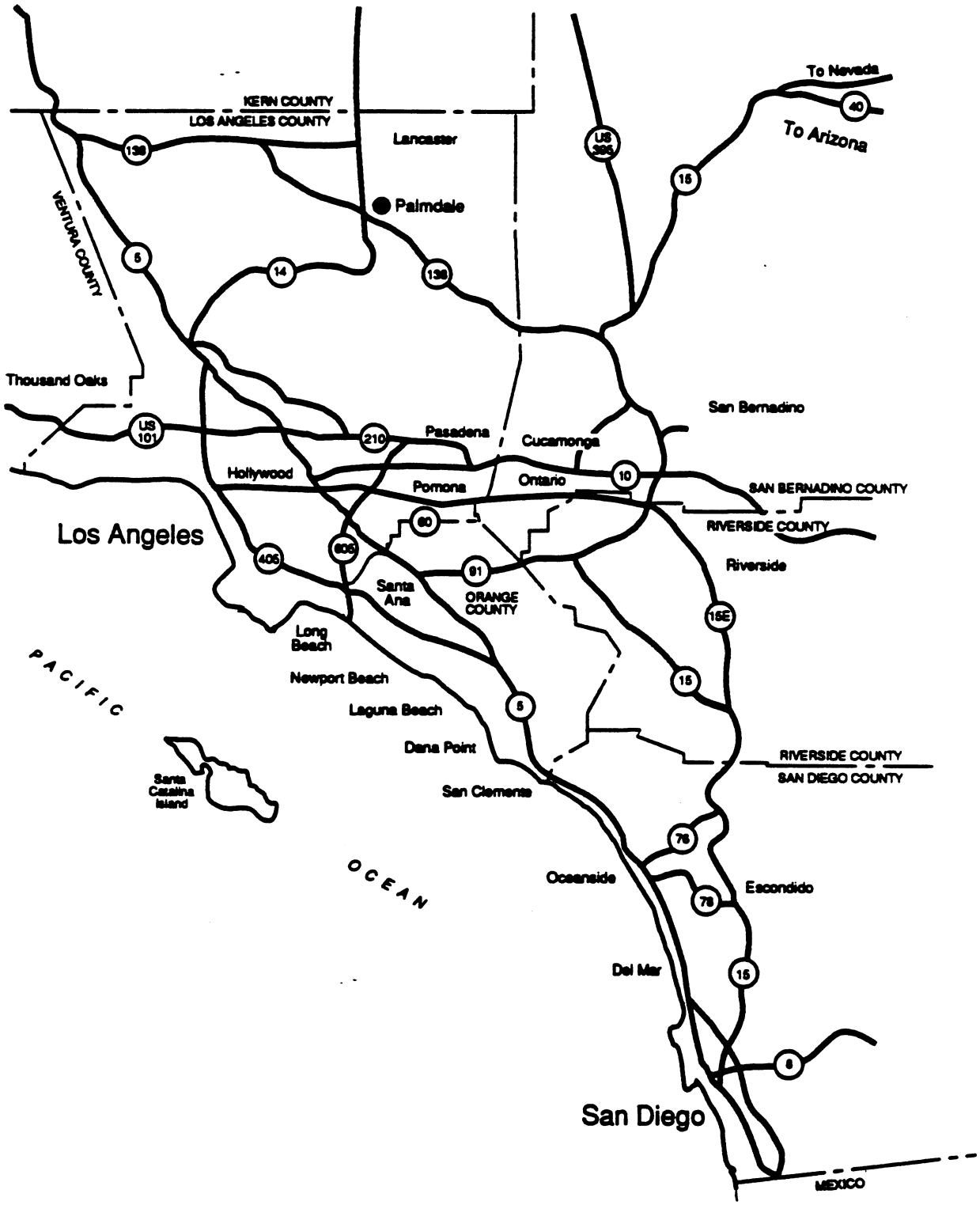
2. Regional and local drainage conditions are evaluated based on review of the existing literature and agency contacts.

3. The hydrologic and hydraulic calculations prepared for the project site will be reviewed, drainage mitigatory measures evaluated, and recommendations are discussed.

4. Alluvial fan hazards will be discussed based on Federal standards and guidelines.

The project site is within the jurisdiction of the Los Angeles County Flood Control District (LACFCD). All evaluations were based on the LACFCD hydrology manual (revised 1988) regulations and the City of Palmdale Master Plan of Drainage.

Palmdale Trade & Commerce Center



Project Site

0 20 Miles

PALMDALE TRADE AND COMMERCE CENTER

Regional Location

Robert Bein, William Frost & Associates
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JN 25957-2898

Exhibit A

II. REVIEW LITERATURE, CRITERIA & METHODOLOGY

Several previous drainage studies in the area were reviewed and used in preparation of this report. These include:

- Hydrology Study for City of Palmdale Specific Plan for the Freeway Business Park, The Keith Companies, January 1990.
- City of Palmdale Drainage Master Plan, BSI Consultants, Inc., October 1988.
- Amargosa Creek Draft Drainage Report, BSI Consultants, Inc., 1989.
- P.M. 20017 Palmdale Environmental Impact Report Auto Mall, LSA, 1988.
- Preliminary Hydrology P.M. 20017 City of Palmdale, JN Sarracino, 1988.
- Palmdale Trade and Commercenter Environmental Impact Report, Keith Companies, 1989.
- Final Supplemental Program Environmental Impact Report for the Antelope Valley Mall Project, Michael Brandman and Associates, 1989.

All hydrologic computations performed in the LACFCD should be in compliance with the LACFCD hydrology manual (revised, 1988). For areas in excess of 100 acres the Modified Rational Method is used to calculate the design flowrates. The Rational Method computation procedure is used to compute the time of concentrations for subarea inputs of the Modified Rational Method. The two runoff computation methods are outlined in the LACFCD hydrology manual. The current County and City design guidelines require sizing regional and local facilities for 50-year (Capital Storm) and 10-year design storms respectively.

In order to evaluate the previous hydrologic analysis, the basin boundaries tributary to the project site and subbasin boundaries within it were checked against a United States Geological Survey (USGS) topographic map. The hydrologic parameters used in this analysis such as rainfall zones and soil classification areas were compared to parameters identified by LACFCD Hydrology Manual (revised 1988). In addition, Flood Insurance Rate Map (FIRM) flood hazard zones as established by the Federal Emergency Management Agency (FEMA) were identified for the project site and it's near vicinity. The alluvial fan assessments were completed using the Flood Insurance Study Guidelines and Specifications for Study Contractors as established by FEMA, 1985.

III. EXISTING DRAINAGE CONDITIONS

The project site is located within the City of Palmdale jurisdictional boundaries, about 48 miles north of Los Angeles, bordering City of Lancaster at north and unincorporated areas of the L.A. County in all other directions. It is comprised of approximately 780 acres of mostly open land with some existing developments such as an Auto Mall, a Public Storage, and a few retail stores located in the middle of the site, along its northern boundaries, and along Palmdale Boulevard respectively.

The project site includes Section 22, the northern half of Section 27, and a small southwestern portion of Section 15 of the Ritter Ridge USGS quadrangle (7.5 minute series). Avenue "P" and the Antelope Valley Freeway comprise the project site's northern boundary. Division Street, 10th Street West, and Palmdale Avenue comprise the project sites' eastern, western, and southern boundaries. Avenue "Q" and the Antelope Valley Freeway dissect the project site. The highest and the lowest elevations at the project site are 2800 feet above Mean Sea Level (MSL) at its very southwestern boundary, and 2625 feet (MSL) at its eastern boundary respectively.

Precipitation in the area is very sparse and ranges from 6 inches in Palmdale to over 19 inches in the mountains to the south. Drainage direction at the project site is northeasterly. Amargosa Creek, one of the four major creeks in Antelope Valley, originates from the San Gabriel Mountains and flows northeasterly through the very northwestern portion of the project site. The remainder of the site intercepts drainage from west as sheet flow which drains in a northeasterly direction towards the Antelope Valley Freeway and out of the site.

The Los Angeles County Department of Public Works maintains the regional flood control facilities (i.e. Amargosa Creek) and the City of Palmdale the local storm drain facilities in this area. Los Angeles County does not currently have any flood control facilities within the project area (LSA, 1988). There are no flood control facilities to mitigate for the incoming tributary drainage to the site. The majority of the tributary offsite drainage is generated on natural landuse. In addition there are no immediate drainage facilities to intercept the generated onsite flows. The only onsite facilities include three (36 inch diameter) culverts located beneath Antelope Valley Freeway approximately 300 feet apart in between Avenue "P-8" and Palmdale Boulevard crossings. Preliminary calculations by Keith Engineering (1990) indicates that these culverts are currently undersized to convey the generated upstream flowrates. The runoff tributary to the project site from west and south has been considered by Los Angeles County to pose a flood hazard. The existing 50-year (capital storm) flowrates tributary to the project site and generated from the site itself, as developed by Keith Engineering (1990) are shown on Exhibit B and in Appendix A. Keith Engineering (1989) generated a storm runoff hydrograph for the pre-development condition at the project site. Results indicated that in the pre-development conditions which assume that there is no development at all in all the subareas affecting the project site, a peak storm runoff of 429 cfs could be generated from a 50-year frequency, 4-day storm, for the 1671 acre tributary area.

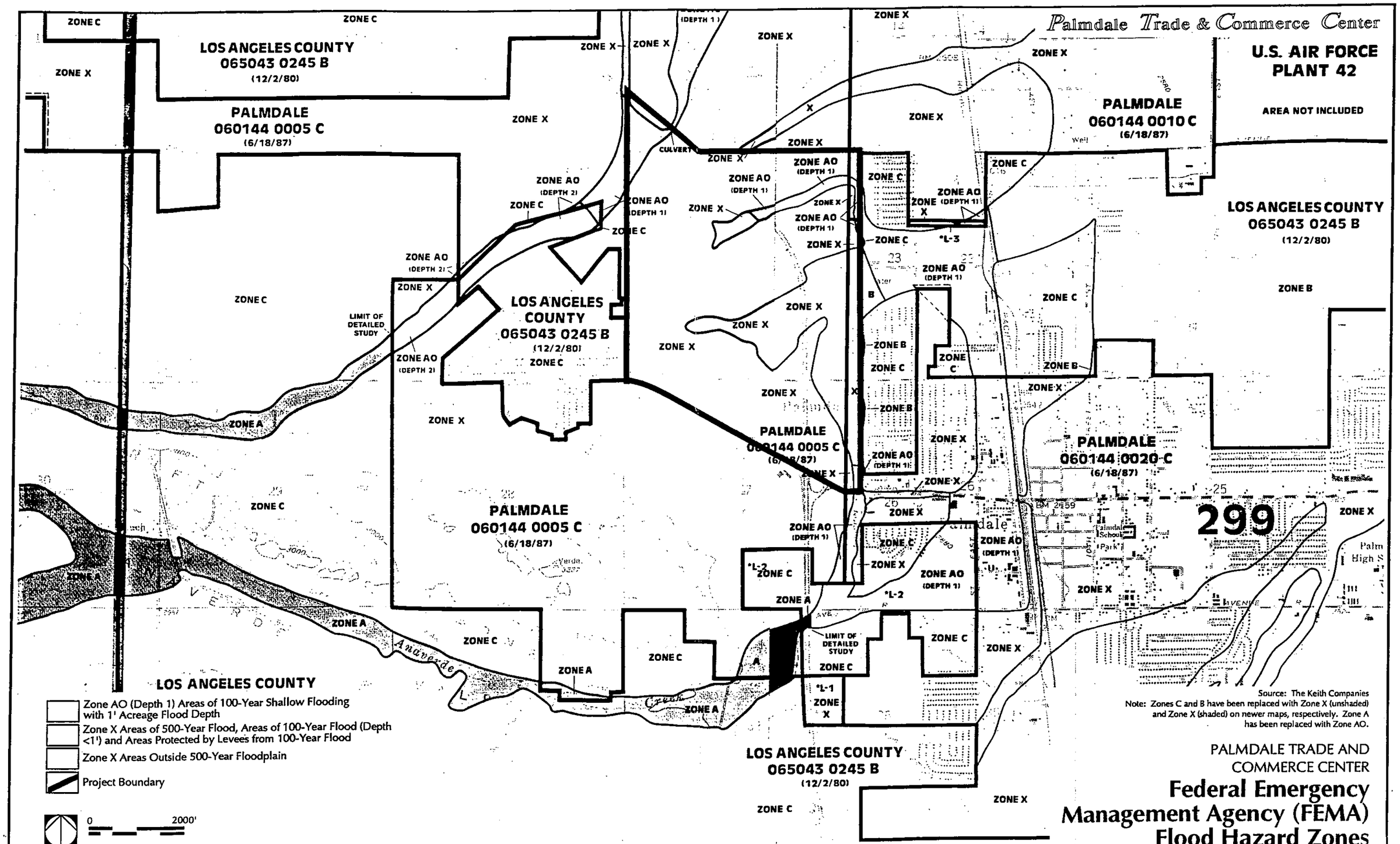

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Exhibit B

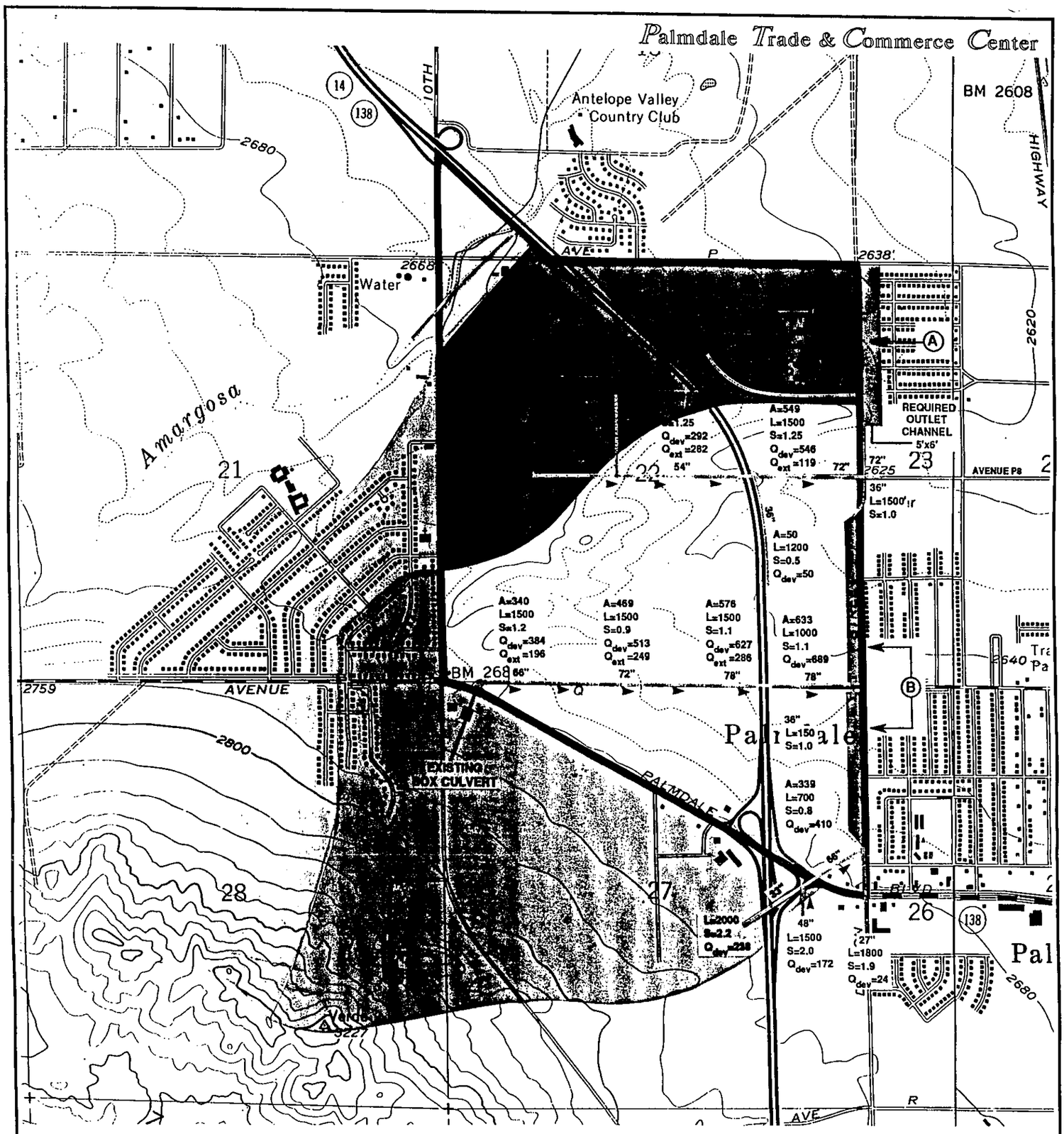
Existing Floodplain Mapping

The existing flood hazard zones at the project site and its near vicinity as established by FEMA and adopted by the Flood Data Systems, Inc. is shown on Exhibit C. Majority of the project site is within a Zone X (unshaded) flood hazard zone. Zone X (shaded) is the second most predominant flood hazard zone at the project site. The northwestern boundaries within Amargosa Creek floodplain, the southeastern edge and a portion of the project site at north are located within Zone AO (depth 1) Flood Hazard Zone. The following is a description of the flood hazard zones and some of the regulations pertaining to development within their boundaries.

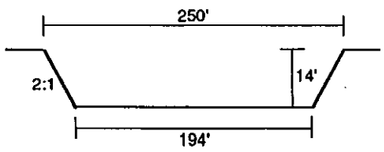
Zone X (unshaded) is defined as areas determined to be outside 500-year floodplain. Zone X (unshaded) is used on new and some revised maps in place of the previous Zone C. Zone X (unshaded) areas have been identified in the community flood insurance studies as areas of moderate or minimal hazard from the principal source of flood in the area. However, buildings in this zone could be flooded by severe, concentrated rainfall coupled with inadequate local drainage systems. Local stormwater drainage systems are not normally considered in the community's Flood Insurance Study. The failure of a local drainage system creates areas of high flood risk within this zone. Flood insurance is available in participating communities but is not required by regulation in this zone. There are no regulations for development within a Zone X (unshaded).

Zone X (shaded) is defined as areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 100-year flood. Zone X (shaded) is used on new and some revised maps in place of the previous Zone B. This area has been identified in the community flood insurance study as an area of moderate or minimal hazard from the principal source of flood in the area. However, buildings in this zone could be flooded by severe, concentrated rainfall coupled with inadequate local drainage systems. Local stormwater drainage systems are not normally considered in the community's Flood Insurance Study. The failure of a local drainage system creates areas of high flood risk within this zone. Flood insurance is available in participating communities but is not required by regulation in this zone. There are presently no regulations for development within a Zone X (shaded).

Zone AO (depth 1) is the Flood Insurance Rate zone that corresponds to the areas of 100-year shallow flooding (usually sheet flow on sloping terrain) where average depths are 1 feet. The average depth shown for this zone has been derived from a detailed hydraulic analysis. For areas of alluvial flooding within this zone, velocities are also determined. Mandatory flood insurance purchase requirements apply within this zone. All habitable buildings within a Zone AO are required to raise their pad elevations one foot above the base flood elevation.

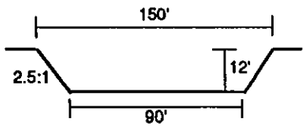


Detention Basin Volumes = 157 AF
Typical Section:



Section A

Detention Basin Volumes = 145 AF
Typical Section:



Section B

- Project Boundary
- Proposed Detention Area
- Proposed Storm Drain
- Tributary Basin Area = +33 Acre
- Tributary Basin Area = +306 Acre
- Tributary Basin Area = +349 Acre
- Tributary Basin Area = +475 Acre
- Tributary Basin Area = +506 Acre
- Proposed Amargosa Creek Channel (By Ass. Dist. 88-1)
- 0 — 1500'
- ► Drainage Direction
- 33" Reinforced Concrete Pipe Size
- A Area (acres)
- L Length (feet)
- S Slope (%)
- Q_{dev} 50-Year Peak Flow Rate for Developed Conditions (cfs)
- Q_{ext} 50-Year Peak Flow Rate for Existing Conditions (cfs)

Source: The Keith Companies

PALMDALE TRADE AND COMMERCE CENTER

Drainage Master Plan

Robert Bein, William Frost & Associates
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Exhibit C

The project site terrain can generally be classified as being an alluvial fan. Extension of the National Flood Insurance Act of 1968 to alluvial fans is a key element in flood loss protection on alluvial fan areas and towards strengthening the necessary mitigation measures. The flooding process on alluvial fans is highly complex. Flows on alluvial fans typically have a high velocity, unpredictably change direction, and carry large amounts of debris. The soils on alluvial fans are usually highly porous and easily erodible. In addition, flow characteristics change abruptly over short distances on most alluvial fans. However, hydrologic and hydraulic characteristics varies widely among various alluvial fans. All watercourse on alluvial fans are ephemeral. Channel patterns and flooding zones vary with each flood.

IV. PROJECT IMPACTS

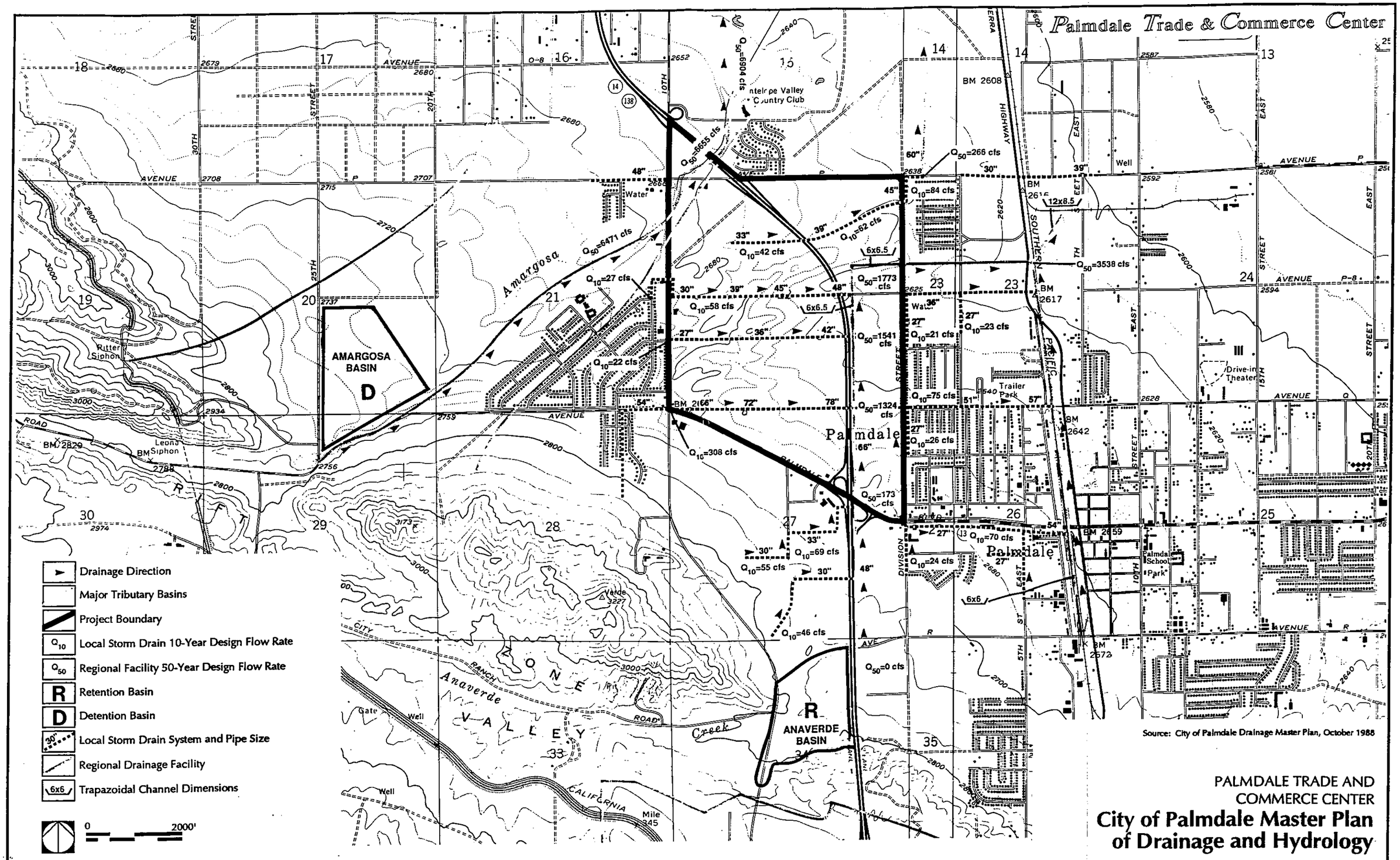
Development plans for the Freeway Business Park includes mixed, mixed residential, mixed AICUZ restricted, and planned development (office, commercial, and public administrative). The land use designations are shown on Table 1. The proposed development landuse will generate 100% of the area being an impervious surface.

10-year and 50-year developed condition flowrates for the project area as presented in the City of Palmdale Master Plan of Drainage are shown on Exhibit D. The 10-year and 50-year flowrates have been generated for the local and regional facilities respectively. Proposed regional facilities are similar to those identified in the L.A. County's Comprehensive Flood Control Plan. However, adjustments in regional facilities were made, due to refinements in hydrology and the addition of more retarding basins. Proposed local facilities include all required facilities within the City that are 24 inches or greater.

The tributary drainage basins and the 50-year capital storm flowrates as developed by Keith Engineering (1990) are shown on Exhibit B and in Appendix A. A storm runoff hydrograph was generated for the post-development conditions at the project site. The post development hydrograph was generated assuming total development in all the subareas. The peak 50-year frequency 4-day storm hydrograph flowrate for the 1671 acre tributary area was computed to be 1592 cfs. The difference in runoff volume in between the existing and developed conditions must be retained onsite because of the drainage ordinance for the Antelope Valley.

The hazards from high velocity flood flows on alluvial fans could be significant. Floodwaters on fans usually carry large quantities of sediment eroded from both the upstream basin and from the fan. Deposition occurs usually where channel slopes decrease or upstream of obstructions. In addition, flood flow could result in scour damage consisting of undermining of structural foundations and loss of topsoil and pavements.

Development of the site will present some changes in the quality of storm runoff from the site. Due to increased traffic, urban types of pollutants such as oil and grease, heavy metals, and debris will increase as well as sediment flows containing fertilizers and pesticides. In addition, during construction some soil loss will occur due to sheet erosion of exposed soils. The erosion will be most serious along freshly graded slopes. However, under stabilized conditions the total debris production from the project site should be in the same range as existing conditions.



Source: City of Palmdale Drainage Master Plan, October 1988

PALMDALE TRADE AND COMMERCE CENTER

City of Palmdale Master Plan of Drainage and Hydrology

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JN 25957-2898

Exhibit D

TABLE 1
LAND USE SUMMARY

LAND USE DESCRIPTION	NET AREA (acres)	AREA PERCENTAGE
Planned Development	393.5	55.9
Mixed Use-AICUZ Restricted	41	5.8
Flood Control	15.1	2.1
Mixed Use Residential	62.7	8.9
Mixed Use	96	13.7
Streets, Other	94.7	13.6
TOTAL	703	100

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V. MITIGATION MEASURES

Stormwater Runoff

The City of Palmdale Master Plan of local and regional facilities required within the project site and it's near vicinity are shown on Exhibit D. At the project site, the local facilities include storm drains that range in size from 30 inches to 78 inches. The regional facilities range in size from a 66 inch storm drain pipe to a 6 feet by 6.5 feet concrete trapezoidal channel.

According to the City, the drainage facilities that provide the most immediate impact on a drainage basin are retarding basins. In addition to reducing their discharge downstream, basins are usually not dependent upon the construction of downstream facilities. Amargosa detention basin, as proposed in the City of Palmdale Master Plan, is the only significant revision to the L.A. County's Comprehensive Plan of Flood Control for this area. Amargosa detention basin construction would reduce the capital flood peak discharge in the Amargosa Channel from 21,500 cfs to 6,000 cfs. Amargosa detention basin and Araverde retention basin are shown on Exhibit D.

The Amargosa Creek improvements as proposed by BSI Consultants, Inc. (1989) in the Amargosa Creek Flood Control Project design report in between Amargosa detention basin to Avenue "M" is comprised of a concrete trapezoidal channel with 15 feet base width and 1.5:1 side slopes. Proposed Amargosa Channel crossings would be comprised of double box culverts with transitions at the upstream and downstream of each crossing. As a condition of approval for the Freeway Business Park Specific Plan, the City of Palmdale requires mitigation of the flooding problem of the Amargosa Creek within the project site. The City's options given to the developer includes joining the Amargosa Creek Assessment District or doing all the required construction affecting the project.

Keith Engineering has prepared a conceptual drainage plan for the project site as shown on Exhibit B. In general, the proposed facilities are similar to those shown in the City of Palmdale Master Plan of Drainage. However, the regional system along the Antelope Valley Freeway collecting western tributary runoff as shown on the City's Master Plan of Drainage was not included. With the proposed drainage plan, the three existing undersized culverts beneath Antelope Valley Freeway will have sufficient flow capacities. Three detention basins at the very eastern boundary of the project site are proposed to replace the City's regional system and collect runoff from the west and south. Two basins are proposed to be located south of Avenue "P-8", and within the project site boundaries and one basin is proposed to be located north of Avenue "P-8" but outside the site boundaries. The basins are interconnected with inlet/outlet pipes. Agreements with adjacent property owners and City approval will be required prior to construction of the offsite basin. The detention basin volume north and south of Avenue "P-8" are 157 acre-feet and 145 acre-feet respectively. The detention basins are proposed to store the difference in runoff volume in between the existing and proposed developed conditions at the project site. The onsite retention of runoff creates a "No Impact" condition from this project to the downstream facilities. Furthermore, the cummulative downstream drainage impacts with this project are the same as with "No Project". The unretained runoff from the basins, discharges into the proposed City of Palmdale Regional 6' x 6.5' trapezoidal channel shown on Exhibit D. This regional system has more than the required capacity for accepting the generated upstream runoff. The typical detention basin sections are shown on Exhibit B. The proposed storm drain sizes are summarized on Table 2.

TABLE 2
PROPOSED STORM DRAIN SIZES*

LOCATION/STREET	Q50 (cfs)**	AREA (acres)	LENGTH (feet)	SLOPE (%)	SIZE*** (inch)
In Between Ave. "P" & Ave. "P8"	119	115	2000	0.5	36
Avenue "P8"	101	113	1300	1.25	48
Avenue "P8"	282	292	1500	1.25	54
Avenue "P8"	546	549	1500	1.25	72
St. Xing Avenue "P8"	80	80	1000	0.5	36
Avenue "Q"	384	340	1500	1.2	66
Avenue "Q"	513	469	1500	0.9	72
Avenue "Q"	627	576	1500	1.1	78
Avenue "Q"	689	633	1000	1.1	78
Antelope Valley Freeway	50	50	1200	0.5	36
Division St.	24	---	1800	1.9	27
Division St.	---	---	150	1.0	36
Division St.	---	---	1500	1.0	36
System Xing Palmdale Blvd.	410	339	700	0.8	66
System Xing Palmdale Blvd.	172	---	1500	2.0	48
System Xing Antelope Valley Fwy.	238	---	2000	2.2	33

* Source: Keith Engineering (1990)

** Developed Condition Flowrates

*** Reinforced Concrete Pipes

dlf/259572

Peak Attenuation and Storage

Detention basins are proposed to detain the difference between the post development storm runoff and the pre-development runoff derived from the subareas affecting the Freeway Business Park as a requirement for all developments in the Antelope Valley. The proposed basins will reduce the peak flood discharge and sediment. The proposed detention basins are located on the west and east of the existing Diversion Street between Palmdale Boulevard and Avenue "P". The calculated required storage volume for the basins is 300 acre-feet. The detention basins are connected with bypass systems with an outfall system to the Blue Line watercourse north of Avenue P-8. The ponds are proposed to be utilized as landscape buffers between the residential and industrial uses.

Detention facilities may pose potential offsite hazards, particularly in downstream areas. In order to ensure proper detention basin performance inspections are necessary at a minimum semiannually, and after all major storms. These inspections will determine the necessity and frequency for debris, weeds, rodents, and vector control and other repair requirements. Some offsite oriented safety provisions, primarily structural, that may be applicable to detention facility outlet works include:

1. An emergency spillway sized and adequately armored to pass at least the 50-year recurrence interval flood flow.

2. Provisions for an emergency downstream flow path to safely carry discharge passing over the emergency spillway.

3. Seepage collars on outlet pipes through earthen dams to mitigate piping supplemented with use of carefully selected and adequately compacted fill material.

4. Installation of a cutoff trench beneath the outlet control works to mitigate piping.

5. Riprap, an energy dissipator, or other protection at the downstream end of the detention facility outlet pipe to mitigate erosion, particularly erosion that might occur at the toe of, and damage, an earthen embankment.

6. Mildly sloped embankment faces to provide structural stability.

7. Grates, cages, hoods, and other devices to resist movement of objects and debris into and the resulting blockage of detention outlet works.

8. Adoption of downstream floodplain or similar regulations, or modification of existing regulations, to control the extent and type of flood-prone activity or land use.

Onsite safety provisions and devices that may be applicable to detention facilities include the following:

1. Removable safety cages or grates mounted on the entrance to otherwise open storm drains which flow either into or out of the detention facility. Installation of safety cages or grates is critical where inlet and outlet pipes are connected directly to a long or extensive underground pipe system, that is, where such pipes are not simply short culverts beneath roadways or through berms. Cages or grates installed on the entrance to outlet pipes should be sloped so that water moving through the grate will tend to exert an upward force component on a person or object trapped against the grate. The total grate area should be large enough to reduce to safe levels drag forces at the face of the grate.

2. Guardrails or fences installed near the top edge of vertical or steep walls or slopes, especially along the top of headwalls and wingwalls at inlet and outlet structures.

3. Steps, including hand rails, strategically located on the periphery of a detention facility if there are no or few mildly sloped areas to provide access to and exit from the lower areas of a detention facility.

4. Signs placed around the perimeter of a detention facility to indicate its occasional use for storage of water.

5. Use of mild side slopes (e.g., 7 horizontal to 1 vertical or flatter) under water around the periphery of a retention facility.

6. Maximum lateral and longitudinal slopes on concrete cunnettes or trickle channels of 4 percent (about 0.5 in/ft) to minimize the possibility of falling on wet, slippery surfaces.

7. Positioning of active recreation areas such as ballfields and playgrounds away from busy streets, and locating these facilities so that they are easily visible from areas outside, but close to, the detention facility.

Water Quality

Detention basins are the most effective and reliable of the techniques examined for control of urban runoff pollutant and sediment load. Other useful drainage control facilities include installation of sediment traps in open channels and utilizing energy dissipators in stormwater conduits to prevent erosion and reduce sediment transport. In order to combat the stormwater pollution created by the various land uses the following source control mitigation measures are recommended:

- Periodic cleaning (i.e. street sweeping) of paved areas to remove small particle size sediments with absorbed pollutants caused by uses of the area.

- Routinely cleaning manholes and catch basins to remove sediment and debris.

- Source control surveys of all industrial facilities to determine possible contributors to stormwater pollution especially those facilities at which storage or handling of hazardous or toxic chemicals takes place.

- Controlling washdown drainage from industrial facilities. In some cases, disposal to sanitary sewers may be required.

- Providing information to residents on disposal of pet wastes, waste oil and grease, and pesticide containers.

- Carefully controlling pesticide and fertilizer usage.

In addition, during construction mitigation in the form of erosion control measures will be necessary to prevent exposed soils from erosion during periods of heavy rainfall. Soils on graded slopes must be strengthened by planting to reduce the potential of erosion. During the interim period before the ground cover takes hold, straw, wood chips, and plastic (visqueen) can be used as stabilizing agents.

APPENDIX "A"

HYDROLOGY STUDY
FOR
CITY OF PALMDALE
SPECIFIC PLAN
FOR
THE FREEWAY BUSINESS PARK

January 26, 1990

Prepared by:

The Keith Companies, North Counties, Inc.
1609 East Palmdale Boulevard, Suite D
Palmdale, California 93550
(805) 273-9444

HYDROLOGY

This hydrology study is generally based on the City of Palmdale Drainage Master Plan dated October, 1988 and prepared by B.S.I., Incorporated.

In developing the 50-year storm frequency run-offs, the sub-areas contributing to the Freeway Business Park and used in the B.S.I. study are also used in our calculations, particularly sub-areas 163A through 198A. Sub-areas 199A through 224A in our study do not compare with those in the B.S.I. study.

Detention basins shall be used to detain the difference between the post-development storm run-off and the pre-development run-off derived from the sub-areas affecting the Freeway Business Park. In the pre-development conditions which assume that there is no development at all in all the sub-areas affecting the Freeway Business Park, a peak storm run-off of 429 C.F.S. is calculated. Whereas, in the post-development conditions which assume that there is total development in all the sub-areas, a peak storm run-off of 1592 C.F.S. is determined. Hydrographs for the pre-development and post-development conditions are plotted and the area between these hydrographs, as shown on the post-development/pre-development hydrographs, is the required detention storage volume for the Freeway Business Park. This storage volume is calculated to be 300 acre-feet. The detention basins will be located on the west side of the existing Division Street between Palmdale Boulevard and Avenue "P". In the City of Palmdale Drainage Master Plan, a regional storm drain facility is proposed along the east side of Antelope Valley Freeway. This facility shall be replaced by the detention basins.

A storm drain system along Avenue "P-8" shall serve the Freeway Business Park and the neighboring areas. This storm drain system will begin at 10th Street West and end at the detention basins at the existing Division Street.

DETENTION VOLUME DETERMINATION

PREDOMINATE SOIL TYPE - 134

750 AC.	Comm/IND	(90% Imp.)	x .2788 =	208
824 AC.	RES.	(40% Imp)	x .1268 =	104
62 AC.	MIXED	(50% Imp.)	x .1571 =	10
				322

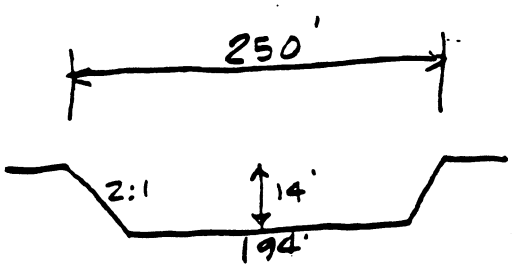
322 x 1.17 (CONV. TO 50 YR)

= ~~377~~ AC. FT TOT. DET. REQ'D

302 per Hydrograph

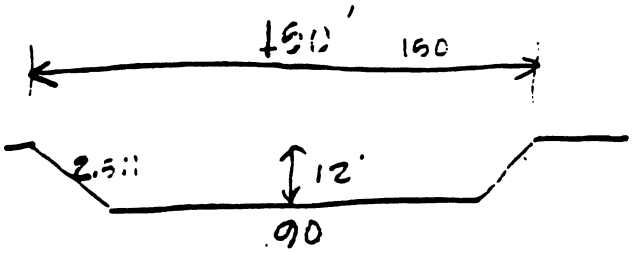
POND VOLUME

NORTH OF P-8	$\left(2200' \times \frac{250+194}{2} \times 14\right)$ =	157 AC. FT.
SOUTH OF P-8	$\left(4400' \times \frac{150+90}{2} \times 12\right)$ =	145
		302



TYP SEC

N. OF P-8



TYP SEC

S. OF P-8

HYDROLOGY COMPUTATIONS

Detailed Hydrological computations are available at the City of Palmdale Planning Department.

D. Preliminary Geotechnical Investigation

Engineers, Geologists &
Environmental Specialists

22 Mauchly
Irvine, California 92718

Fax 714 727-334
714 727-3223

Schaefer Dixon Associates

Schaefer J. Dixon
Ellis J. Jones
Robert J. Lynn
Paul Davis
James J. Weaver
William J. Monahan
E.J. Parrish

John J. Butelo
Joseph F. Monta
Bernard J. LaRu
Kyle D. Emerson
Michael L. Leon
Timothy S. Simp

9R-123B

February 8, 1990

Robert Bein, William Frost & Associates
14725 Alton Parkway
Irvine, California 92718

Attention: Mr. Kevin Thomas
Project Manager
Environmental Services

Subject: **Geology, Soils and Seismicity Portion for EIR**
For Palmdale Trade and Commerce Center
Specific Plan, Palmdale, California

Dear Kevin:

In accordance with our proposal dated September 14, 1989 and your authorization (dated December 21, 1989), we are submitting herewith three copies of the geology, soils and seismicity portion of the EIR for the subject area.

In general accordance with the scope of services described in our proposal, Schaefer Dixon Associates, Inc. (SDA) performed the following as part of our EIR level study:

1. Reviewed existing readily available data relative to the site and vicinity.
2. Evaluated two sets of black and white aerial photographs.
3. Performed limited field reconnaissance.
4. Drilled, sampled and logged eight (8) hollow stem auger borings.
5. Performed nine (9) Cone Penetrometer Soundings (CPT's) to evaluate the presence of a previously mapped buried fault trace within the site.
6. Performed laboratory testing to evaluate hydroconsolidation potential of subsurface soils.
7. Preparation of this EIR-level report presenting our findings, conclusions and recommendations.

Orange County Los Angeles Inland Empire

Robert Bein, William Frost & Associates
9R-123B
February 8, 1990

As we have discussed over the telephone, the results of the CPT work has indicated the presence of a subsurface discontinuity in the vicinity of the photolineament which appears on a 1987 black and white aerial photograph of the site area. In addition, this photolineament broadly coincides with the presumably buried trace of a fault as identified by the U.S. Geological Survey. Based on our recent telephone conversations, we understand authority by the landowner, the City of Palmdale and by RBF is forthcoming to excavate an exploratory trench across the photolineament/subsurface discontinuity in order to evaluate the nature of this feature. The results of that exploratory work will be presented in a subsequent letter report to be submitted within about two weeks following authorization to proceed (notwithstanding factors beyond SDA's control).

Thank you again for the opportunity to be of service to you on this interesting project. If you have any questions, please do not hesitate to contact us.

Respectfully submitted,

SCHAEFER DIXON ASSOCIATES, INC.

D. Scott Magorien
Associate Geologist
CEG #1290

Ellis J. Jones
President
RCE # 13698

REGISTERED PROFESSIONAL ENGINEER
ELLIS J. JONES
No. 13698
Exp. 3/31/93
CIVIL
STATE OF CALIFORNIA

Enclosures: Figure 1 - Geologic Map
Figure 2 - Active Faults and Seismicity Map
Appendix A - Exploratory Boring Logs
Appendix B - Cone Penetrometer Sounding Data
Appendix C - Laboratory (Hydroconsolidation) Test Data

Distribution: (3) Addressee

DSM:EJJ:RJL:amd\9R123BCL.DOC

1.0 GEOLOGY AND SOILS

1.1 TOPOGRAPHY

1.1.1 Environmental Setting

The project area is situated along the southern margin of the Antelope Valley, within the City of Palmdale. The area encompasses approximately 660 acres and is bounded by Division Street, 10th Street, Avenue P, and Palmdale Boulevard on the east, west, north and south, respectively. Highway 14 (Antelope Valley Freeway) bisects the study area which essentially splits the total area into a western half and an eastern half. Recent grading between Avenue Q and Avenue P8 within the western portion of the site has further subdivided the project area.

Topographically, the northern portion of the project area is characterized by low, northeasterly trending ridges with plateaus separated by broad, shallow drainage courses. A segment of the northeasterly draining Amargosa Creek transects the northwestern tip of the area. The southern half is characterized by a broad, gently northeasterly sloping surface.

Maximum relief across the entire site area is about 60 feet with elevation that ranges from a maximum of about 2,690 feet Mean Sea Level (MSL) along the southern margin to about 2630 feet MSL along the northeast margin. The surface gradient slopes northeasterly between 0.4 and 0.1 foot/foot.

Man-made modifications to the natural topography include numerous unimproved dirt roads, end-dumped dirt piles, accumulations of household debris (furniture, water heaters, refrigerators, etc.) and old car frames. Currently, ongoing excavation and grading for a city sewer main is occurring within the northwestern portion of the project area.

1.1.2 Impacts

Modifications of the existing topography will occur during grading for the proposed developments. These modifications will consist of earthwork excavation involving removal of unsuitable soils (refer to Section 1.3) and replacing with compacted fill to establish new designed grades. Although no grading plans were available at the time of this study, we assume grading for the project will create numerous cut and fill slopes and will raise the elevation of the ground in some areas and lower it in others.

Natural surface water drainages would be altered and/or eliminated with construction of the proposed developments.

1.1.3 Mitigating Measures

All grading and landform modifications should be conducted in conformance with state-of-the-practice construction and design parameters set forth in Chapter 70 of the Unified Building Code. All graded slopes should be constructed to be grossly and surficially stable. Surface water runoff should be controlled via storm drains or other surface water control structures.

1.2 GEOLOGY

1.2.1 Environmental Setting

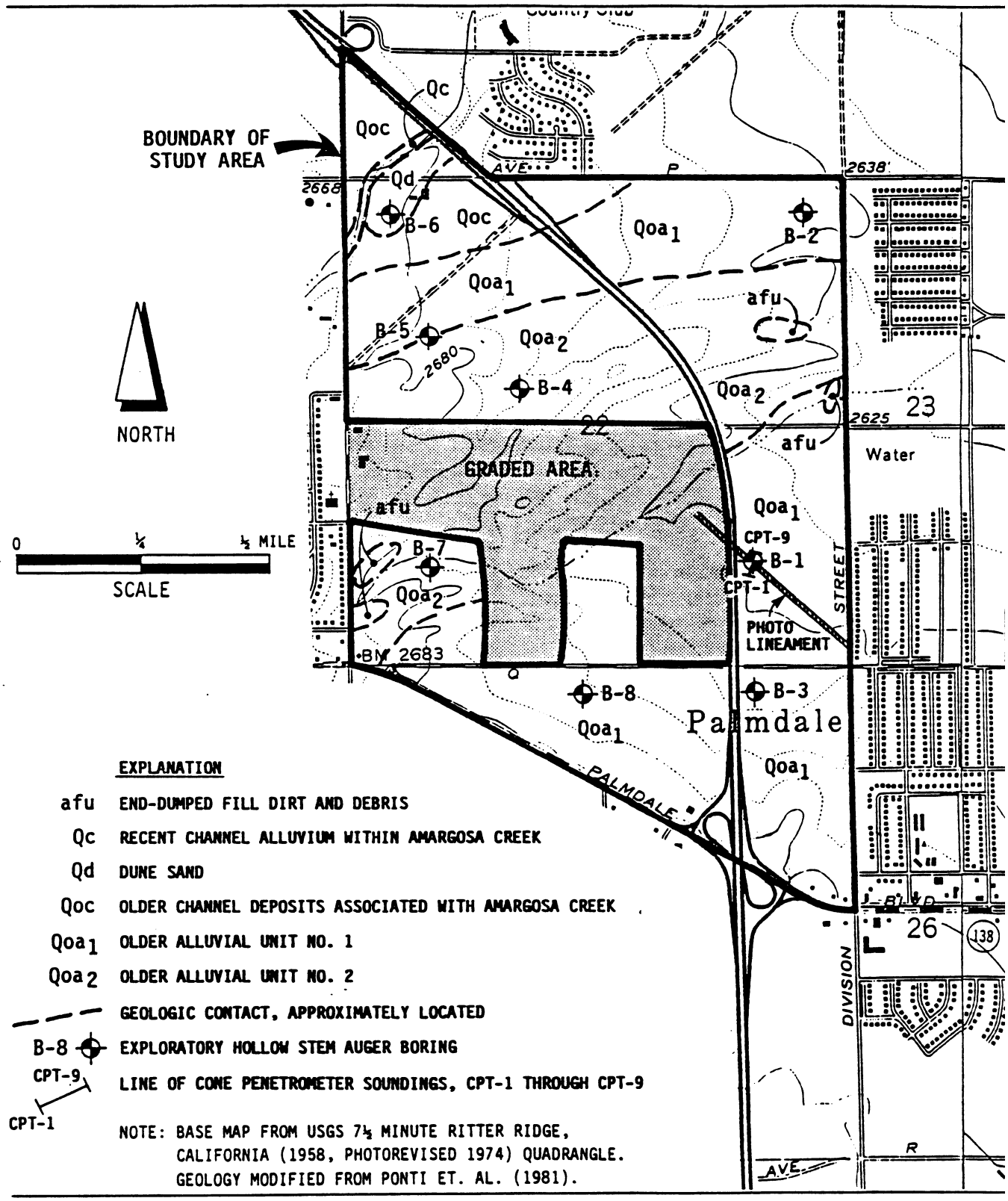
The natural earth materials exposed within the project area consist predominantly of alluvial materials ranging in age from modern stream channel alluvium to alluvial deposits on the order of 140,000 ± 40,000 years old (References 6 and 7). Based on mapping performed by the U.S. Geological Survey (Reference 7), and reconnaissance-level mapping performed by SDA, the alluvial materials exposed within the study area are divided into five units herein referred to from youngest to oldest as units (Geologic Map Symbols) Qc, Qd Qoc, Qoa_1, and Qoa_2. Also within the area are piles of end-dumped dirt, and debris (Af_u) composed of asphalt, concrete, car frames and various household furniture and appliances. The limits of these units are shown on Figure 1 - Geologic Map.

The youngest alluvial unit (Qc) occupies the active stream channel of Amargosa Creek located within the northwest corner of the project area. These materials consist typically of a loose mixture of silt, sand and gravel with occasional cobble-sized clasts.

Eolian "dune sand" (Qd) is present within the northwestern corner of the project area. Exploratory boring B-6 penetrated approximately three feet of these materials which are composed typically of drifting, fine-to medium-grained sand.

Older channel deposits (Qoc) associated with Amargosa Creek occupy an area of approximately 60 acres within the northeast corner of the project area. Based on subsurface data obtained from Boring B-6, and visual observations made within a currently excavated sewer pipeline trench, these materials consist of crudely stratified layers and lenses of porous, fine-to coarse-grained sand.

The older alluvial units (from youngest to oldest), Qoa_1, Qoa_2 underlie the majority of project area. These two units have been differentiated by the U.S Geological Survey (Reference 7) based on geomorphic, topographic and soil characteristics. Geologic contacts as delineated by the USGS between these two older alluvial units have been somewhat modified based on subsurface data obtained from the exploratory borings (Appendix A).



Project No. 9R-123B Date 2-8-90

Geologic Map

Figure 1

The youngest of the two older alluvial units underlies the majority of the study area south of Avenue P8. The lithologic character of these materials based on our boring data, and data from others (References 3, 7, 10, and 17), varies from predominantly silty sand and sandy silt within the southeastern one-quarter of the project area, to sandy clay and silty sand northerly of this area to the contact with older alluvial unit Qoa2. The majority of the sandy materials are yellow-brown in color, dry to slightly moist, and dense to very dense. The sandy clay deposits are typically reddish-brown in color, slightly moist to moist, and very stiff to hard.

Based upon laboratory testing, the older channel deposits associated with the Amargosa Creek and the relatively dry, coarser grained older alluvial units (Qoa1, and Qoa2) have a moderate to high potential for hydroconsolidation (Refer to Figures C-1 through C-8, Appendix C). Due to the presence of interbedded, relatively impermeable units within the older alluvial units (Qoa1, and Qoa2), the potential for hydroconsolidation due to infiltrating surface irrigation water and rainfall resulting in hydroconsolidation is considered to be moderate to high in these areas.

The potential for hydroconsolidation to occur within the older channel deposits (Qoc), located in the northwestern corner of the site is considered to be moderate due to the well draining character of these deposits.

A northwest trending photolineament observed on recent (1987) aerial photographs of the site and vicinity, which approximately coincides with a buried fault trace shown by the U.S. Geological Survey (USGS) (Reference 4) transects the central eastern portion of the project area (see Figure 1). Based on interpreted data from nine Cone Penetrometer Soundings (CPT) performed for this study (Appendix B), there appears to be subsurface, lithologic discontinuity within this area. Figure 1 shows the location of the line of CPT soundings. The photolineament/lithologic discontinuity could reflect the presence of the buried fault mapped by the USGS (Reference 7), or simply a natural variation in subsurface conditions (i.e. onlap and/or a "pinching out" of sedimentary lithologic units).

Land subsidence due to overdrafting of the groundwater basin within the Antelope Valley area has occurred in the past, during the period 1915 to 1972 (Reference 5). The maximum accumulated subsidence near Lancaster was approximately three feet. There is no documented evidence suggesting the project area was affected by subsidence.

The potential for mud/debris flows which could affect the project area is considered to be low as the result of drainage control structures within Amargosa Creek and limited topographic relief upgradient of the site.

There are no known landslides within or adjacent to the project area.

Mineral exploitation potential of the alluvial materials is not documented. However, the potential sand and gravel resources from the older channel deposits (Qoc) is considered to be high, based on direct visual observations of these materials within a 40-foot deep ± excavation for a sewer line. The potential sand and gravel resource from the older alluvial units (Qoa1, and Qoa2) is considered to be low due to the amount of fine-grained materials associated with these deposits.

1.2.2 Impacts

The relatively dry, coarser grained older channel (Qoc) and older alluvial units (Qoa1, and Qoa2) are considered to be subject to hydroconsolidation and could significantly impact the proposed development.

The ultimate impact from the proposed grading would be the loss of sand and gravel resources within the northwestern corner of the site.

The potential impact of the photolineament/subsurface discontinuity is unknown, however, exploratory trenching to evaluate the nature of this feature has been recommended.

Land subsidence within the project area may occur if significant groundwater extractions are made from the principal or deep aquifer (refer to Section 1.4) underlying the project site, causing the water table to achieve lower than historic low levels. Ground fracturing and differential changes in elevation associated with subsidence could impact the proposed development.

1.2.3 Mitigating Measures

Remedial grading within the project area to help mitigate hydroconsolidation and its potential effects to lightly loaded structures, such as one or two-story single family residences, could include the following:

1) Overexcavation of building pads and adjacent areas in amounts that would be appropriate for the local site condition and structure type. Overexcavated materials would be replaced with relatively impermeable soils compacted to at least 90 percent relative compaction.

2) Use of post-tensioned concrete slabs.

3) Construct relatively impermeable surfaces adjacent to the proposed structures, such as paved driveways and walkways, and provide suitable surface drainage to convey runoff into streets and gutters.

4) If planters are to be used around the perimeter of structures, impermeable liners could be used to prevent irrigation water from infiltrating into native materials.

5) Prevent over-irrigation of lawns and gardens and provide adequate landscaping/surface drainage to prevent ponding of water.

6) Provide measures to prevent offsite surface water runoff from collecting and/or ponding within or around the periphery of the project area.

7) Grading should be carried out under the guidelines set forth in Chapter 70 of the Unified Building Code.

To mitigate the potential for hydroconsolidation to adversely impact multistory and/or heavily loaded structures, deep foundations should be considered.

The loss of sand and gravel resources within the northwestern corner of the project area cannot be mitigated.

In order to evaluate the nature of the aerial photo lineament/subsurface discontinuity, an exploratory trench should be excavated across this feature.

Land subsidence associated with lowering of the groundwater table below historic low levels can be mitigated provided significant overdrafting of the groundwater basin does not occur. Although current groundwater use is much less than in the past when agricultural use dominated the region, rapid expansion and residential growth of the Antelope Valley area, especially around Palmdale and Lancaster, could possibly begin to deplete the groundwater reservoir. This possibility can however be mitigated with proper groundwater resources management and continued use of imported water for consumptive use.

1.3 SOILS

1.3.1 Environmental Setting

Surface soils within the project area have been identified by the Soil Conservation Service (SCS) (Reference 17) as belonging, generally, to three soil series, Adelanto, Greenfield, and Ramona. The Adelanto and Greenfield series soils overlie most of the older alluvial unit No. 1 (Qoa_1), as identified in Section 1.3, as shown on Figure 1 - Geologic Map. Ramona series soils overlie all of older alluvial unit No. 2 (Qoa_2) (see Figure 1) and a portion of older alluvial unit No. 1 generally south of Palmdale Boulevard.

Adelanto soils are present within an approximately one-quarter mile wide, east-west trending band south of Avenue Q. The SCS classifies these soils as a coarse sandy loam which are relatively non-expansive (low shrink-swell potential) with moderate strength and low corrosive potential.

Greenfield soils occupy a roughly wedge-shaped area in the southwestern portion of the site, north of Avenue Q. The SCS classifies these soils as a coarse sandy loam which is relatively non-expansive with moderate strength and low corrosivity potential.

Ramona soils are present within an approximately 1,500- to 3,000-foot wide, northeasterly trending band within the central portion of the site. The limits of these soils generally correspond to the older alluvial unit No. 2 (Qoa2) as shown on Figure 1 - Geologic Map. The SCS classifies these soils as coarse, sandy to clayey loams which are relatively non-expansive with moderate strength and low corrosivity potential. Based upon visual observations and laboratory testing, in their natural state these soils are subject to collapse due to placement of structural loads (i.e. foundations). In addition, based on laboratory testing, these soils are also subject to hydroconsolidation upon saturation by water (see Figure C-8, Appendix C) and placement of structural loads.

Mining (ie. economic value) potential of the three soils series is considered to be low.

1.3.2 Impacts

Basically, all surficial soil materials within the project area are considered to be subject to collapse and hydroconsolidation upon placement of structural loads and/or saturation. If these soil materials were to be left in place, the structural integrity of the proposed development would be significantly impacted.

The potential impacts due to expansivity and corrosivity of the on-site soils is considered to be low, based on data compiled by the Soil Conservation Service (Reference 17).

1.3.3 Mitigating Measure

Remedial grading within the site to remove collapsible surficial soils should be performed prior to site development.

Although the SCS has reported the on-site soils to be non-expansive and have low corrosion potential, additional laboratory testing of clayey soils, where encountered during subsequent geotechnical investigations, should be performed.

1.4 GROUNDWATER CONDITIONS

1.4.1 Environmental Setting

The project area lies within the Lancaster subunit of the Antelope Valley groundwater basin. Of the 10 separate subunits within the basin, the Lancaster subunit is the largest in both water use and size, and the most economically significant in terms of population and agriculture (Reference 4). It is bounded on the north by the Rosamond and Bissel Hills, and a near-surface bedrock high beneath the northern portion of Rodgers ("Dry") Lake (Reference 4). The eastern boundary is formed by the Hi Vista Area. The southern and western boundaries are represented by the San Andreas Fault, and the postulated buried trace of the Neenach fault, respectively.

The older alluvium of Pliocene and Pleistocene age forms the principal aquifers and underlies the valley floor at depth (Reference 4). There are two major aquifers within the basin, the principal and the deep aquifer, which are separated by overlapping lacustrine clay layers.

According to U.S. Geological Survey data (Reference 4) depth to groundwater beneath the study area within the principal aquifer is approximately 425 feet below the lowest ground surface elevation within the site area. The direction of groundwater flow beneath the site and vicinity is to the northeast (Reference 4). Recharge to the basin is supplied mainly by precipitation and surface-water runoff from the surrounding mountains. Minor additional recharge is from reclaimed water applied for irrigation. At the present time groundwater pumpage constitutes the majority of discharge from the basin. Under natural conditions, groundwater discharges into the various lakes in the valley.

In most of the Antelope Valley, groundwater from the principal aquifer is suitable for domestic irrigation, and most industrial uses (References 4 and 9).

1.4.2 Impacts

Increased groundwater recharge in the areas of the project area where residential structures are planned will likely result from irrigation of lawns and gardens. It is unlikely that groundwater levels within the principal aquifer beneath the project area would be significantly impacted.

Over-irrigation of lawns and gardens could produce "perched" groundwater conditions beneath the site where permeable sand layers/beds close to the surface are underlain by laterally extensive relatively impermeable clayey layers/beds. Development of perched groundwater would likely promote hydroconsolidation of certain soils beneath the site, as discussed in Section 1.2.

No impacts to the chemical quality of groundwater within the principal aquifer are anticipated with construction of the proposed development.

1.4.3 Mitigating Measures

Unless adequate moisture barriers and positive drainage control are employed, such as identified in Section 1.2.3, the creation of perched groundwater beneath portions of the site cannot be mitigated.

1.5 FAULTING AND SEISMICITY

1.5.1 Environmental Setting

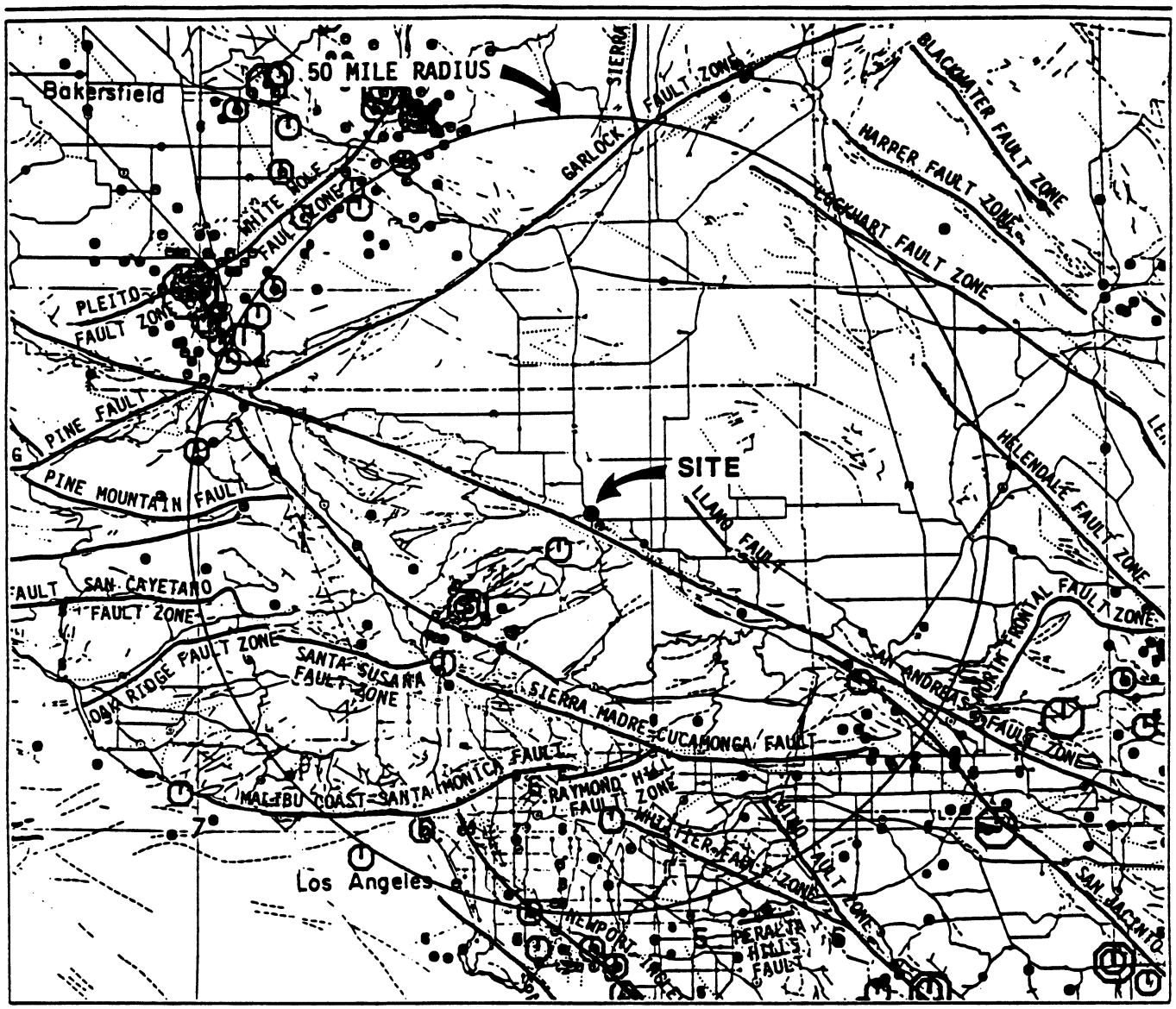
The project area lies within the highly seismic southern California region. There are no known active faults that trend toward or through the project area. The closest major fault to the site is the active San Andreas fault (zone), which passes approximately one mile southwesterly of the southern margin of the site through Leona Valley (Figure 2). The seismically active nature of the San Andreas fault (zone) has been well documented by numerous investigators (e.g. Sieh, 1978a, b, 1984; Weldon and Sieh, 1984; Barrows, et. Al., 1985) and continues to be the focus of ongoing detailed investigations.

The San Andreas fault (zone) is the best known of all California faults due mainly to its known historic seismic activity and destructive capabilities. The central section of the fault (Cholome to San Bernardino) is known for infrequent great earthquakes (Reference 1) such as the 1857 Fort Tejon earthquake, with an estimated Richter Magnitude (M) of 8.25, which caused ground surface rupture along the fault over a length of about 210 miles.

Other major faults that may influence seismicity in the site area include the Garlock fault, Big Pine fault, White Wolf fault, Sierra Madre/Cucamonga fault and San Jacinto fault. These faults are believed to be capable of producing maximum magnitude earthquakes in the range of M6.5 to M7.5. The maximum magnitude earthquake on the San Andreas fault in the vicinity of the project site is commonly reported to be M8.25.

Figure 2 presents a compilation of known active faults within a 50-mile radius of the project site and shows historic seismicity from 1900 to 1988 for earthquakes with magnitudes greater than M4.0.

The photolineament/subsurface discontinuity discussed in Section 1.2, and whose surface trace is shown on Figure 1, could possibly represent the trace of a buried fault identified by the USGS (Reference 4).



MAGNITUDE

- 4.0 TO 4.9
- 5.0 TO 5.9
- 6.0 TO 6.9
- 7.0 TO 7.9

NORTH

30 20 10 0 30 MILES

SCALE

INTEGER. . . . .MAXIMUM REPORTED INTENSITY
(ONLY FOR EARTHQUAKES OF UNKNOWN MAGNITUDE)

NOTE: BASE MAP MODIFIED FROM REAL ET AL., 1978

Project No. 9R-123B Date 2-8-90

Active Faults and Seismicity Map

Figure

2

1.5.2 Impacts

It is anticipated that the project site will be affected by moderate to strong ground shaking due to earthquakes on one or more active faults in the region. Due to the close proximity of the project site to the San Andreas fault, a major earthquake occurring nearby on the fault can be expected to produce extreme ground shaking and lurching within the vicinity of the project area. Other secondary seismic hazards that are the direct result of the vibratory motion or crustal deformation associated with faulting include, but are not necessarily limited to, settlement and regional crustal deformation.

The origin of aerial photolineament discussed above (Section 1.2) should be further investigated to evaluate the possibility of active faulting, and/or ground fissuring which could adversely impact development.

If the photolineament is shown to be an active fault, portions of the site could be significantly impacted by its presence.

Due to the depth of groundwater (425 feet below ground surface) soil liquefaction is not considered to be a problem. Based on the relatively dense nature of the underlying sandy, older alluvial units Qoa_1 and Qoa_2, seismically induced liquefaction within these materials which could contain perched groundwater (refer to Section 1.4.2) does not appear likely.

Since the property is not situated on or in the path of any known or potential landslides, the likelihood of seismically induced landsliding is considered to be nil.

Due to the large distance between the site and the ocean or large inland bodies of water, hazards due to seiche and/or tsunami are considered remote.

1.5.3 Mitigating Measures

To mitigate the potential affects on proposed structures due to ground shaking/lurching due to earthquakes, proper design of structures in consideration of potential seismicity of the area should be implemented by the design engineer.

In order to evaluate the potential of the photolineament to actually be an active fault, excavation of an exploratory trench across this feature would be considered necessary. If the aerial photolineament is determined to be a fault or similar geologic discontinuity (e.g. ground fracture), a structural setback from the feature would be necessary.

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Engineers, Geologists &
Environmental Specialists

22 Mauchly
Irvine, California 92718

Fax 714 727-3347
714 727-3223

Schaefer Dixon Associates

Schaefer J. Dixon
Ellis J. Jones
Robert J. Lynn
Paul Davis
James J. Weaver
William J. Monahan
E. J. Parrish

John J. Butelo
Joseph F. Montagna
Bernard J. LaRue
Kyle D. Emerson
Michael L. Leonard
Timothy S. Simpson

9R-123B

March 6, 1990

Robert Bein, William Frost & Associates
14725 Alton Parkway
Irvine, California 92718

Attention: Mr. Kevin Thomas
Project Manager
Environmental Services

Subject: **Results of Exploratory Trenching and Evaluation of the Photolineament** Discussed in the Below-Referenced Report
City of Palmdale, California

Reference: Geology, Soils and Seismicity Portion of EIR for Palmdale Trade and Commerce Center Specific Plan, Palmdale, California: by Schaefer Dixon Associates, Inc., for Robert Bein, William Frost & Associates, dated February 8, 1990, Project No. 9R-123B.

Gentlemen:

In accordance with your authorization, Schaefer Dixon Associates (SDA) has completed the exploratory trenching and evaluation of the photolineament discussed in the referenced report. The approximate trench location and its relationship to the photolineament is shown on Figure 1 - Location of Exploratory Trench. The exploratory trench was excavated by a rubber-tired backhoe, and was approximately 138 feet long, eight feet deep and two feet wide.

The objective of the exploratory trenching was to preliminarily evaluate the possible presence of active faulting associated with the subject photolineament. The existence of active faulting and its related potential for ground surface displacement along active faults could significantly affect planning, design and construction of the proposed development.

Orange County Los Angeles Inland Empire

Robert Bein, William Frost & Associates
March 6, 1990
9R-123B

Figure 2 - Exploratory Trench Log, illustrates SDA's interpretation of the near-subsurface geologic conditions exposed in the trench. These conditions include a two- to three-foot thick bleached soil horizon (EB) underlain by a relict soil horizon (Bt) that extends, apparently unbroken, the entire length of the trench. Below this relict soil horizon are subhorizontal layers and lenses of sand and silts, along with several infilled animal burrows, and a zone of older alluvium at the northeast end of the trench that has also been extensively altered with infilled animal burrows (Figure 2).

The Bt horizon is estimated by SDA and Mr. Dan Ponti of the U.S. Geological Survey (personal communication in the field) to be in the range of 200,000 years old. On that basis along with its observed unbroken nature throughout the trench it is SDA's opinion the subject photolineament does not represent active faulting (ie. fault displacement during the past approximately 11,000 years). Instead, it is our opinion the photolineament may represent variations of reflectance characteristics of the EB soil horizon.

Those areas that contain infilled animal burrows are likely to require removal on the basis that visually, they appear generally dry and loose, and are expected to be highly compressible to collapsible, particularly upon the addition of water (hydroconsolidation).

Thank you again for the opportunity to be of service to you on this most interesting project. If you have any questions or require additional information, please contact us.

Sincerely,

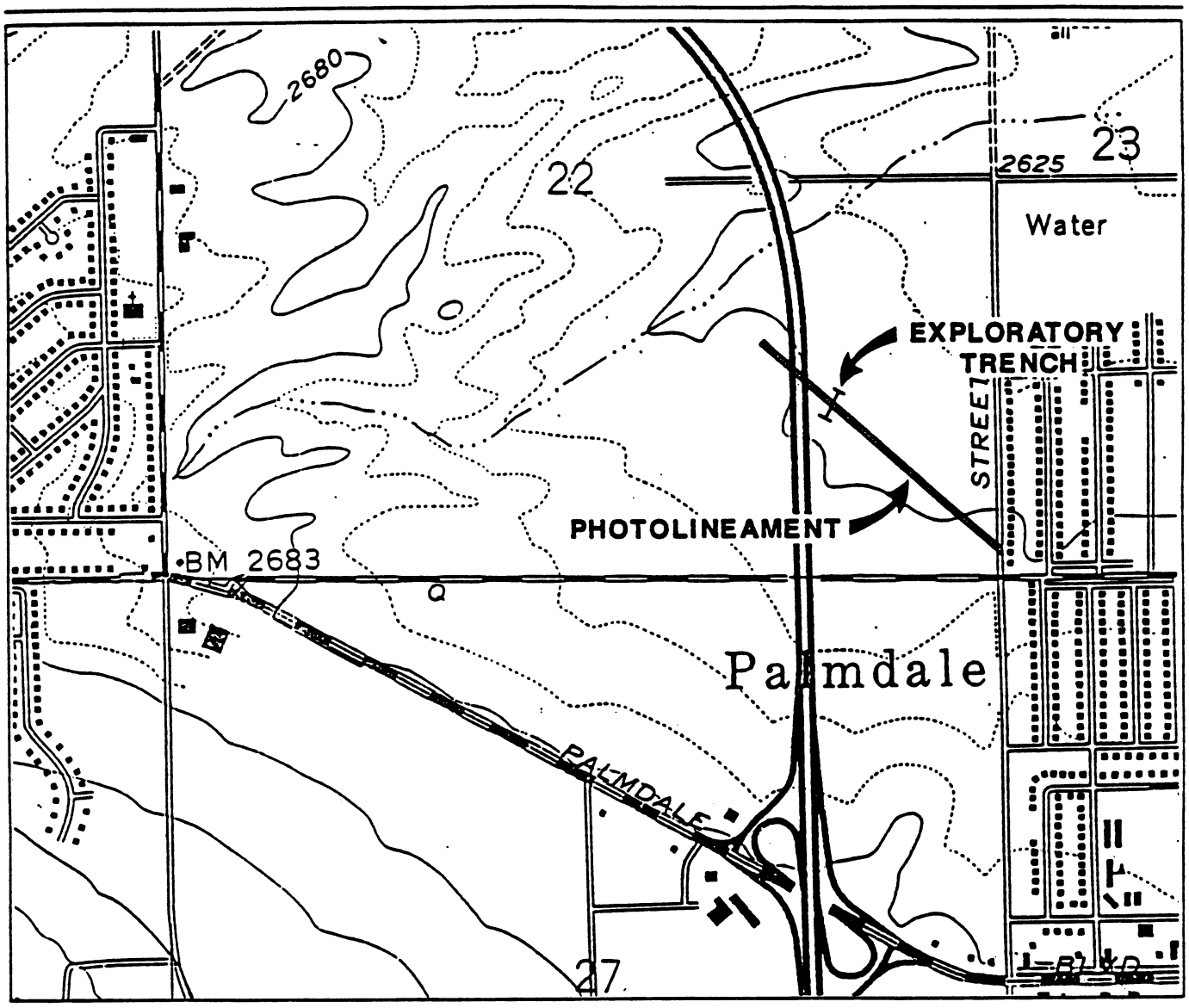
SCHAEFER DIXON ASSOCIATES, INC.

D. Scott Magorien
Associate Geologist
CEG #1290

Robert J. Lynn
Principal Geologist
CEG #727

DMS:RJL:kb\9R123B-2.DOC

Distribution: (3) Addressee



NORTH

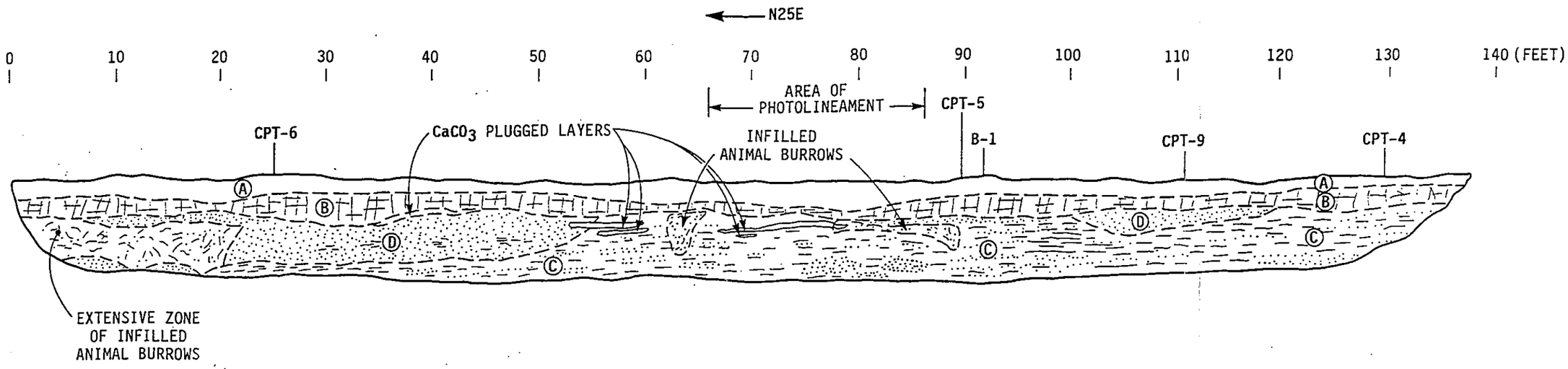
0 500 1000 1500 FEET
SCALE

NOTE: BASE MAP FROM USGS 7½ MINUTE RITTER RIDGE, CALIFORNIA (1958, PHOTOREVISED 1974) QUADRANGLE.

Project No. 9R-123B Date 3-7-90

Location of Exploratory Trench

Figure
1



EXPLANATION

CPT-9 CONE PENETROMETER SOUNDING (PROJECTED 6 FEET)
B-1 EXPLORATORY BORING (PROJECTED 6 FEET)

OLDER ALLUVIUM

Ⓐ EB HORIZON: SILTY SAND, LIGHT GRAY TO VERY LIGHT BROWN, MODERATELY DENSE, DRY, FINE TO COARSE GRAINED, POROUS, ABUNDANT SMALL ROOTLETS. TYPICALLY OVERLAIN BY A 2-TO-3-INCH THICK LAYER OF EOLIAN SAND.

Ⓑ Bt HORIZON: (RELICT SOIL) SILTY SAND, LIGHT GRAY TO VERY LIGHT BROWN, MODERATELY CLAYEY SAND (20-30% CLAY), REDDISH BROWN, VERY DENSE; FINE TO COARSE GRAINED, GRANITIC, SLIGHTLY MOIST TO MOIST. PRISMATIC STRUCTURE, MOTTLED WITH $CaCO_3$ WITHIN LOWERMOST PORTIONS.

Ⓒ SAND & SILT SAND (SP-SW) AND SANDY SILT (ML), FINE TO COARSE GRAINED, RANGING IN THICKNESS FROM 2-TO-6-INCHES WITH PODS OF COARSE GRAINED SAND UP TO 2.5 FEET THICK. CRUDELY STATIFIED LAYERS AND LENSES, SAND IS TYPICALLY DENSE, DRY, POROUS, FRIABLE, SUBANGULAR TO SUBROUND, AND COMPOSED CHIEFLY OF OVERBANK TYPE DEPOSITS, TYPICALLY LIGHT BROWN, HARD, SLIGHTLY MOIST, WITH FINE GRAINED SAND.

Ⓓ SAND WELL GRADED (SM) WITH ISOLATED PODS OF SILTY SAND (SM), PROBABLE CHANNEL DEPOSITS, DENSE, DRY, POROUS, FRIABLE, FINE TO COARSE GRAINED, SUBROUND, AND COMPOSED CHIEFLY OF QUARTZ-RICH (GRANITIC) GRAINS.

SCALE: 1"=10'
HORIZONTAL AND VERTICAL

Project No. 9R-123B Date 3-7-90

Exploratory Trench Log

Figure
2

Geotechnical appendices available at the City of Palmdale Planning Department.

E. Biological Resources Assessment

A REPORT OF THE BIOLOGICAL RESOURCES ON THE 721 ACRE PALMDALE TRADE & COMMERCE CENTER PALMDALE, CALIFORNIA

Prepared for

Robert Bein, William Frost & Associates
P. O. Box 19737
Irvine, CA 92718
(714) 472-3505

Prepared by

Pacific Southwest Biological Services, Inc.
P.O. Box 985
National City, CA 92050
Phone: 619/477-5333
FAX: 619/477-1245

1 February 1990

R. Mitchel Beauchamp, Principal Consultant

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INTRODUCTION

A biological assessment of the 721 acre Palmdale Freeway Business Park Specific Plan area was performed by Pacific Southwest Biological Services, Inc. as a subcontractor to Robert Bein, William Frost and Associates. The purpose of the assessment was to determined impacts of future development of the site through the Specific Plan stage and recommend measures to preserve or mitigate the loss of significant resources.

SITE LOCATION AND SETTING

The subject site lies astride State Route 14 between Avenue P and a line extending westward from the intersection of Division and Palmdale Avenue. Division Avenue serves as the site boundary on the east and 10th Street West on the west. Elevational range of the site is from 2,640 to 2,800 feet. The site lies generally to the west of the town center and is located in Sections 22 & 27 of 16 N, Range 12 W of the USGS Ritter Ridge 7.5' Quadrangle, San Bernardino Base and Meridian (Figure 1). Soils mapped for the site are generally coarse sandy loams of the Adelanta and Ramona series and Greenfield sandy loam (Bowman 1973). Hesperia fine sandy loam is mapped in the Amargosa Creek area. Minor areas of Cajon loamy and fine loamy sands are also present. Surficial geology mapped from the site is recent Alluvium (Rogers 1973). Adjacent land uses are residential to the east, open land and commercial as well as resident to the south, residential to the west and open land and Country Club to the north.

METHODOLOGY

The field assessment of the subject property and environs was made by R. Mitchel Beauchamp, botanist and Eric R. Lichtwardt, zoologist. The field work was done on 18 December 1989 from 0930 to 1200 hours. Weather conditions during the survey were sunny with an air temperature of 60° F. Wildlife identifications were aided by binoculars (10 x 40 power). Unobserved species were identified through indirect signs (i.e. scat, tracks, calls, nests and burrows, etc.).

The botanical investigation was done on 18 December 1989 and 27 January 1990 and involved the field compilation of a floral checklist (Table 1) and delineation of boundaries between the various vegetation and land cover categories (Figure 2).

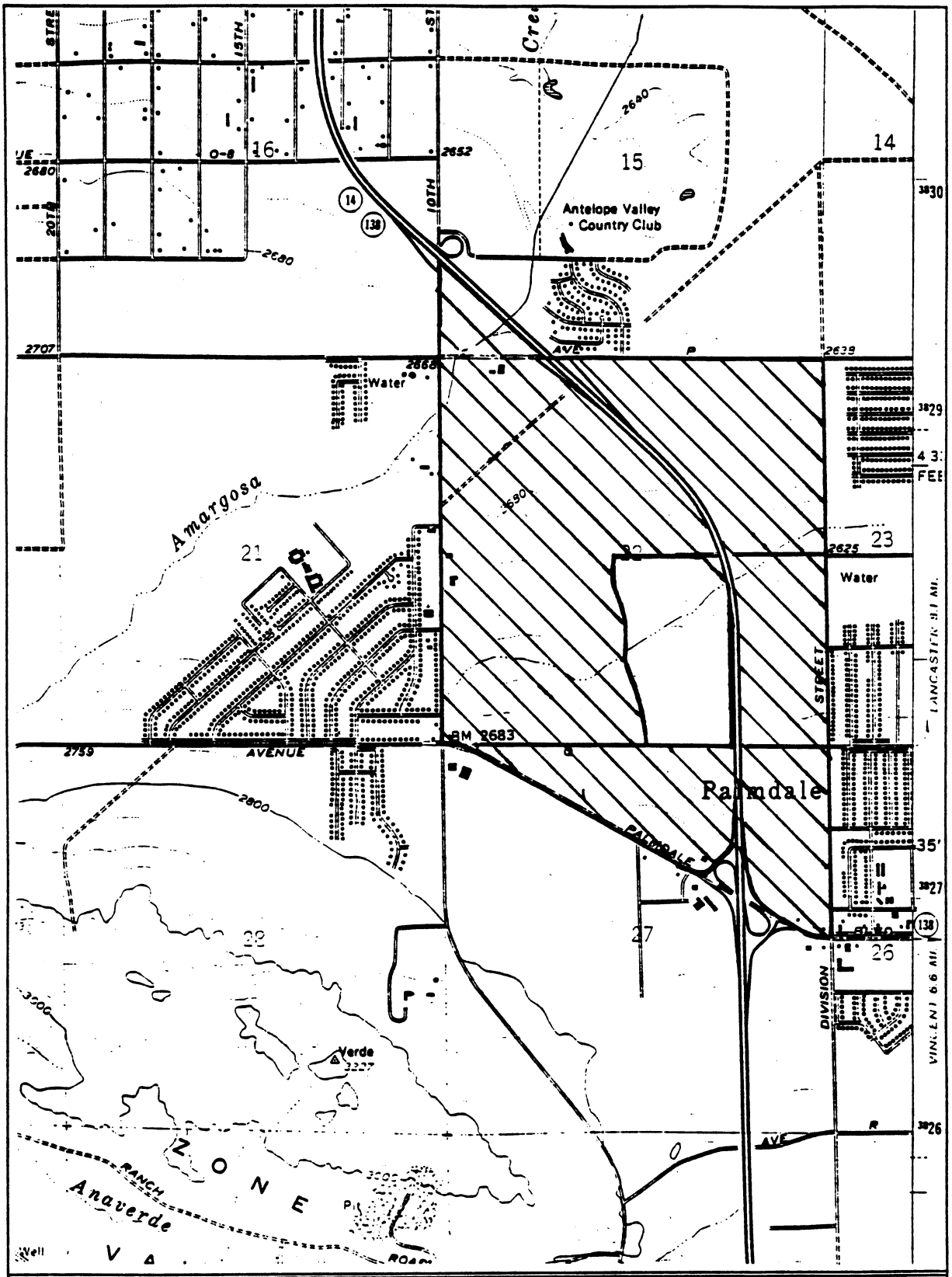

FIGURE 1. PROJECT VICINITY MAP
USGS 7.5' Ritter Ridge Quadrangle

KEY TO VEGETATION TYPES IN FIGURE 2:

B	Buildings/Urban Development
D	Disturbed
F	Fill
G	Graded
O	Old Orchard
X	Desert Wash
N	Non-native Grassland
GB	Great Basin Sage Scrub
S	Rabbitbrush Scrub
J	Joshua Tree Woodland
W	Wetland

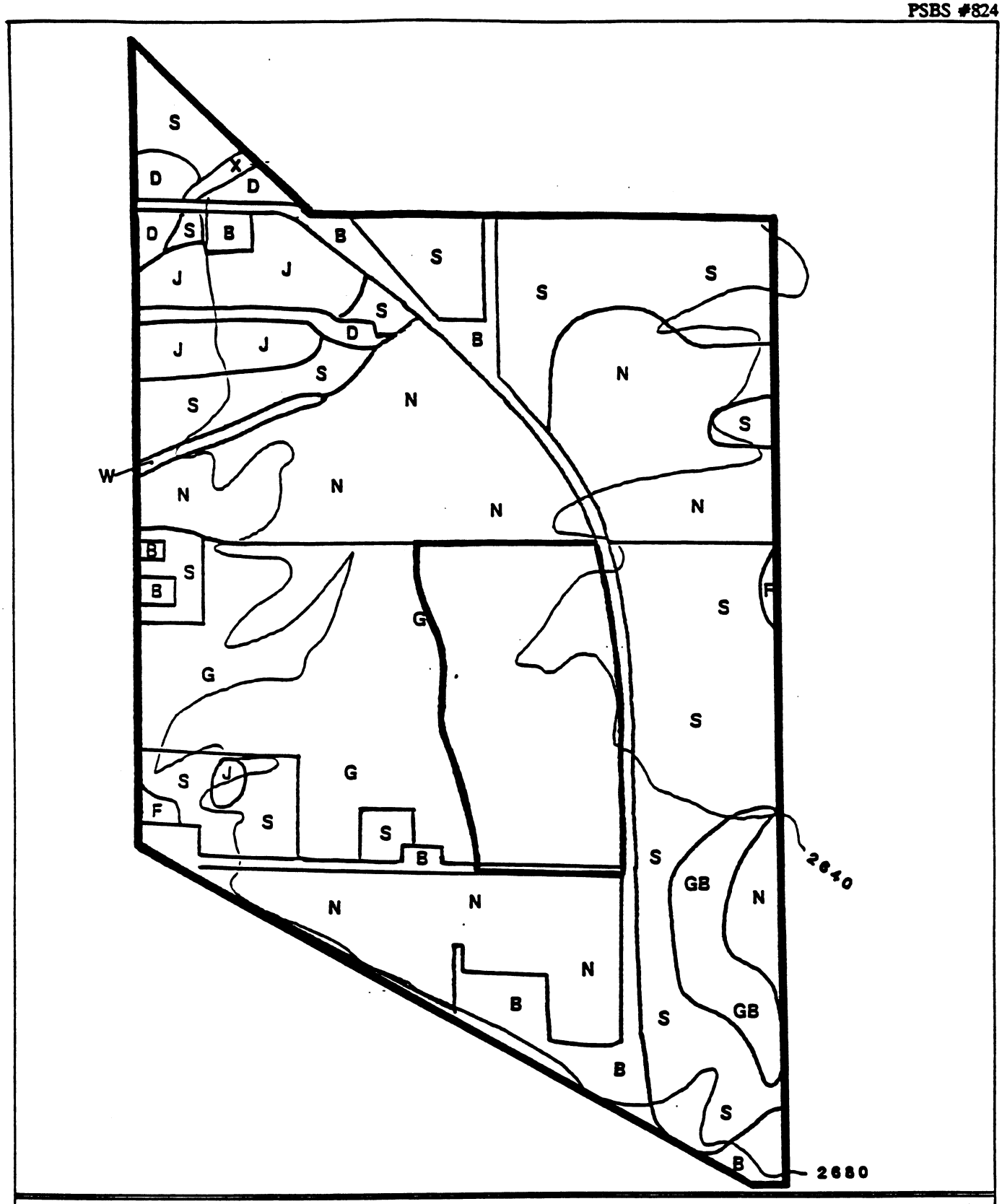

FIGURE 2. EXISTING VEGETATION MAP

N

1" = 1050'

Scientific nomenclature used in this report is from the following references: vegetation, Holland (1986); flora, Munz (1974); birds, American Ornithologists Union (1983); reptiles and amphibians, Stebbins (1985); and mammals, Jameson and Peeters (1988). Wildlife delineations generally follow that of Mayer and Laudenslayer (1988).

BOTANICAL RESOURCES

VEGETATION

The site has been disturbed by a variety of land uses. The majority of the site was probably covered with Joshua tree woodland at the northwest corner as it is now, as well as at the southeast corner, where it now occurs just off-site. Past grazing, fires, grubbing, illegal dumping and grading have eliminated native plant cover in many parts of the site.

Disturbed Areas (203.7 acres)

These areas include buildings, paved areas and recently graded sites.

Annual Grassland (217.7 acres)

These open, disturbed areas have a varying degree of low, non-shrub cover, largely dominated by cheatgrass (*Bromus tectorum*) and filaree (*Erodium cicutarium*). These and other introduced annuals have seriously infested these open areas and generally out-compete the more specialized native annuals which are not so well adapted to disturbance. Presumably these annual grassland areas were once shrub-covered. These open habitat have the potential to provide colorful wildflower displays in the spring is a significant component of native annuals persists. The present study during a dormant season was not able to determine the level of native annuals present in these areas.

Rabbitbrush Scrub (230.1 acres)

Rabbitbrush (*Chrysothamnus nauseosus*) is the dominant plant of this shrubland and had just finished flowering at the survey time. Shrub diversity of this vegetation type is very low in the study area. Only Sand-Aster (*Coreythrogyne*) and Chaparral-Star (*Haplopappus cooperi*) were of any note. As with the annual grassland, the open areas among shrubs are dominated by cheatgrass and filaree.

Great Basin Sage Scrub (22.8 acres)

One small area along Division at Avenue Q contains a pure stand of Great Basin Sagebrush (*Artemisia tridentata*). This vegetation is usually associated with specific, deep, well-drained alluvial soils (Mottsville), so its occurrence here is noteworthy.

Joshua Tree Woodland (40.5 acres)

Two areas of the study site contain stands of these distinctive Yuccas. A small stand of plant clusters lies north of a motel on the north side of Palmdale Avenue. This grove is very degraded and lacks practically all of the associate shrubs. To the east of this grove, fire has claimed 10 plants. None of the Yucca plants in this area, either dead or alive, exceed 10 inches in diameter or 12 feet in height. In contrast, the grove at the northwestern corner of the study area contains a very diverse Joshua Tree Woodland. Unfortunately this grove has been plundered by the massive excavation for a pipe system. The excavation was in progress during the biological survey and several plants were seen to be buried by the side cast. No evidence of plant salvage was noted. The remaining population of Joshua Trees is 80 plants. None of these plants have trunks which reach 12 inches in diameter. The surviving three segments of the grove are representative of native, intact Joshua Tree Woodland. Associated shrubs here include California Juniper (*Juniperus californica*), Mexican Sage (*Salazaria mexicana*), Mormon-tea (*Ephedra* sp.), Goldenheads (*Acamptopappus sphaerocephalus*), Cotton-thorn (*Tetradymia* sp.), Flat-top Buckwheat (*Eriogonum fasciculatum*) and Yucca Buckwheat (*Eriogonum plumatellum*). The widespread Creosote Bush (*Larrea divaricata*) occurs at the site only at only at this location.

Freshwater Marsh (5.1 acres)

A drainage swale runs just to the south of the northern Joshua Tree Woodland. The water source is urban run-off. The vegetation consists of a variety of wetland plants, including Cat-tails (*Typha dominguensis*), Rabbits-foot grass (*Polypogon monspeliensis*), Sprangle-top (*Diplachne uninervia*), Spikerush (*Eleocharis palustris*) Bulrush (*Scirpus robustus*), Mulefat (*Baccharis salicifolia*) and Curly Dock (*Rumex crispus*). Another run-off accumulation site lies along the southern border of the site, next to an apartment area but this is unmapped due to its small extent.

Desert Wash (1.3 acres)

A small area of desert wash occurs in the Armagosa Creekbed at the northend of the site. Due to active scouring, no riparian vegetation was observed.

FLORA

The observed flora of the site is a poor representative of the potential flora which no doubt occurs on the site. The fact that the survey was made in a dormant season following a very poor rainfall year.

Table 1 lists the 39 native and 20 non-native plants which could be determined on the site. The observed flora is representative of the area with the exception of the Great Basin Sagebrush noted above. A comparison of the flora in similar circumstances during a more favorable year (Haines 1986) suggests that the native site flora would total more closely to plant taxa, the number swollen by the presence of annuals.

ZOOLOGICAL RESOURCES

GENERAL WILDLIFE HABITAT

The primary habitat on the site is Mojave Desert Scrub (Brown 1982). This habitat includes several botanical associations, (see vegetation section). Mojave Desert Scrub supports a low diversity bird fauna; however small mammals and reptiles can be common in undisturbed areas. This habitat is widespread throughout the Mojave Desert and reaches its western boundary in the region of the project site. Joshua Tree Woodland is a subset of Mojave Desert Scrub. This habitat is more complex and supports additional species such as the Cactus Wren (*Campylorhynchus brunneicapillus*) and Desert Night Lizard (*Xantusia vigilis*). Large areas of the site have been graded and support no native vegetation or wildlife.

AMPHIBIANS

No amphibians inhabit Mojave Desert Scrub in the area of the project site. Species such as the Red-spotted Toad (*Bufo punctatus*) occur in this habitat near desert streams and oases but are not expected on or near the project site.

REPTILES

Up to nineteen species of lizards and snakes are known to inhabit Mojave Desert Scrub in the western Mojave Desert. Some of the typical species include the Western Banded Gecko (*Coleonyx variegatus*), Desert

Night Lizard (*Xantusia vigilis*), Zebra-tailed Lizard (*Callisaurus draconoides*), Side-blotched Lizard (*Uta stansburiana*), Desert Horned Lizard (*Phrynosoma platyrhinos*), Western Whiptail (*Cnemidophorus tigris*), Coachwhip (*Masticophis flagellum*), Gopher Snake (*Pituophis melanoleucus*), Glossy Snake (*Arizona elegans*), Long-nosed Snake (*Rhinocheilus lecontei*), Sidewinder (*Crotalus cerastes*) and Mojave Rattlesnake (*C. scutulatus*). Many of these species, especially the larger snakes, are probably extirpated from the site due to the fact that it is surrounded by well-travelled roads and developments bisected by a freeway, and the disturbed nature of the habitats. Only one reptile, the Desert Night Lizard, was found during the survey work. Several individuals were discovered under a fallen Joshua Tree log.

BIRDS

Seven species of birds were observed on the site (Table 2). This low number of species is typical of desert flats in the western Mojave Desert. The fact that the habitat was overgrazed and disturbed probably contributed to the low diversity. Several species which were seen are winter visitors to this area, and include the Yellow-rumped Warbler (*Dendroica coronata*), Savannah Sparrow (*Passerculus sandwichensis*) and White-crowned Sparrow (*Zonotrichia leucophrys*). One Western Meadowlark (*Sturnella neglecta*) was seen and six House Finches (*Carpodacus mexicanus*) were seen in brushy thickets. Common Ravens (*Corvus corax*) were the most abundant bird on the site with fifteen individuals being seen. Four Loggerhead Shrikes (*Lanius ludovicianus*) were seen at scattered localities throughout the property. These predacious songbirds are resident in the western Mojave Desert; however there is a influx of wintering individuals into the area.

MAMMALS

The only mammal observed on the site was the Black-tailed Jackrabbit (*Lepus californicus*). This large lagomorph is common in open arid lands throughout southern California and is often found in disturbed areas. Kangaroo Rats (*Dipodomys*) burrows and diggings were found at scattered sites on the property. The Merriam's Kangaroo Rat (*D. merriami*) is probably the most common species present; however the larger Panamint Kangaroo Rat (*D. panamintinus*) may be present in the Joshua Tree woodland. The burrows of the widespread California Ground Squirrel (*Spermophilus beecheyi*) were also found on the site. This large diurnal rodent is one of the most abundant mammalian species in California.

The Mojave Ground Squirrel (*S. mohavensis*) has been historically reported from the Antelope Valley area, however, this rodent which is considered threatened by the California Deptmart of Fish and Game, is not expected to occur on the site lack due to the lack of proper habitat and proximity of urban development and roads. Although searched for, no carnivore scat was found, indicating the probable extirpation of those mammals from the site.

SENSITIVE BIOLOGICAL RESOURCES

BOTANICAL

Plant Taxa

No sensitive plants were noted on the site.

Vegetation

Joshua Tree Woodland

The surviving woodland at the northwestern portion of the study site represents a sensitive botanical resource due to its size and diversity of associated shrubs and, presumably, annuals.

Wetlands

Wetland habitats are rare features in desert environments. The wetlands involved on the site, however, are artificial features whose water supply is undependable and short-term. The presence of a portion of the channel of Amargosa Creek at the northwestern corner of the site was the topic of additional wetland investigation. The channel is severely disturbed due to excavation of a large pipeline. Although no wetland vegetation was observed, the channel is considered a wetland under the California Department of Fish and Game 1600 series code. Alteration of the river bed, as well as the channel mentioned above and the mapped channel to the south which also lacks wetland vegetation, theoretically require a 1600 series streambed alteration agreement with the Department. Use of the term "blue-line stream" in discusssion of such features is without a legal basis in determining Fish and Game jurisdiction and should be avoided. Only by field examination of drainages can the presence or absence of Fish and Game, as well as U.S. Army Corps of Engineers jurisdiction be determined by a qualified wetland biologist.

ANIMALS

Prairie Falcon (*Falco mexicanus*)

LISTING:	SDNGWS - Species of local concern CITES - Priority II Remsen - Priority III
DISTRIBUTION:	Western United States
HABITAT:	Open country, deserts, interior valleys
STATUS:	Uncommon breeder in county; coastal population nearly extirpated.

This large falcon may pass through the site on occasion but is not expected to utilize the property to any significant extent due to high degree of development in this area.

Mojave Ground Squirrel (*Spermophilus mohavensis*)

LISTING:	CDFG - Threatened USFWS - Category 2
DISTRIBUTION:	Mojave Desert in western San Bernardino, eastern Kern, northwestern Los Angeles, and southwester Inyo counties.
HABITAT:	Open desert flats
STATUS:	Declining due to habitat degradation by off-road vehicles and land development.

This small ground squirrel may have been present historically on the site in the past, but its occurrence at present is highly unlikely due to the extensive development in this area, the disturbed nature of the site and the site's proximity to busy paved roadways.

SENSITIVE PLANTS FOUND IN THE REGION BUT NOT OBSERVED ON SITE

Sensitive plants known from the area include Mariposa Lily (*Calochortus striatus*) Spine-Flower (*Chorizanthe spinosa*), and Woolly-Star (*Eriastrum sherman-hoytae*). Aside from the small area of Joshua Tree woodland where the *Eriastrum*, a low rarity plant, might be found, habitat for the other sensitive plants is not on the site.

IMPACTS

The proposed modification of land uses allowed on the site will result in the removal of vegetation now occurring there. The only significant impact expected will be the loss of the Joshua Tree Woodland. Because of the quality of the remaining woodland habitat fragments, this impact is considered significant.

RECOMMENDATIONS

The Joshua Tree Woodland area should be protected by *in situ* preservation of the habitat or acquistion of equivalent, off-site habitat within the Sphere of Influence of the City of Palmdale. Preservation is considered to include fencing of the site and dedication of an open space easement to the City of Palmdale. Areas adjacent to the woodland should have a 50' setback from the Joshua Tree plants. Within that setback, develop native plant cover to restore natural habitat values to the buffer area if such plant cover is not present.

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TABLE 1. FLORAL CHECKLIST OF PALMDALE

HABITAT

GYMNOSPERMS

Cupressaceae
Juniperus californica Carr. Juniper

DICOTYLEDONS

Asteraceae - Sunflower Family
Acamptopappus sphaerocephalus (Harv. & Gray)Gray Desert Goldenhead
Ambrosia acanthicarpa Hook. Annual Bur-Weed
Artemisia tridentata ssp. *parishii*(Gray)Hall & Clem Great Basin Sagebrush
Baccharis salicifolia (R.P.)Pers. Mule-fat
* *Chrysothamnus nauseosus* (Pall)Britt. Rabbitbrush
* *Conyza canadensis* (L.)Cronq. Horseweed
Corethrogyne filaginifolia var. *bernardina*(Abrams)Hall Cudweed-Aster
Gnaphalium palustre Nutt. Lowland Cudweed
Gutierrezia californica (DC.)T. & G. Broom Matchweed
Haplopappus cooperi (Gray)Hall
Heterotheca grandiflora Nutt. Telegraph Weed
* *Lactuca serriola* L. Prickly Lettuce
Lagophylla ramosissima Nutt. Common Hareleaf
Lasthenia californica D.C. ex Lindley. Goldfields
Lessingia glandulifera Gray var. *glandulifera* Valley Lessingia
Stephanomeria exigua Nutt. ssp. *exigua*. Small Wreath-Plant
Tetradymia spinosa H. & A. var. *longispina*
Tessaria sericea (Nutt.)Cov. Arrowweed

Boraginaceae - Borage Family
Amsinckia intermedia F.& M. Rancher's Fiddleneck

Brassicaceae - Mustard Family
* *Brassica geniculata* (Desf.)J. Ball. Short-pod Mustard
* *Sisymbrium altissimum* L. Tumble-Mustard

Cactaceae
Opuntia echinocarpa

Chenopodiaceae - Goosefoot Family
Atriplex canescens (Pursh)Nutt. ssp. *canescens* Four-wing Saltbush
* *Salsola australis* R. Br. Russian-thistle

Euphorbiaceae - Spurge Family
Eremocarpus setigerus (Hook.)Benth. Doveweed

Fabaceae - Pea Family
Lupinus bicolor ssp. *microphyllus* (Wats.)D. Dunn. Lupine
* *Robinia pseudo-acacia* L.

Geraniaceae - Geranium Family
* *Erodium cicutarium* (L.)L'Her. Red-stem Filaree

TABLE 1. FLORAL CHECKLIST OF PALMDALE (CONTINUED)

Lamiaceae - Mint Family
* *Marrubium vulgare* L. Horehound
Salazaria mexicana Torr. Bladder-Sage
Trichostema lanceolatum Benth. Vinegar Weed

Malvaceae - Mallow Family
Sphaeralcea ambigua Gray. Desert-Hollyhock

Polemoniaceae - Phlox Family
Eriastrum diffusum (Gray)Mason Desert Woolly-Star

Polygonaceae - Buckwheat Family
Eriogonum fasciculatum Benth. ssp. *fasciculatum* Flat-top Buckwheat
Eriogonum plumatella Dur.&Hilg. Yucca Buckwheat
* *Polygonum arenastrum* Bor. Yard Knotweed
* *Rumex crispus* L. Curly Dock

Solanaceae - Nightshade Family
Datura discolor Bernh. Jimsonweed
Lycium andersonii Gray. Waterjacket

Tamaricaceae - Tamarisk Family
* *Tamarix parviflora* D.C. Tamarisk

Zygophyllaceae - Caltrop Family
Larrea divaricata ssp. *tridentata* (Sesse & Moc. ex D.C.)Felger & Lowe. Creosote Bush

MONOCOTYLEDONS
Agavaceae - Agave Family
Yucca brevifolia Engelm. Joshua Tree

Cyperaceae - Sedge Family
Eleocharis macrostachya Britt. in Small. Pale Spike-Sedge
Scirpus robustus Pursh. Prairie Bulrush

Juncaceae - Rush Family
Juncus bufonius L. Toad-Rush

Poaceae - Grass Family
* *Bromus diandrus* Roth. Ripgut Grass
* *Bromus rubens* L. Red Brome
* *Bromus tectorum* L. Cheat-Grass Brome
* *Cynodon dactylon* (L.)Pers. Bermuda Grass
Diplachne uninervia
* *Oryzopsis miliacea* (L.)Benth. Millett Ricegrass
* *Polypogon monspeliensis* (L.)Desf. Annual Beardgrass
* *Setaria geniculata* (Lam.)Beauv. Knotroot Bristle Grass
Stipa speciosa Trin. & Rupr. Desert Stipa

Typhaceae - Cat-Tail Family
Typha domingensis Pers. Tule Cat-tail
* - Denotes non-native plant taxa

02/01/90

TABLE 2. ANIMALS OBSERVED OR DETECTED ON THE PALMDALE PROPERTY

HABITAT D = Mojave Desert Scrub F = Flying
J = Joshua Trees

COMMON NAME	SCIENTIFIC NAME	NUMBER/MEANS OF DETECTION	HABITAT
AMPHIBIANS AND REPTILES			
Xantusiidae (Night Lizards)			
Desert Night Lizard	*Xantusia vigilis*	3	J
BIRDS			
Corvidae (Jays, Magpies, and Crows)			
Common Raven	*Corvus corax*	15	D, F
Troglodytidae (Wrens)			
Cactus Wren	*Campylorhynchus brunneicapillus*	nest	J
Laniidae (Shrikes)			
Loggerhead Shrike	*Lanius ludovicianus*		
Emberizidae (Warblers, Sparrows, Blackbirds and Relatives)			
Yellow-rumped Warbler	*Dendroica coronata*	2	D
Savannah Sparrow	*Passerculus sandwichensis*	12	D
White-crowned Sparrow	*Zonotrichia leucophrys*	2	D
Western Meadowlark	*Sturnella neglecta*	1	D
Fringillidae (Finches)			
House Finch	*Carpodacus mexicanus*	6	D
MAMMALS			
Leporidae (Rabbits and Hares)			
Black-tailed Jackrabbit	*Lepus californicus*	2	D
Sciuridae (Squirrels, Chipmunks, and Marmots)			
California Ground Squirrel	*Spermophilus beecheyi*		
Heteromyidae (Pocket Mice and Kangaroo Rats)			
Kangaroo Rat	*Dipodomys* sp.	burrows, diggings	D, J

F. Noise Assessment

Table 2 and 3 of the Noise Assessment have been revised to reflect revisions to the traffic study. The revisions are on Tables 18 and 19 of the EIR text.

Noise Assessment for Palmdale Trade and Commerce Center City of Palmdale

Prepared for

RBF
14725 Alton Parkway
Irvine, CA 92718

Prepared by

Fred Greve, P.E.
Tanya Nguyen
Mestre Greve Associates
280 Newport Center Drive
Suite 230
Newport Beach, CA 92660
(714) 760-0891

March 6, 1990

Noise Assessment for Palmdale Trade and Commerce Center
City of Palmdale

1.0 EXISTING NOISE ENVIRONMENT

1.1 Introduction

The proposed project calls for the development of Palmdale Trade and Commerce Center which covers a total of 543 acres. The project will consist of commercial, office, industrial and hotel land uses. The project is located in the Los Angeles County.

1.2 Noise Criteria

Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Exhibit 1 provides examples of various noises and their typical A-weighted noise level.

The "equivalent noise level," or Leq is the Average noise level on an energy basis for any specified time period. The Leq for one hour is the energy Average noise level during the hour, specifically, the Average noise based on the energy content (acoustic energy) of the sound. It can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise level has the units of dBA, therefore, a sound measured for one hour may be expressed as a one hour Leq of 57 dBA.

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. The predominant rating scale now in use in California for land use compatibility assessment is the Community Noise Equivalent Level (CNEL). The CNEL scale represents a time weighted 24 hour Average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. The evening time period (7 p.m. to 10 p.m.) penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA. These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. The day-night or Ldn scale is similar to the CNEL scale except that evening noises are not penalized. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 2.

The criteria used to assess the acceptability of community noise levels varies with the municipality. The City of Palmdale uses 65 CNEL as the critical criterion for assessing the compatibility of residential land uses with noise sources. The City of Palmdale recommends that the exterior living areas (yards and patios) for new residential land uses do not exceed 65 CNEL. In addition, for multi-family residential projects, the California Noise Insulation Standard (California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4) requires that the indoor noise levels in multi-family residential development do not exceed a CNEL of 45 dB. The City of Palmdale indoor noise standards are consistent with the state standards. The City of Palmdale requires that both single family and multi-family development achieve an indoor noise standard of 45 CNEL.

SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS

(A-Scale Weighted Sound Levels)

dB(A)	OVER-ALL LEVEL Sound Pressure Level Approx. 0.0002 Microbar	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
130	UNCOMFORTABLY	Military Jet Aircraft Take-Off With After-burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
120 110	LOUD	Turbo-Fan Aircraft @ Take Off Power @ 200 Ft. (90)	Riveting Machine (110) Rock-N-Roll Band (108-114)	110 dB(A) 16 Times as Loud
100	VERY	Jet Flyover @ 1000 Ft. (103) Boeing 707. DC-8 @ 6080 Ft. Before Landing (106) Bell J-2A Helicopter @ 100 Ft. (100)		100 dB(A) 8 Times as Loud
90	LOUD	Power Mower (96) Boeing 737, DC-9 @ 6080 Ft. Before Landing (97) Motorcycle @25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times as Loud
80		Car Wash @ 20 Ft. (89) Prop. Airplane Flyover @ 1000 Ft. (88) Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times as Loud
70	MODERATELY LOUD	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 +or- 6)	Living Room Music (76) TV-Audio, Vacuum Cleaner	70 dB(A)
60		Air Conditioning Unit @ 100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	60 dB(A) 1/2 as Loud
50	QUIET	Large Transformers @ 100 Ft. (50)		50 dB(A) 1/4 as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		40 dB(A) 1/8 as Loud
	JUST AUDIBLE	(dB[A] Scale Interrupted)		
10	THRESHOLD OF HEARING			

SOURCE: Reproduced from Melville C. Branch and R. Dale Beland, Outdoor Noise in the Metropolitan Environment. Published by the City of Los Angeles, 1970, p.2.

Exhibit - 1
Typical A-Weighted Sound Levels

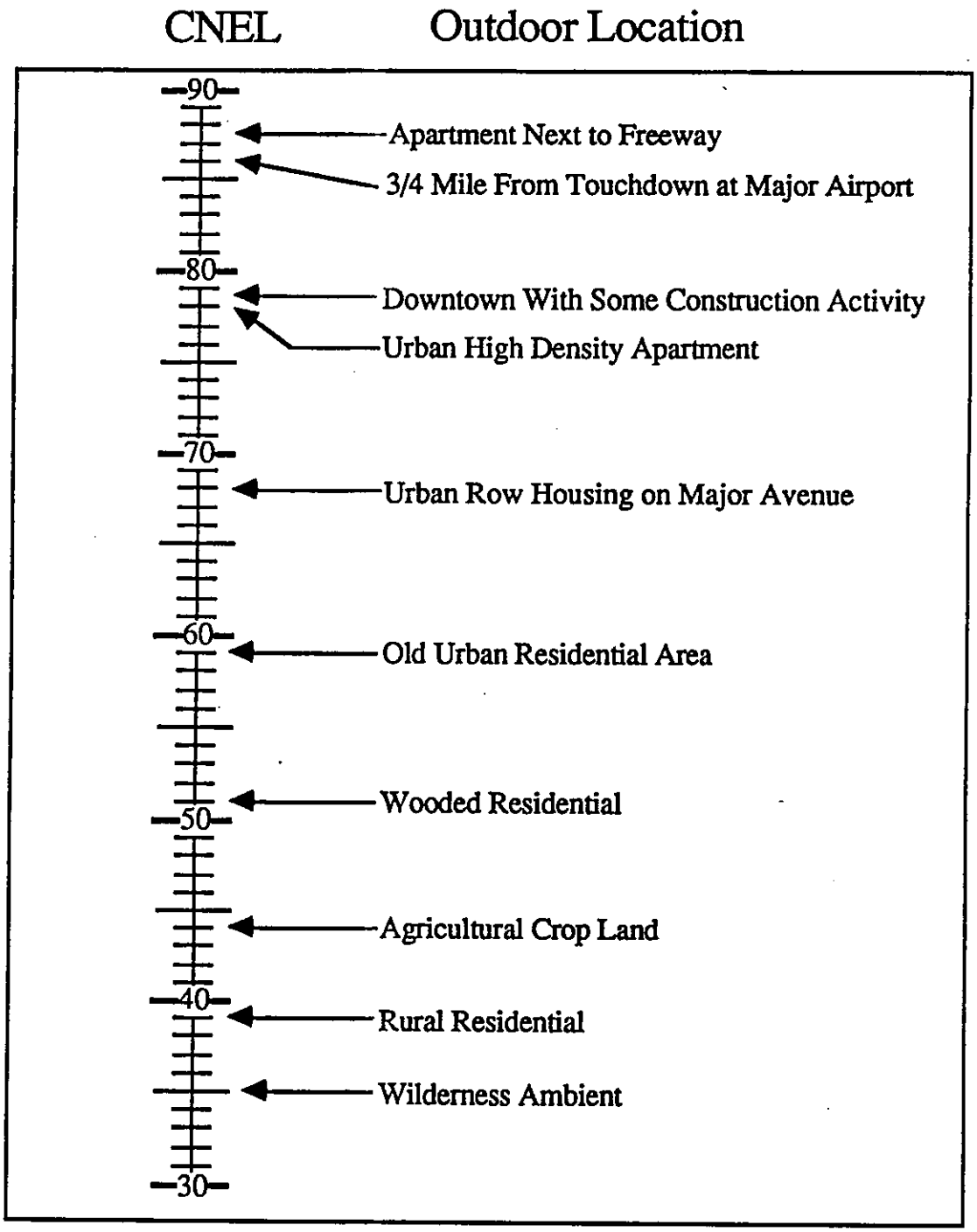
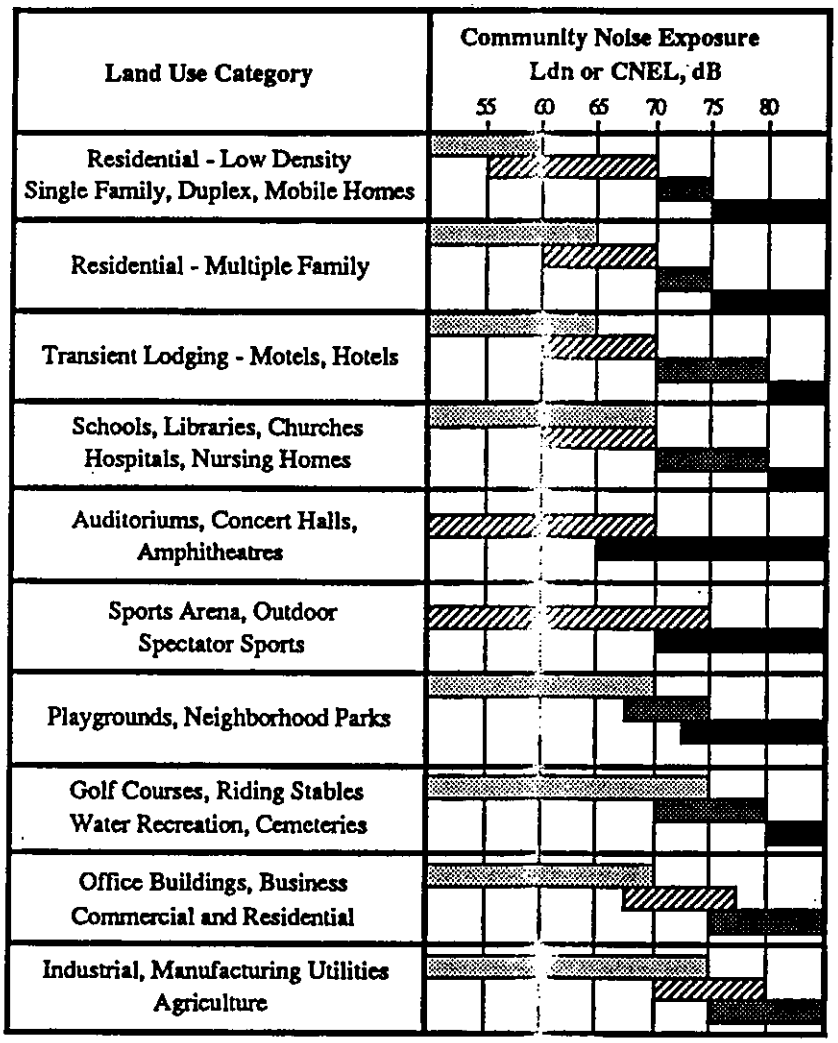


Exhibit - 2
Typical Outdoor Noise Levels



Interpretation

Normally Acceptable

Specified Land Use is Satisfactory, Based Upon the Assumption that Any Buildings Involved are of Normal Conventional Construction, Without Any Special Noise Insulation Requirements.

Conditionally Acceptable

New Construction or Development Should be Undertaken Only After a Detailed Analysis of the Noise Reduction Requirement is Made and Needed Noise Insulation Features Included in the Design. Conventional Construction, but with Closed Windows and Fresh Air Supply Systems or Air Conditioning, Will Normally Suffice.

Normally Unacceptable

New Construction or Development Should Generally be Discouraged. If New Construction or Development Does Proceed, a Detailed Analysis of the Noise Reduction Requirements Must be Made and Needed Noise Insulation Features Included in the Design.

Clearly Unacceptable

New Construction or Development Should Generally not be Undertaken.

MESTRE GREVE ASSOCIATES

Exhibit - 3
California Land Use/Noise Guidelines

LAND USE CATEGORIES		ENERGY AVERAGE CNEL	
CATEGORIES	USES	INTERIOR [1]	EXTERIOR [2]
RESIDENTIAL	Single Family, Duplex, Multiple Family	45[3] 55[4]	65
	Mobile Home	----	65 [5]
COMMERCIAL INDUSTRIAL INSTITUTIONAL	Hotel, Motel, Transient Lodging	45	65 [6]
	Commercial Retail, Bank Restaurant	55	----
	Office Building, Research and Development, Professional Offices, City Office Building	50	----
	Amphitheatre, Concert Hall Auditorium, Meeting Hall	45	----
	Gymnasium (Multipurpose)	50	----
	Sports Club	55	----
	Manufacturing, Warehousing, Wholesale, Utilities	65	----
	Movie Theatres	45	----
INSTITUTIONAL	Hospital, Schools' classroom	45	65
	Church, Library	45	----
OPEN SPACE	Parks	----	65

INTERPRETATION

1. Indoor environment excluding: Bathrooms, toilets, closets, corridors.
2. Outdoor environment limited to: Private yard of single family
   Multi-family private patio or balcony which is served by a means of exit from inside.
   Mobile home Park
   Hospital patio
   Park's picnic area
   School's playground
   Hotel and motel recreation area
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
4. Noise level requirement with open windows, if they are used to meet natural ventilation requirement.
5. Exterior noise level should be such that interior noise level will not exceed 45 CNEL.
6. Except those areas affected by aircraft noise.

MESTRE GREVE ASSOCIATES

Exhibit - 4

CITY OF IRVINE NOISE ELEMENT

Commercial, office, industrial and hotel land uses are included as part of the project. The California Department of Health Services has published guidelines for determining the compatibility of varies land uses with noise levels. The guidelines are summarized in Exhibit 3. The guidelines rate compatibility in terms of "normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable." The guidelines are used to assess the compatibility of the proposed project with the noise environment.

The Noise Element of the General Plan of the City of Irvine establishes noise standards for various land uses. These standards are in terms of the CNEL scale. Exhibit 4 presents the City of Irvine Noise Element. We recommend that the interior and exterior noise standards be applied to the commercial, office, industrial and hotel land uses in the project. The City of Palmdale does not have any noise standards for commercial, office, industrial and hotel land uses.

1.3 Existing Traffic Noise Levels

The highway noise levels projected in this report were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." A computer code has been written which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used. CNEL contours are found by iterating over many distances until the distances to the 60, 65, and 70 CNEL contours are found. For the roadway analysis, worst-case assumptions about future motor vehicle traffic and noise levels have been made and were incorporated in the modeling effort, specifically, no reductions in motor vehicle noise have been assumed in spite of legislation requiring quieter vehicles at the time of manufacture.

Existing traffic volumes and estimated speeds were used with the FHWA Model to estimate existing noise levels in terms of CNEL. Traffic volumes were obtained from the Palmdale Trade and Commerce Center Traffic Study, by Kunzman Associates, Inc. (February 27, 1990).

The distances to the CNEL contours for the roadways in the vicinity of the project site are given in Table 1. These represent the distance from the centerline of the road to the contour value shown. Note that the values given in Table 1 do not take into account the effect of any noise barriers or topography that may affect ambient noise levels.

Table 1
EXISTING NOISE LEVELS

Roadway	Link	Distance to CNEL Contour from Centerline of Roadway (Feet) 70 CNEL	65 CNEL	60 CNEL
AVENUE P				
	W. of 10th Street West	RW	RW	87
	5th St. West to 3rd St.	RW	85	183
	E. of Sierra Hwy	RW	80	173
AVENUE P-8				
	3rd St. to Sierra Hwy	RW	RW	RW
AVENUE Q				
	5th St. to Division St.	RW	RW	RW
ELIZABETH LAKE ROAD				
	W. of 10th St. West	RW	RW	109
PALMDALE BOULEVARD				
	10th St. West to Street A	RW	70	150
	Street A to 5th St. W.	RW	70	150
	5th St. W. to Antelope Valley Fwy	RW	70	150
10TH STREET WEST				
	N. of Antelope Valley Fwy	RW	58	126
	S. of Avenue P	RW	66	142
	N. of Elizabeth Lake	RW	66	142
	S. of Elizabeth Lake	RW	RW	63
ANTELOPE VALLEY FWY				
	W. of 10th St. W.	143	309	666
	Avenue P to Palmdale Blvd.	141	304	655
	S. of Palmdale Blvd.	139	299	644
5TH STREET WEST				
	S. of Elizabeth Lake	RW	RW	RW
DIVISION STREET				
	S. of Palmdale Blvd.	RW	RW	84
SIERRA HIGHWAY				
	N. of Avenue P	64	138	298
	Avenue P-8 to Palmdale Blvd.	52	112	241

RW - Contour falls on roadway.

The data in Table 1 indicate that a major noise corridor exists along Antelope Valley Freeway. Noise levels directly adjacent to the interstate exceed 70 CNEL. Avenue P, Palmdale Boulevard, 10th Street West, and Sierra Highway have noise levels greater than 65 CNEL. Other roadways in the project vicinity have low levels of traffic and correspondingly low levels of noise.

1.4 Existing Noise Level Measurements

Measurements of the noise levels were made during the morning and afternoon hours of January 24, 1990. The measurements were made with a Bruel & Kjaer Modular Precision Sound Level Meter, Type 2231. The system was calibrated before and after each measurement series. The wind speed during the time of measurements was medium (0 to 20 miles per hour).

Measurements were made on six different locations on and next to the project site. These locations are shown in Exhibit 5. Two 15 minute measurements were made at each of these locations. The measurement results were averaged and are given in Table 4. They are presented in terms of the equivalent noise level (Leq), peak noise level (Lmax), minimum noise level (Lmin), and noise levels exceeded for a percentage of time (L%). The L10 percentile level for example, represents the noise levels exceeding 10 percent of the time. Therefore, L1 and L10 represent the loudest noise levels generally experience. For all six locations monitored, the loudest events were usually trucks pass-bys in the nearest lane. The L90 levels represent the most quiet noise levels experienced, or the background levels. These daytime levels were usually due to distant traffic noise sources and occasional aircrafts overhead. The Leq scale is similar to the CNEL scale with the difference of roughly 4 to 5 dBA.

Table 4
NOISE MEASUREMENT RESULTS (DBA)

Location	Leq	Lmax	Lmin	L1	L10	L50	L90	L99
1 (on site)	64.9	79.4	54.5	72.3	66.8	63.3	60.1	56.3
2 (on site)	71.0	81.6	56.8	77.6	73.8	69.8	65.3	61.3
3 (on site)	54.3	66.1	49.1	61.3	55.8	53.6	51.8	50.3
4 (adjacent residential)	52.4	65.6	44.5	60.3	54.3	47.3	46.1	45.1
5 (adjacent residential)	70.4	83.0	48.4	78.8	74.1	67.6	55.6	50.1
6 (adjacent residential)	69.6	84.1	-	76.1	72.3	68.1	62.6	56.3

The data in Table 4 show that land uses directly adjacent to Antelope Valley Freeway, 10th Street West, and Avenue P on the project site as well as on adjacent residences are being impacted with significant noise levels. The Lmax noise levels on these locations are usually caused by trucks pass-bys in the nearest lane.

1.5 Existing Noise Levels Due to Aircraft Overflights

The Air Force Plant 42 is located approximately 2.5 miles northeast of the project site. This is a training base which operates military aircrafts such as air carriers and jets. The site is impacted by aircrafts following the primary approach pattern which takes place directly north of the project site.

The 1978 CNEL noise contours were obtained from the Department of the Air Force, AICUZ report (January, 1978). According to the contour map (Exhibit 6), the project site is located approximately 1.5 miles from the nearest 65 dBA CNEL contour. The project experiences

aircraft noise levels below the 65 CNEL.

2.0 POTENTIAL NOISE IMPACTS

Potential noise impacts are commonly divided into two groups; temporary and long term. Temporary impacts are usually associated with noise generated by construction activities. Long term impacts are further divided into impacts on surrounding land uses generated by the project and those impacts which occur at the project site.

2.1 Construction Noise

Construction noise represents a short term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. Grading activities typically represent one of the highest potential for noise impacts, however, most of the grading should occur away from existing residential land uses. However in some areas grading will be occurring adjacent to newly developed areas. For these situations, the most effective method of controlling construction noise is through local control of construction hours. When construction occurs adjacent to existing residential development the hours of construction should be limited to 7 a.m. to 7 p.m. on Monday through Friday. Construction should not be permitted for these circumstances on weekends or federal holidays.

2.2 Impacts on Surrounding Land Uses

The proposed development of the Palmdale Trade and Commerce Center will generate traffic, and as a result may alter projected noise levels in the surrounding areas. To assess the impact of the proposed project on land uses adjacent to streets that will serve the project, the change in roadway noise along these streets was determined. Due to other planned development in the area which has already been approved there will be an increase in traffic in the surrounding area with or without the Palmdale Trade and Commerce Center project. The change in noise was calculated for these roads and is shown below in Table 2. Column 1 shows the change in the future noise levels over existing noise levels. The future noise levels include the sum of noise levels generated from existing traffic and noise levels generated from traffic due to cumulative development in the surrounding area, including the project. Column 2 shows the change in future noise levels over future noise levels without the project. This column represents the increase in noise solely attributable to the proposed project.

Table 2
INCREASE IN NOISE LEVELS (dBA)

Roadway	Link	Future noise increase over existing	Future noise increase due to project
AVENUE P			
	W. of 10th Street West	11.2	0.7
	Antelope Valley Fwy to 3rd St.	3.8	3.9
	3rd St. to Sierra Hwy	-	-
	E. of Sierra Hwy	6.0	-
AVENUE P-8			
	10th St. W. to Street A	-	-
	Street A to 5th St. W	-	-
	5th St. W. to Division St.	-	-
	3rd St. to Sierra Hwy	14.5	4.1
AVENUE P-12			
	10th St. W. to Street A	-	-
AVENUE Q			
	5th St. to Division St.	12.7	0.5
	Division St. to 3rd St.	-	-
ELIZABETH LAKE ROAD			
	W. of 10th St. West	9.1	0.4
PALMDALE BOULEVARD			
	10th St. West to Street A	4.2	1.4
	Street A to 5th St. W.	3.5	1.7
	5th St. W. to Antelope Valley Fwy	6.5	3.3
10TH STREET WEST			
	N. of Antelope Valley Fwy	7.4	1.0
	S. of Antelope Valley Fwy	-	-
	S. of Avenue P	9.1	2.3
	N. of Elizabeth Lake	7.2	0.5
	S. of Elizabeth Lake	11.1	0.1
ANTELOPE VALLEY FWY			
	W. of 10th St. W.	-	-
	Avenue P to Palmdale Blvd.	9.5	0.2
	S. of Palmdale Blvd.	7.6	0.6
5TH STREET WEST			
	Avenue P-8 to Avenue P-12	-	-
	Avenue P-12 to Avenue Q	-	-
	S. of Avenue Q	-	-
	S. of Elizabeth Lake	13.9	0.3
SIERRA HIGHWAY			
	N. of Avenue P	3.7	-
	Avenue P to Avenue P-8	-	-
	Avenue P-8 to Palmdale Blvd.	-	-

In community noise assessment changes, noise levels greater than 3 dBA are often identified as significant, while changes less than 1 dBA will not be discernible to local residents. In the range of 1 to 3 dBA residents who are very sensitive to noise may perceive a slight change. No scientific evidence is available to support the use of 3 dBA as the significance threshold. In laboratory testing situations humans are able to detect noise level changes of slightly less than 1 dBA. However, in a community noise situation the noise exposure is over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people.

The data in Column 1 indicate that the future noise levels will increase substantially (greater than 3 dBA) for some streets over existing noise levels in the vicinity of the project which will have noise sensitive land uses. A maximum change of 14.5 dB exists along Avenue P-8. All other roadways shown in Table 2 will have existing to future noise increases greater than 3 dB. These significant increases are due primarily to the low amount of traffic currently on these roadways. All roadways that have noise increases greater than 3 dB and future noise levels exceeding 65 CNEL may significantly impact already existing residential developments adjacent to these roadways. Roadways along planned residential areas that are not yet developed can be mitigated by the developer at the time of construction. The future noise levels are likely to increase eventually over the years rather than immediately due to other developments throughout the area. This is a regional problem due to the intense development throughout this area. The Noise Element of the General Plan is intended to develop strategies to address regional problems. The City of Palmdale Noise Element should be updated to address this area. (The California Department of Health recommends that Noise Elements be updated every five years.)

The future noise increase due solely to the project are identified in Column 2 and are greater than 3 dB in some areas. This indicates the project will also contribute significantly to the noise increase problem in this region. Maximum noise increases of 3.9, 4.1 and 3.3 dB will occur along Avenue P, Avenue P-8 and Palmdale Boulevard, respectively. These roadways will have noise levels greater than 65 CNEL. There are existing residential and commercial areas adjacent to these roadways and they could be affected by future noise levels. Existing residences are located along Avenue P, east of Antelope Valley Freeway and along Avenue P-8, between 3rd Street and Sierra Highway. Existing commercial areas are located along Palmdale Boulevard, between 5th Street West and Antelope Valley Freeway (SR-14). Walls of approximately 7 feet high, border the residences along Avenue P. Even with these walls the residences along Avenue P will be impacted with noise levels in excess of 65 CNEL.

2.3 Noise Levels On-Site

Traffic volumes reported in the traffic study were used with the FHWA Highway Traffic Noise Model to project future unmitigated noise levels for all of the roadways. The modeling results are reported in Table 3 in the form of distances to the 60, 65, and 70 CNEL contours. These projections do not take into account any barriers or topography that may reduce noise levels. Table 3 presents the future noise levels with the proposed project. For the project site the data is also presented graphically in Exhibit 5. Exhibit 5 shows the 60, and 65 CNEL noise contours for the project site.

The data in Table 3 indicate that portions of the project site may experience future traffic noise levels greater than 65 CNEL without some form of mitigation. Land uses along Antelope Valley Freeway (SR-14), Palmdale Boulevard, Avenue P, Avenue P-8, 10th Street West, 5th Street West, Avenue Q and Division Street may experience noise levels greater than 65 CNEL without some form of mitigation. Measures will be necessary to ensure that residential areas planned along these roadways will experience outdoor noise levels less than 65 CNEL, and indoor noise levels less than 45 CNEL. The usual form of mitigation is through the construction of sound walls and sound insulation for the buildings.

If the commercial, office, industrial and hotel land uses are to be built adjacent to Antelope Valley Freeway, Avenue P, Avenue P-8, Avenue Q, Palmdale Boulevard, 5th Street West, Division Street and 10th Street West, they could be exposed to noise levels exceeding 70 CNEL. According to the California Land Use/Noise Compatibility guidelines (presented previously as Exhibit 3) commercial, office, industrial land uses inside the 70 CNEL zone are "conditionally acceptable", new construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction but with closed windows and fresh air supply systems will normally suffice. For hotel land use inside the 70 CNEL zone, the guidelines specified the condition as "normally unacceptable", new construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

2.4 Future Aircraft Noise Levels

The 1978 AICUZ noise contours for Air Force Plant 42 are shown in Exhibit 6. These contours represent the existing noise levels. The contours indicate that the project will experience noise levels outside the 65 dBA CNEL, and therefore the noise impact on the project is insignificant. It is our understanding that in the future, the air base will take on some commercial and quieter military aircrafts, therefore, the future noise levels are projected to be reduced considerably. We were informed by the chief engineer at the AF Plant 42 that an updated Air Installation Compatible Use Zone (AICUZ) Report had been completed and is being reviewed, and if approved, should be available to the public in the next two months.

3.0 MITIGATION MEASURES

3.1 Construction Noise Impacts

Construction adjacent to existing residential development should be limited to the hours of 7 a.m. to 7 p.m. on Monday through Friday. Construction should not be allowed on weekends or federal holidays.

Table 3
FUTURE NOISE LEVELS (dBA)

Roadway		Distance to CNEL Contour from Centerline of Roadway (Feet) 70 CNEL	65 CNEL	60 CNEL
AVENUE P				
	W. of 10th Street West	105	227	490
	5th St. West to 3rd St.	70	151	326
	3rd St. to Sierra Hwy	90	193	416
	E. of Sierra Hwy	94	203	438
AVENUE P-8				
	10th St. W. to Street A	RW	RW	98
	5th St. W. to Division St.	65	140	301
	3rd St. to Sierra Hwy	53	115	248
AVENUE Q				
	5th St. to Division St.	62	134	289
	Division St. to 3rd St.	RW	99	213
ELIZABETH LAKE ROAD				
	W. of 10th St. West	95	204	440
PALMDALE BOULEVARD				
	10th St. West to Street A	61	132	285
	Street A to 5th St. W.	56	120	259
	5th St. W. to Antelope Valley Fwy	87	188	406
10TH STREET WEST				
	N. of Antelope Valley Fwy	84	181	390
	S. of Antelope Valley Fwy	109	236	508
	S. of Avenue P	124	267	575
	N. of Elizabeth Lake	92	199	429
	S. of Elizabeth Lake	75	161	346
ANTELOPE VALLEY FWY				
	Avenue P to Palmdale Blvd.	604	1302	2806
	S. of Palmdale Blvd.	445	958	2064
5TH STREET WEST				
	Avenue P-8 to Avenue P-12	71	154	332
	Avenue P-12 to Avenue Q	97	209	451
	S. of Avenue Q	74	160	346
	S. of Elizabeth Lake	57	123	265
DIVISION STREET				
	Avenue P to Avenue P-8	75	162	349
	Avenue P-8 to Avenue Q	47	100	217
	Avenue Q to Palmdale Blvd.	56	121	261
SIERRA HIGHWAY				
	N. of Avenue P	114	245	528
	Avenue P to Avenue P-8	93	200	432

RW - Contour falls on roadway.

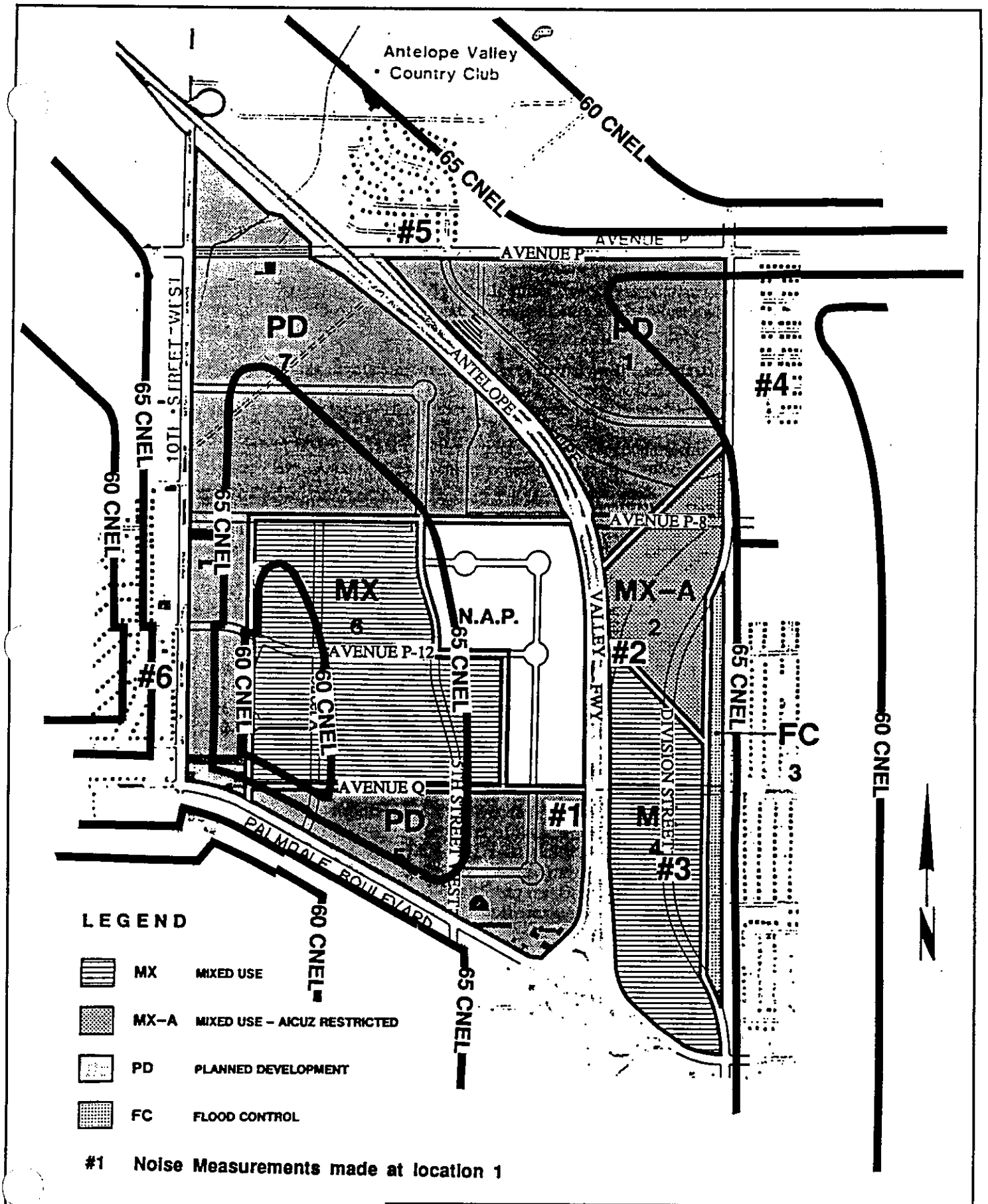


Exhibit - 5
Future On-Site CNEL Noise Levels

MESTRE GREVE ASSOCIATES

3.2 Off-Site Noise Impacts

The proposed project by itself will contribute significantly to the ultimate future noise levels. These substantial noise increases are along Avenue P, Avenue P-8 and Palmdale Boulevard. Future noise exposure on these roadways will be greater than 65 CNEL. Existing residences that will be adversely impacted by future noise are along Avenue P, between Antelope Valley Freeway and 3rd Street; along Avenue P-8 between 3rd Street and Sierra Highway. Existing commercial land uses that will be adversely impacted by future noise are along Palmdale Boulevard, between 5th Street and Antelope Freeway.

Three options are identified for consideration to mitigate the adverse impacts;

1. Reduce the project density so that traffic volumes in adjacent developments are not increased beyond the limits that would require off-site mitigation.

2. Provide off-site mitigation in the form of barriers, structural upgrades, etc. This option would require the developer to work with the other developer and homeowners to determine final wall heights, building upgrades, etc. needed for mitigation.

3. Determine that the above two measures are not reasonable and feasible, and identify the off-site noise impacts as unavoidable adverse impacts.

3.3 On-Site Noise Impacts Due To Traffic Noise Levels

Mitigation measures are needed to reduce noise levels in outdoor and indoor residential areas exposed to noise levels greater than 65 CNEL. Specifically, areas along Antelope Valley Freeway, Avenue P, Avenue P-8, 10th Street West, 5th Street West, Avenue Q and Division Street may experience noise levels over 65 CNEL without some form of mitigation. The measures below are presented to demonstrate feasibility, and should not be interpreted as design specifications. A more detailed noise analysis will be warranted when grading plans are developed.

The FHWA Model described previously and future traffic volumes were used to assess the feasibility of sound barriers in reducing the noise levels along the roadways of concern. A 5 foot observer height as recommended in the FHWA Model was utilized. It was assumed that a noise barrier would be constructed at the residential property line and that the observer was located 5 feet from the barrier. It has been assumed that no second story balconies will face the roadway for units located inside the 65 CNEL impact zone. In general, second story balconies should not overlook major roadways due to potential noise impacts. However, if such balconies are planned additional noise mitigation will be necessary.

Noise barrier heights were calculated for sample locations along Antelope Valley Freeway, Avenue P, Palmdale Boulevard, Avenue P-8, 10th Street West, 5th Street West, Avenue Q and Division Street. Walls of 6 feet or greater may be required along all these roadways. However, it is not aesthetic to have walls exceeding 6 feet. A more desirable alternative is a combination berm and wall which would reduce the wall height considerably. The noise barrier heights projected may be reduced considerably through site design, such as setbacks from the roadways, grade separations, and exterior living area orientation. The barriers could be a berm, wall, or a combination berm and wall. Walls should not contain holes or gaps, and should be constructed of slumpstone or other masonry material. Final noise barrier heights should be determined when final grading plans are developed that show lot locations, house setbacks, and precise pad elevations.

Exhibit 7 presents a standard condition utilized by the County of Orange. We recommend that a similar condition be attached to this project. This will insure that the projects meet the indoor and outdoor noise standards for the City of Palmdale.

Since the City of Palmdale does not have standards for commercial, office, industrial and hotel land uses, we recommend the interior and exterior noise criteria as specified in the City of Irvine Noise Element (Exhibit 4) be applied. All commercial, office, and industrial uses inside the 65 CNEL contour as shown in Exhibit 5 should be required to prepare acoustical reports. All hotel uses inside the 60 CNEL contour should be required to prepare acoustical reports. The indoor and outdoor noise criteria specified that an acoustical report will need to be completed prior to issuance of building permits to show mitigation measures, if any, needed to meet the city's interior and exterior noise standards for these land uses.

3.4 On-Site Noise Impacts Due to Aircraft Levels

The commercial, office, industrial and hotel land uses in the project would result in no significant aircraft noise impacts.

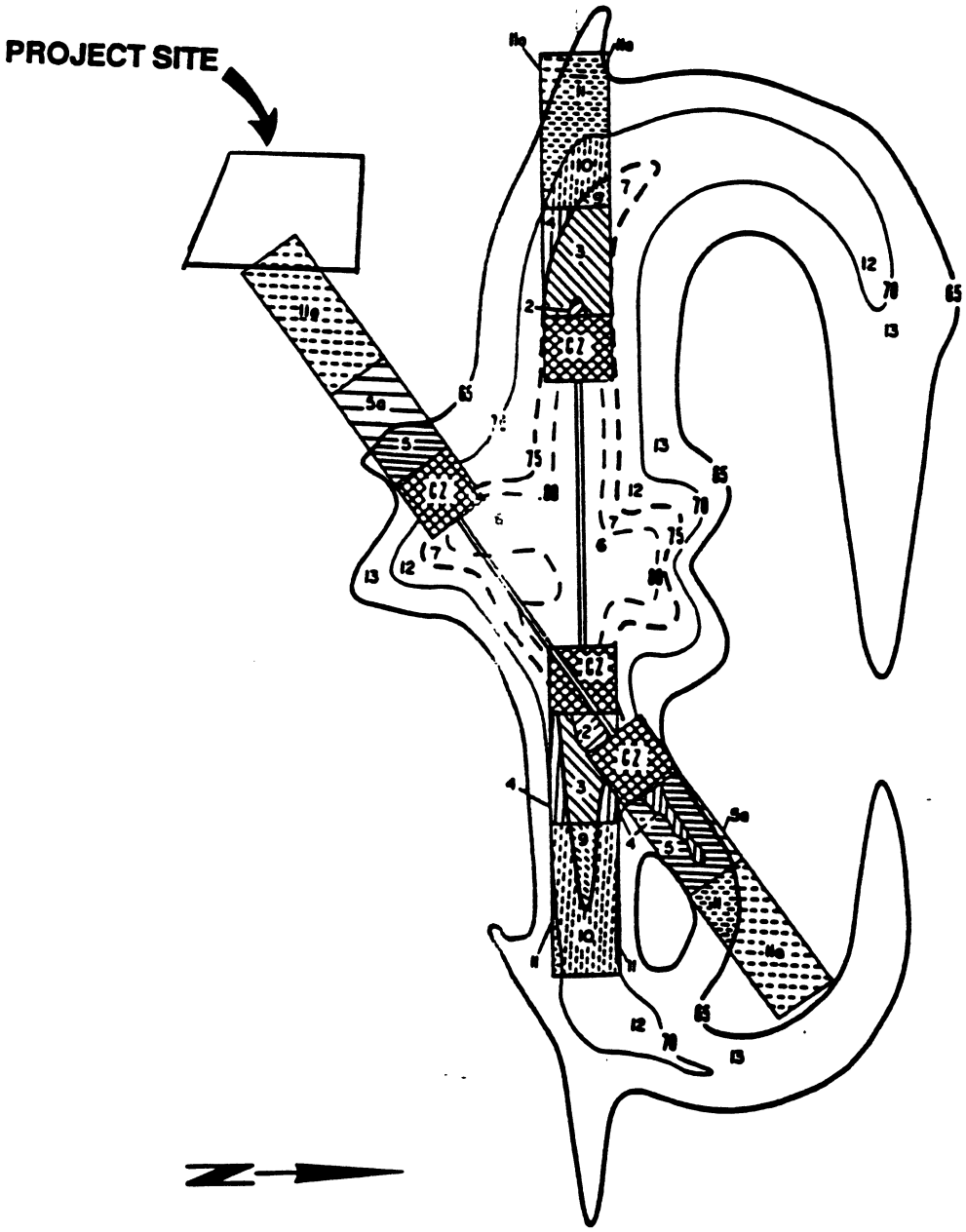


Exhibit - 6

AF PLANT-42 AIRCRAFT CONTOURS

MESTRE GREVE ASSOCIATES

N1 All residential lots and dwellings shall be sound attenuated against present and projected noise, which shall be the sum of all noise impacting the project, so as not to exceed an exterior standard of 65 dB CNEL in outdoor living areas and an interior standard of 45 dB CNEL in all habitable rooms. Evidence prepared under the supervision of acoustical consultant that these standards will be satisfied in a manner consistent with applicable zoning regulations shall be submitted as follows:

A. Prior to the recordation of a final tract/parcel map or prior to the issuance of Grading Permits, at the sole discretion of the County, an Acoustical Analysis Report shall be submitted to the Manager, Development Services Division, for approval. The report shall describe in detail the exterior noise environment and preliminary mitigation measures. Acoustical design features to achieve interior noise standards may be included in the report in which case it may also satisfy "B" below.

B. Prior to the issuance of any building permits, an acoustical analysis report describing the acoustical design features of the structures required to satisfy the exterior and interior noise standards shall be submitted to the Manager, Development Services Division for approval along with satisfactory evidence which indicates that the sound attenuation measures specified in the approved acoustical report(s) have been incorporated into the design of the project.

C. Prior to the issuance of any Certificates of Use and Occupancy, field testing in accordance with Title 25 regulations may be required by the Manager, Building Inspection Division, to verify compliance with STC and IIC design standards.

APPENDIX
Traffic Data Used to Calculate Noise Levels

Roadway	Link	Speed	ADT (in thousands) Existing	Existing w/Project	Future w/Project	Future w/o Project
AVENUE P						
	W. of 10th Street West	45	4.7	14.1	62.2	52.8
	5 th St. West to 3rd St.	45	14.2	34.1	33.8	13.9
	3rd St. to Sierra Hwy	45	-	27.7	48.7	-
	E. of Sierra Hwy	45	13.1	-	52.6	-
AVENUE P-8						
	10th St. W. to Street A	45	-	14.5	5.6	-
	Street A to 5th St. W	45	-	15.7	-	-
	5th St. W. to Division St.		-	12.7	30	-
	3rd St. to Sierra Hwy	45	0.8	14.4	22.4	8.8
AVENUE P-12						
	10th St. W. to Street A	45	-	8.1	-	-
AVENUE Q						
	5th St. to Division St.	45	1.5	4.7	28.2	25
	Division St. to 3rd St.	45	-	-	17.8	-
ELIZABETH LAKE ROAD						
	W. of 10th St. West	45	6.5	11.2	53	48.3
PALMDALE BOULEVARD						
	10th St. West to Street A	45	10.6	18.2	27.6	20
	Street A to 5th St. W.	45	10.6	18.2	23.9	16.3
	5th St. W. to Antelope Valley Fv	45	10.6	35.5	46.9	22
10TH STREET WEST						
	N. of Antelope Valley Fwy	45	8.1	17.5	44.3	34.9
	S. of Antelope Valley Fwy	45	-	-	65.7	-
	S. of Avenue P	45	9.7	42.3	79.2	46.6
	N. of Elizabeth Lake	45	9.7	15	51	45.7
	S. of Elizabeth Lake	45	2.9	3.6	37	36.3
ANTELOPE VALLEY FWY						
	W. of 10th St. W.	55	42	59.6	-	-
	Avenue P to Palmdale Blvd.	55	41	55.2	363.2	349
	S. of Palmdale Blvd.	55	40	70.5	229.2	198.7
5TH STREET WEST						
	Avenue P-8 to Avenue P-12	45	-	9.6	34.7	-
	Avenue P-12 to Avenue Q	45	-	11.9	55	-
	S. of Avenue Q	45	-	18.3	36.9	-
	S. of Elizabeth Lake	45	1	2.7	24.8	23.1
DIVISION STREET						
	Avenue P to Avenue P-8	45	-	6.1	37.5	-
	Avenue P-8 to Avenue Q	45	-	10.9	18.3	-
	Avenue Q to Palmdale Blvd.	45	-	10.3	24.2	-
	S. of Palmdale Blvd.	45	4.4	-	-	-
SIERRA HIGHWAY						-
	N. of Avenue P	50	22.8	-	53.8	-
	Avenue P to Avenue P-8	50	-	-	39.8	-
	Avenue P-8 to Palmdale Blvd.	50	16.6	-	-	-

G. Hazardous Materials Assessment

Engineers, Geologists &
Environmental Specialists

2500 Wilshire Blvd., Suite 1111
Los Angeles, California 90057

Fax 213 389-5062
213 389-3003

Schaefer Dixon Associates

Schaefer J. Dixon
Ellis J. Jones
Robert J. Lynn
Paul Davis
James J. Weaver
William J. Monahan
E.J. Parrish

John J. Butelo
Joseph F. Montagna
Bernard J. LaRue
Kyle D. Emerson
Michael L. Leonard
Timothy S. Simpson

90-123C

December 28, 1989

Robert Bein, William Frost & Associates
14725 Alton Parkway
Irvine, California 92718

Attention: Kevin Thomas
Project Manager

Subject: **Preliminary Environmental Assessment**
Freeway Business Park Specific Plan
Palmdale, California

Gentlemen:

This letter presents the findings of our environmental assessment at the subject site. The objective of this assessment was to evaluate (1) if documented present and historic use of the site has resulted in a potential for the presence of hazardous wastes and (2) the general geologic-hydrogeologic conditions at the site based upon published soils, geologic and hydrologic data in our files. This evaluation was performed in general accordance with our agreement-proposal dated October 2, 1989. This report has been prepared solely for use by RBF and the City of Palmdale to assess the potential for the presence of hazardous materials on the site. This report may not contain sufficient information for other uses or for purposes of other parties.

If you should have any questions or if we can be of further assistance, please do not hesitate to contact the undersigned.

Respectfully submitted,

SCHAEFER DIXON ASSOCIATES, INC.

Gary Pestana
Staff Geologist

for Michael L. Leonard, Sr.
Associate

GP/MLL:tmb/38LM

Distribution: (3) Addressee

Enclosures: Figure 1 - Site Vicinity Map
Figure 2 - Location Map
Figure 3 - Land Use Map
Appendix A - Questionnaire (Sample)

ENVIRONMENTAL ASSESSMENT REPORT

FREEWAY BUSINESS PARK SPECIFIC PLAN

1.0 SCOPE OF WORK

To accomplish the objectives stated in our proposal dated October 2, 1989, we have performed the following scope of work:

1.1 Site Reconnaissance

Representatives of this office performed a reconnaissance at the site on December 12, 1989 to assess present site conditions.

1.2 Review of Published Hydrogeologic and Geologic Data

The following published hydrogeologic and geologic data were reviewed:

Los Angeles County - Department of Public Works, Hydrologic Report 1980-1987, prepared by Hydraulic/Water Conservation Division, November 1988.

Department of Water Resources, 1975. Hydrologic Data: 1975, Volume V; Southern California. Bulletin 130-75, 487 p.

Geologic Maps of California, Los Angeles Sheet, California Division of Mines and Geology, 1969.

Preliminary Map Showing Valley-Fill Areas and Source, Occurrence, and Movement of Groundwater in the Western Part of the Mojave Desert Region, California by Fred Kunkel, U.S. Geologic Survey, 1962.

1.3 Review of Available Aerial Photographs

The following aerial photographs were reviewed:

Date	Spence Collection Series #	Scale
07/03/85	*WAC-85CA:16-257	1"=2000'
02/24/71	AV-21	1"=2000'
11/24/69	AV-69	1"=2000'
11/29/67	E-19804	1"=2000'

Source: Spence Photographic Collection, UCLA
* SDA files

1.4 Review Listing of Hazardous Waste Generator Sites Provided by the City of Palmdale

We reviewed a listing provided by Sharon McCauhey from the City of Palmdale of hazardous waste generator sites within the City limits.

1.5 Compilation of Questionnaire Responses

Responses to a questionnaire mailed to 54 property owners were compiled.

1.6 Compilation and Presentation of Data and Formulation of Conclusions

The data obtained from the tasks described above was compiled and evaluated. Based upon this evaluation, our conclusions regarding the potential for the presence of contamination on site are presented in this report.

1.7 Limitations

Our conclusions were based solely upon the level of effort described in the above tasks. Field exploration or laboratory testing was not performed in conjunction with this assessment. Accordingly, the conclusions in this report represent our judgment as to the potential for the presence of hazardous wastes at the site.

If it is deemed necessary or required to determine the actual absence or presence of hazardous wastes at the site, a more comprehensive investigation including subsurface exploration and sampling and laboratory testing should be performed.

2.0 FINDINGS

2.1 Site Conditions

The following paragraphs present the information obtained relative to site surface conditions, subsurface soils, geologic and hydrogeologic data and historic land use.

2.1.1 Surface Conditions

The study area is comprised of approximately 960 acres of principally undeveloped land divided into 66 parcels owned by 54 separate landowners. These landowners were identified and made known to SDA by the City of Palmdale. The location of the study area is shown on Figure 2, Location Map. In order to aid in assessing present conditions, SDA conducted a site reconnaissance and sent a questionnaire to each property owner (see Section 2.1.5).

A site reconnaissance of the study area was conducted on December 12, 1989 by a member of SDA's staff and features observed in the study area were recorded on recent aerial photographs.

The study area consists predominantly of undeveloped land, with several gas stations, motels, shopping centers and fast food restaurants. The latter accounts for approximately 10 percent of the study area, the former approximately 90 percent. No discernible evidence of hazardous waste contamination was observed on developed portions of the subject site.

In certain undeveloped areas, illegal dumping of domestic trash and construction debris has occurred. Areas showing considerable material of this type are noted on Figure 3, Land Use Map. Limited quantities of potentially hazardous wastes were noted in dumped materials located 400 feet south of the intersection of Palmdale Boulevard and Division Street. This waste includes buried asphalt pavement and automobile tires.

This reconnaissance did not allow inspection of individual developed facilities. Observations were limited to what could be seen from public roadways. Therefore, the surface condition in and around various buildings could not be determined. There were no observed above ground storage tanks onsite; however, two above ground water tanks were observed on the southwest corner of Avenue P and 10th Street West, just outside the subject property.

Three service stations are located within the subject property, two east of the Antelope Valley Freeway and one west (see Land Use Map, Figure 3). Interviews with the Palmdale Development Company (land owner) indicate that all underground fuel tanks are in compliance with State and Federal regulations concerning underground tank use.

Development within the immediate area (within 500 feet) is almost exclusively residential to the north, west and east. Areas to the south consists of open land and commercial businesses.

2.1.2 Subsurface Conditions

The geology of the Palmdale area is a complex combination of igneous, metamorphic, volcanic, and sedimentary rocks. In general, the stratigraphic sequence in the Palmdale area is comprised of unconsolidated alluvial materials underlain by moderately to highly consolidated sedimentary units.

The bedrock or basement material is primarily undifferentiated granitic and metamorphic rock. These units are slightly to moderately fractured and on average have very low permeability values. Secondary permeability from the fracturing is present in isolated areas of limited extent. Features present in the bedrock formed by fault activity act as barriers for groundwater movement across the features. In the Antelope Valley, the bedrock formed a large, bowl-shaped depression, with the lowest point being north of Palmdale.

Overlying the bedrock are consolidated sedimentary units of marine and terrestrial origin. These units are primarily sandstone and conglomerates, with some shale layers. These rocks are moderately to well cemented and are of low permeability. Included in this section of rocks are layers of volcanic ash and flow deposits. These volcanics are composed of both rhyolite and basalt, and are present as welded ash deposits, flows, and breccias. Areal extent of these volcanics varies with the contact relief and is not precisely known.

The uppermost soils in the Palmdale area are composed of unconsolidated alluvial materials. These materials are predominantly poorly sorted (well graded) sands and gravels, silts, and clays. These soils are part of the alluvial fan deposits present in the Antelope Valley.

Depth to groundwater has increased steadily over the past 40 years. Currently, groundwater flows to the northwest at depths greater than 300 feet below land surface.

2.1.3 Historic Land Use

Our research included a review by our personnel on November 10, 1989 of aerial photographs from the Spence Photographic Collection at the University of California, Los Angeles. The collection spans a time period from 1920-1970. Additional photographs were reviewed from SDA files. The site location was well covered from 1967 to 1971 with an additional photo in 1985. Based on these aerial photographs, the subject area was essentially undeveloped through 1971 with the exception of three structures west of the Antelope Valley Freeway on Palmdale Boulevard. The 1985 photo indicated a large portion of current site development had been completed.

2.1.4 Listing of Hazardous Waste Generator Sites Provided by City of Palmdale

Site: Palmdale Regional Airport
Address: 39441 North 25th Street East
City: Palmdale
Data Source: WRCB

Site: Lockheed-California Company
Address: 2500 East Avenue M, Site 2, AFP 42
City: Palmdale
Data Source: WRCB

Site: Mobil Service Station #10-MNE
Address: 110 North Palmdale
City: Palmdale
Data Source: WRCB

The Mobil Service #10-MNE, located at the intersection of Palmdale Boulevard and Division Street is within one mile of the subject site. A review of file #I-9415-4A from Los Angeles County Department of Public Works Waste Management Division indicated an underground waste oil tank had leaked in early 1986. However, this tank was removed, along with associated contaminated residue, and replaced with a new tank. Additionally, the three remaining underground fuel tanks were also removed and replaced with new tanks. All tanks were subsequently leak tested and found to be tight.

The remaining listed sites are not within a one mile radius of the subject site.

2.1.5 Environmental Assessment Questionnaires

Questionnaires asking for pertinent environmental information were mailed to the 54 landowners identified by the City of Palmdale. A copy of this questionnaire is attached as Appendix A. The questionnaire was mailed on November 19, 1989. As of December 2, 1989 only 17 responses have been received. Responses to questions were generally negative. Exceptions are as noted below. Land use indicated in the responses was predominantly undeveloped open land.

A response from the Palmdale Development Company indicated underground gasoline tanks at the Shell, Chevron and Arco service stations (see Land Use Map, Figure 3). Interviews with Palmdale Development Company indicated all underground fuel tanks to be in compliance with State and Federal regulations concerning underground tank use.

The remainder of the responses indicated no further underground or above ground tank locations. Additionally, no active irrigation or drinking wells were identified in the responses.

None of the responses suggest significant potential for hazardous waste contamination.

2.2 Review Available Public Records

Available public records were reviewed to determine if sites within one mile are listed therein as being contaminated and the nature of such contamination. The following paragraphs present the records reviewed and our findings.

2.2.1 EPA Listed Sites

1. EPA National Priorities (NPL) Site: None

2. EPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Site: None

2.2.2 State Listed Sites

1. Site: Southern Pacific - Palmdale
   Address: 38021 Sierra Highway
   City: Palmdale
   Source: WRCB
   Case Type: Tank Leak
   Misc: Only soil has been affected

2.2.3 County Landfill Sites

1. Solid Waste Information System (SWIS) Inventory of Landfills: None

2.3 Other Potential Sources of Hazardous Waste

No other potential sources of hazardous waste were indicated in the information reviewed during our study.

3.0 CONCLUSIONS

3.1 General

Based upon the scope of work described above and subject to the limitations thereof, the following paragraphs present our conclusions relative to the potential for the presence of hazardous materials at the site.

3.2 Present Site Conditions

No readily discernible evidence of significant hazardous waste contamination was observed during our reconnaissance of the study area. However, this reconnaissance, for reasons previously stated, was limited with respect to identified onsite structures.

3.3 Historic Land Use

Review of aerial photographs revealed no direct evidence of land use practices with the potential to result in hazardous waste contamination. Since the area has been primarily open undeveloped land in the past, it is unlikely the subject site has been adversely affected by previous site usage.

3.4 Questionnaire Results

Approximately 30 percent of the landowners responded to the questionnaire. Very few indicated the existence of storage tanks and none indicated dumping areas or drum storage. The site reconnaissance generally corroborates these findings.

3.5 Public Records

The Hazardous Waste and Substances Sites (Cortese) list, prepared by the State Office of Planning Research includes one site that falls within the one-mile radius of the subject

property. The site is located at 38021 Sierra Highway. According to the SWRCB, Underground Storage Tank Division, a gasoline leak was reported June 22, 1988, which caused soil contamination only. The SWRCB indicated no further action is required.

3.6 Other Potential Sources of Hazardous Materials

No other sources of hazardous waste were indicated in the information reviewed during our study.

4.0 RECOMMENDATIONS

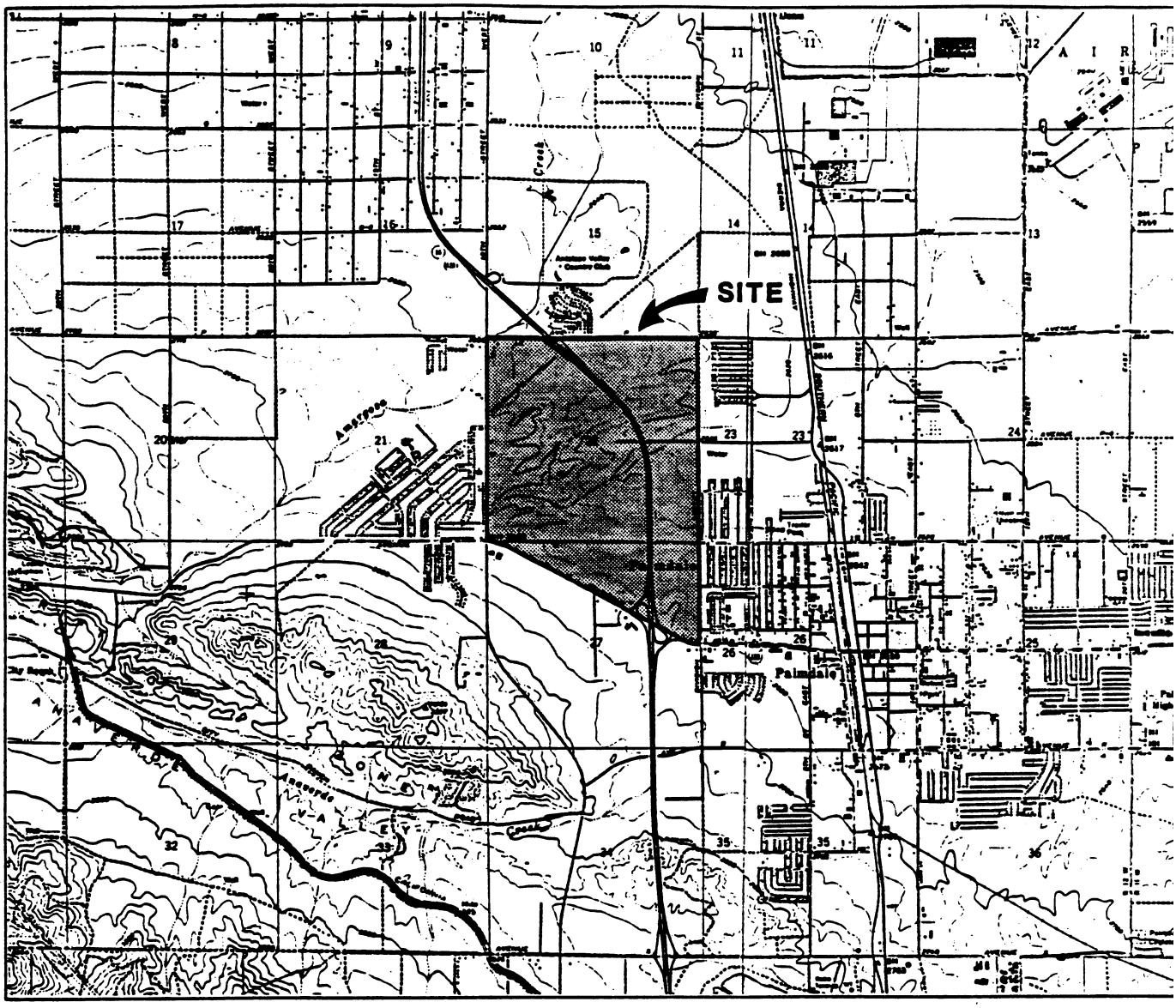
In view of the above conclusions and findings, we are of the opinion that the subject site does not present an undue risk in terms of the potential presence of a contamination problem resulting from hazardous materials. We do however recommend that 1) additional information on current conditions of underground storage tanks at the Arco, Shell and Chevron service stations be obtained and reviewed (such as operating permits, reports of investigations/testing owners have performed, etc.), and 2) future grading plans and specifications should include a clause regarding observation, testing (if necessary) and proper disposal of any hazardous materials encountered in the trash/debris dumping areas.

5.0 CLOSURE

The findings and conclusions presented in this assessment were based solely upon the scope of work described above, upon our interpretation of the information described above, and are intended to address the potential for the presence of hazardous materials on the site at the time of performance of this evaluation.

This report should be used solely for its intended purpose and within the limitations of our assessment. Prior to use for other than its intended purpose or beyond the limitations described herein, sufficient and thorough studies should be performed to conform the findings presented in this report.

Changes in conditions at a property can occur with the passage of time. In addition, the broadening of knowledge or legislative or regulatory actions relative to hazardous materials could result in varying standards concerning the presence of hazardous materials at the site.



NOTE: BASE MAP FROM USGS 7½ MINUTE PALMDALE, CALIFORNIA (1958, REVISED 1974), AND RITTER RIDGE, CALIFORNIA (1958, PHOTOREVISED 1974), QUADRANGLES.

NORTH

0 2000 4000 6000 FEET

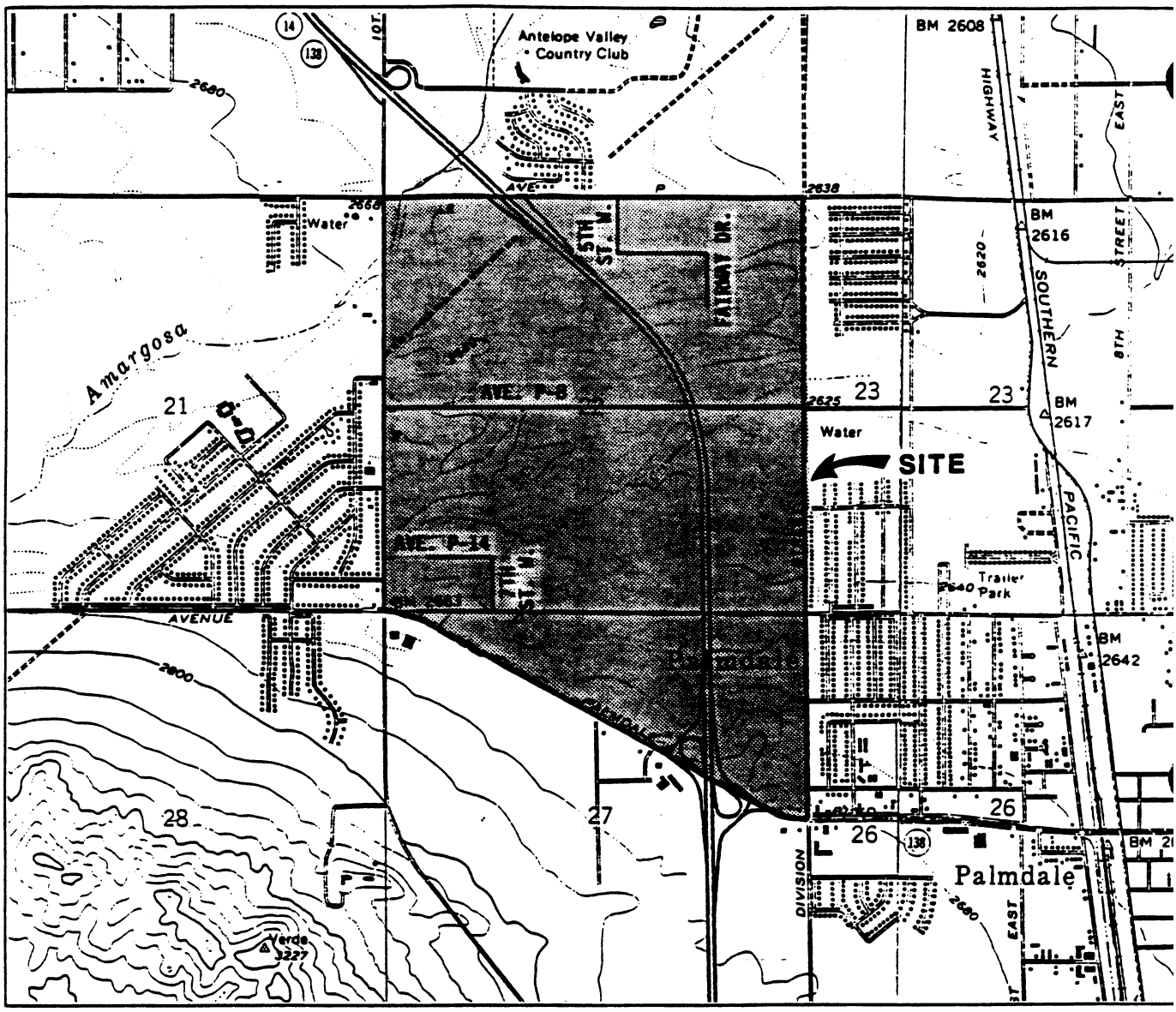
SCALE

Project No. 90-123C Date 12/89

Site Vicinity Map

Figure

1



NOTE: BASE MAP FROM USGS 7½ MINUTE PALMDALE, CALIFORNIA (1958, REVISED 1974), AND RITTER RIDGE, CALIFORNIA (1958, PHOTOREVISED 1974), QUADRANGLES.

NORTH

0 1000 2000 3000 FEET

SCALE

Project No. 90-123C Date 12/89

Location Map

Figure 2

H. Cultural Resources Assessment

PALEONTOLOGICAL RESOURCE ASSESSMENT
FREEWAY BUSINESS PARK,
CITY OF PALMDALE
LOS ANGELES COUNTY, CALIFORNIA

PREPARED FOR:

ROBERT BEIN, WILLIAM FROST, AND ASSOCIATES
14725 ALTON PARKWAY
IRVINE, CALIFORNIA 92718

PREPARED BY:

RMW PALEO ASSOCIATES
23352 MADERO, SUITE J
MISSION VIEJO, CALIFORNIA 92691

(714) 770-8042
FAX (714) 458-9058

AUTHOR:

FRANCES M. GOVEAN
CERTIFIED PALEONTOLOGIST

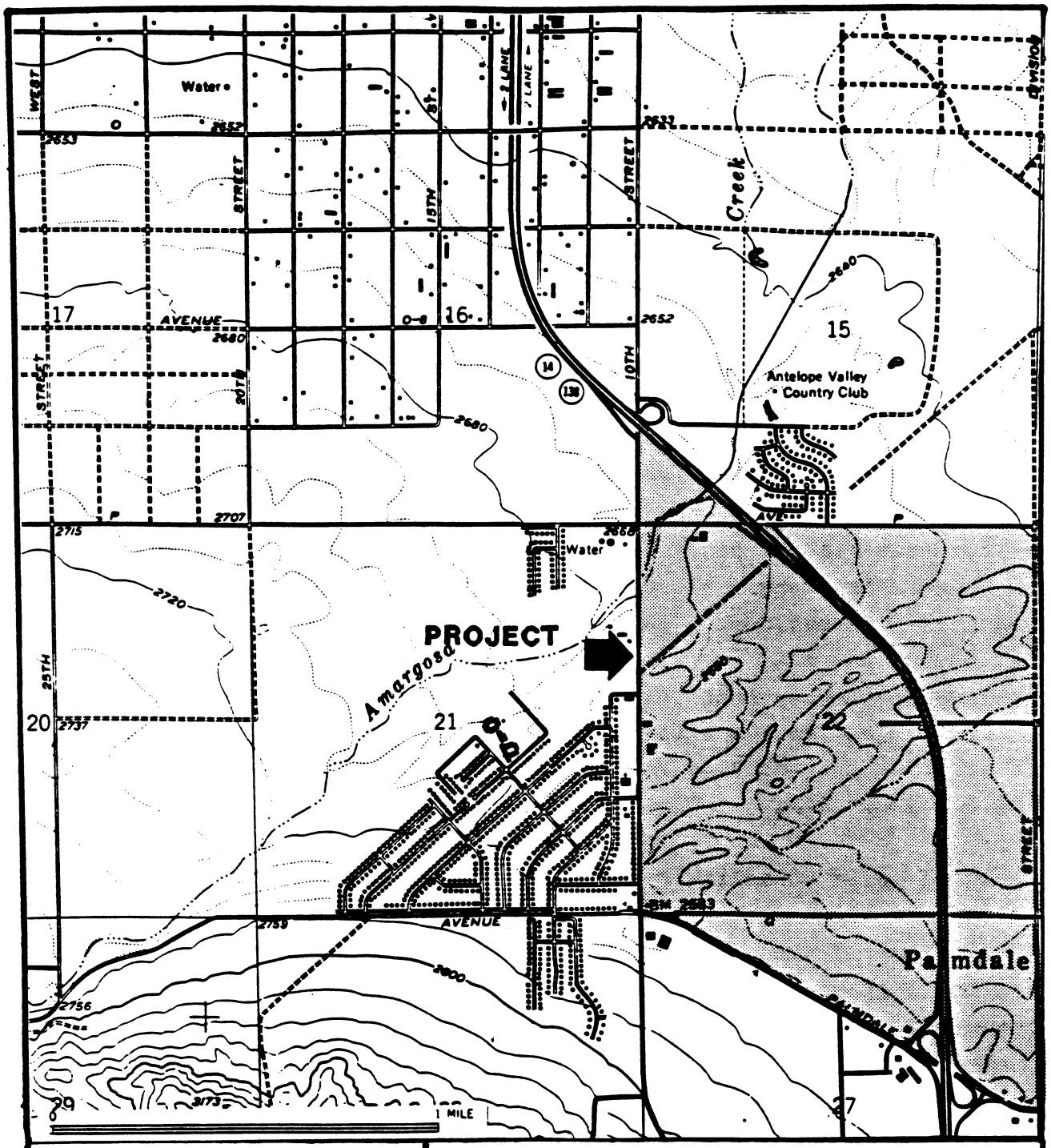
15 JANUARY 1990

INTRODUCTION

This report presents the results of a paleontologic resource assessment of the Freeway Business Park Project, City of Palmdale, Los Angeles County, California (Index Map). This project consists of approximately 960 acres that lie north of Palmdale Avenue, south of P Avenue, west of Tenth Street West and east of Division Street. A triangular parcel of land, bounded by P Avenue, the Antelope Freeway (Highway 14) and Tenth Street West also is included. Pertinent paleontologic/geologic literature was reviewed for this study. A records search was conducted at the San Bernardino County Museum and the Los Angeles County Museum of Natural History. A field survey of the project was conducted January 4 and 5, 1990.

FIELD SURVEY

The study parcel is covered by materials ranging from natural and man-made rock exposures to compacted fill. Part of the southern half of the area has been taken to finish grade with both compacted fill and cut exposures. On the northwest part of the project, the Amargosa River drainage has natural rock exposures produced by erosion. A large diameter pipe currently is being laid parallel and west of the Antelope Freeway and following parallel along Avenue P. The trench is approximately 25 to 30 feet in depth. Isolated buildings dot the project. The remainder of the area is undisturbed ground with desert vegetation. Refuse, both old and recent, appears sporadically across the project. The primary areas where rock exposures were studied lay in the pipeline trenches, cut exposures on the graded area and in the river drainage.



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(714) 770—8042

INDEX MAP.

FREEWAY BUSINESS PARK PROJECT.

CITY OF PALMDALE,

LOS ANGELES COUNTY, CA.

STRATIGRAPHY AND PALEONTOLOGY

The project area is underlain primarily by Pleistocene alluvium (approximately 1.8 million to 10,000 years Before Present) and a thin veneer of Recent alluvium. Recent alluvium is too young geologically to contain significant fossils in situ. On rare occasions, fossils from older formations can weather out and be incorporated into Recent deposits. The only bone materials observed in the Recent alluvium were modern in origin. These bones were situated on the southeast corner of the property and showed evidence of butchering with steel tools.

Geologic mapping by Dibblee (1967) shows Pleistocene alluvium underlying most of the parcel. Reynolds (Written Comm., 1990) writes that red paleosols with caliche horizons are indicative of the older Pleistocene alluvium in this part of Palmdale. Reynolds (Written Comm., 1990) suggests that this intensity of weathering and soil profile development may "correspond to the soils described by Ponti (1985)." Therefore the older alluvium on the project may be equivalent in age to the Tylerhorse series of soils of the Antelope Valley which are postulated to be 500,000 years B.P.

Dark red soils underlain by dark gray brown sediments were exposed in the pipe trenches (trench depth - approximately 25' - 30'). Some of these same sediments with bands of caliche were exposed further south on the graded area of the parcel. No fossils were observed on the field reconnaissance.

Pleistocene alluvial sediments in the western Mojave Desert, the City of Palmdale area, and Leona Valley have produced a wide variety of vertebrates and invertebrates. Scientific publications by Jefferson (1989) and Reynolds (1989) list and discuss many of these taxa and their importance. Additional fossil localities have been documented in paleontologic resource

management plans and salvage reports from development projects (Reynolds, 1988; Govean, 1990 in progress). The following combined vertebrate and invertebrate list of taxa collected from these older Pleistocene sediments are from Reynolds (1989) with additions from Govean (1990 in progress).

?*Ammospermophilus* sp.	antelope ground squirrel
Perognathus sp.	pocket mouse
?*Chaetodippus* sp.	spiny pocket mouse
Anodonta sp.	fresh water mussel
Succinea sp.	fresh water snail
Gopherus sp.	tortoise
Lepus sp.	jack rabbit
Sylvilagus sp.	cotton tail rabbit
Dipodomys sp.	kangaroo rat
Microtus sp. cf. *M. californicus*	vole
Neotoma (*Teanopus*) "*prefuscipes*"	extinct pack rat
Neotoma (*Teanopus*) "*prealbigula*"	extinct pack rat
Peromyscus sp. cf. *P. longimembris*	extinct deer mouse
Peromyscus sp.	deer mouse
Prodipodomys idahoensis	extinct ancestral kangaroo rat
Sigmodon sp.	cotton rat
Thomomys sp.	pocket gopher
Antilocapridae	pronghorn
Camelidae	extinct camels
Hemiauchenia sp.	extinct llama
Equus sp. (large)	extinct large horse
Mammut sp.	extinct mastodon
Mammuthus sp.	extinct mammoth

Jefferson (1989) has published a composite faunal list that includes snails, crustaceans, fish, mammals, birds, and reptiles.

Physa sp.	snail
Gastropoda sp. a	snail
Gastropoda sp. b	snail
Ostracoda	ostracodes
Osteichthyes	fish
Reptilia	reptiles
Aves	birds
Homo sapiens	human
Lepus sp.	jack rabbit
Sylvilagus sp.	cottontail rabbit
Dipodomys sp.	kangaroo rat
Neotoma sp.	pack rat
?*Mammuthus*	extinct mammoth
Equus sp.	extinct horse
?*Camelops*	extinct camel
cf. *Hemiauchenia*	extinct llama
?*Antilocapra*	pronghorn

PALEONTOLOGIC SENSITIVITIES

Older alluvium both in the sphere of influence of the City of Palmdale and elsewhere in the Western Mojave Desert has produced significant vertebrate and invertebrate fossils.

These fossils have proven useful in (1) determining the amounts and rates of offset along faults such as the San Andreas Fault, (2) aiding in our understanding of the terrestrial environments that once existed in this part of southern California and (3) learning what animals lived, evolved and/or became extinct in the Pleistocene.

The history of significant fossil finds in sediments of this age and type strongly indicates that the older Pleistocene alluvium on the project has the potential for producing fossils. Therefore these sediments are rated with a High paleontologic sensitivity. Grading and trenching activities could expose fossils but these same activities would also destroy them. This would be an adverse impact on any paleontological resources present on the project.

The Recent alluvium is too young geologically to contain scientifically significant fossils in situ. Any older fossil that was reworked into these young sediments would lack contextual stratigraphic data and therefore would be correspondingly less valuable to science. For these reasons the Recent alluvium is rated with a Low paleontologic sensitivity.

To reduce the adverse impacts of development on any non-renewable paleontologic resources on the study parcel to an acceptable level, the following mitigation measures are recommended.

MITIGATION MEASURES

The following mitigation measures have proven useful in protecting the paleontologic resources of sites while allowing the timely completion of projects in the southern California area.

(1) A qualified paleontologist shall be retained to formulate and carry out a mitigation program for the site.

(2) This paleontologist shall have the power to temporarily direct or divert operations to allow evaluation, and if necessary, salvage any exposed fossils.

(3) Paleontologic monitoring efforts shall be based on the sensitivity of the units being excavated, the numbers of spreads in operation at one time, and the amount of material (in cubic yards) being moved.

(4) Geologic units of High Sensitivity shall be monitored on a full-time basis. If more than one spread is being run simultaneously and/or more than 25,000 cubic yards of earth is to be graded per day, then additional monitors will be needed.

(5) Geologic units of Low Sensitivity require only periodic visits.

(6) Matrix samples for microvertebrate screening shall be collected and processed. If microvertebrates are present, up to 6,000 pounds of matrix will need to be sampled. This material can be placed to one side of the active grading so as not to delay the project. Screening may be done on site.

(7) All fossils collected need to be prepared to the point of identification. These remains should be donated to an institution with an educational and/or research interest in the materials and a retrievable storage system, such as the Los Angeles County Musuem of Natural History.

(8) A final report summarizing findings, including an itemized inventory, contextual stratigraphic data, and photographs shall accompany the fossils to the designated repository with an additional copy sent to the appropriate Lead Agency.

If you have any questions, or if we can be of further assistance, please contact us at the above address.

Respectfully,

Frances M. Govean

Frances M. Govean
Certified Paleontologist

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INDIVIDUALS CONTACTED

Mr. Robert Reynolds, Curator, San Bernardino County Museum (714) 798-8570.

Dr. J. D. Stewart, Assistant Curator of Vertebrate Paleontology, Los Angeles County Museum of Natural History. (213) 744-3318.

Dr. David Whistler, Curator of Vertebrate Paleontology, Los Angeles County Museum of Natural History (213) 744-3310.

Cultural Resources Reconnaissance of The Freeway Business Park, Palmdale, 960 Acres in Los Angeles County, California

PREPARED FOR:

Robert Bein, William Frost, and Associates
14725 Alton Parkway
Irvine, California 92718

PREPARED BY:

RMW Paleo Associates
23352 Madero, Suite J
Mission Viejo, California 92691
(714) 770-8042
FAX (714) 458-9058
RMW Project Number 89-1191

AUTHOR:
Kenneth M. Becker

PRINCIPAL INVESTIGATOR:
Ronald M. Bissell

15 January 1990

MANAGEMENT SUMMARY

A literature review and field reconnaissance of the Freeway Business Park study area determined that historic archaeological site CA-LAn-1554-H lies within its boundaries. No other historic or any prehistoric sites are known to exist on the property.

It is recommended that the second of the two mitigation measures outlined by the Northridge Center For Public Archaeology, California State University, Northridge be implemented to properly manage the deposit at CA-LAn-1554-H. The recommended procedure is a program of archaeological monitoring and associated data recovery, as required. In addition, it is recommended that the site be subjected to a surface collection of any diagnostic artifacts prior to ground disturbing activities.

It is important to note that archaeological site locations are confidential. This report contains such locations. This report is not to be released to other than client or agency personnel who have demonstrated a project related need for the information.

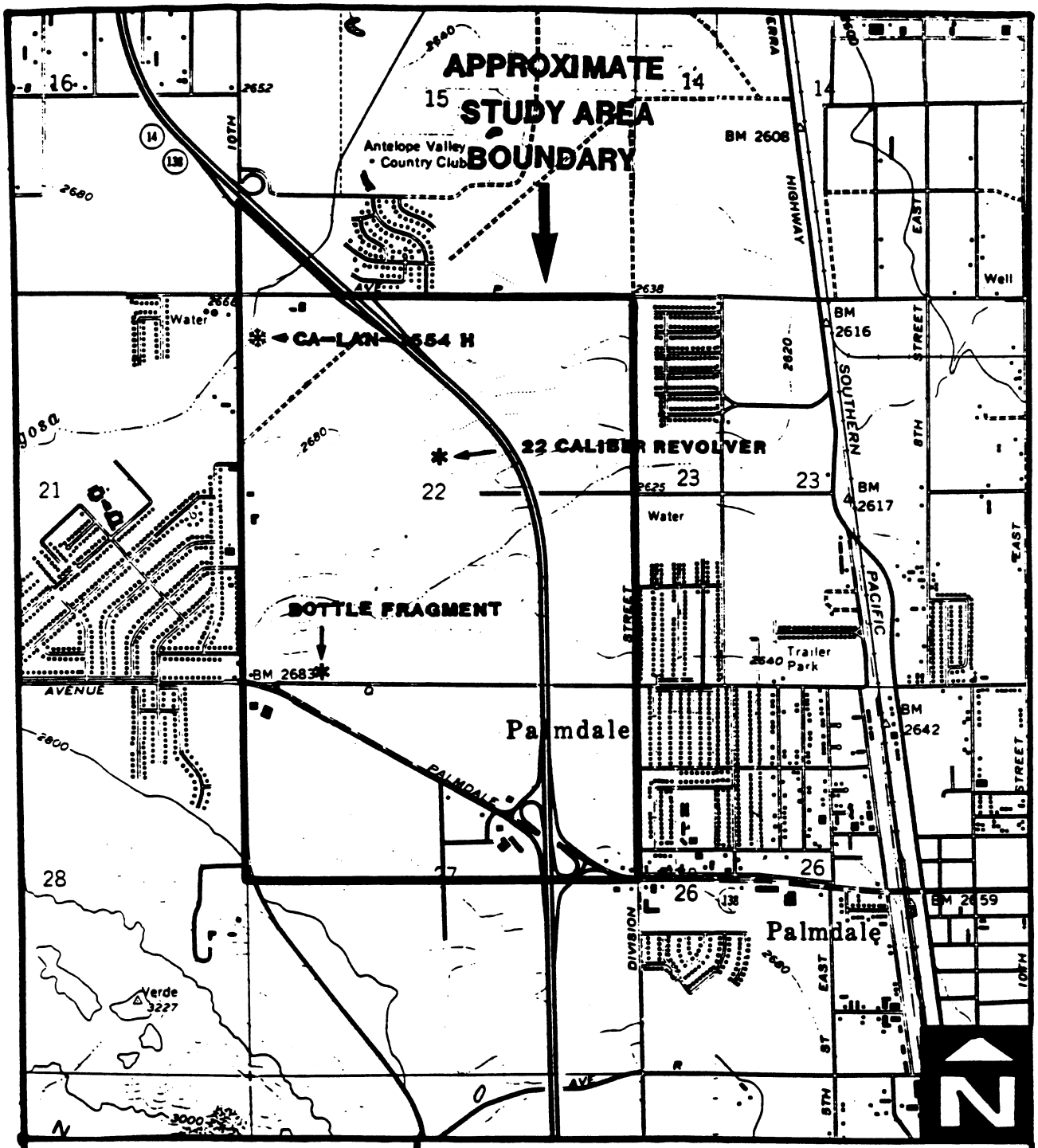
INTRODUCTION

This report represents the results of RMW Paleo Associates cultural resources reconnaissance of the Freeway Business Park, Palmdale, Los Angeles County, California. The reconnaissance project consisted of both a review of the literature pertinent to the project and a field inspection of the surface of the parcel. The field examination was conducted by Kenneth Becker, Cliff Hopf and Juanita Shinn. The literature review was completed by Becker. Ronald Bissell served as Principal Investigator. All field crew members hold Bachelor of Arts degrees; Becker in Anthropology, Hopf in Sociology and Shinn in History. Bissell holds a Master of Arts Degree in Anthropology and is certified as a Field Archaeologist by the Society of Professional Archaeologists. All persons involved are experienced archaeologists.

PHYSICAL SETTING

The Freeway Business Park study area consists of approximately 960 acres of land located in the southern Antelope Valley. It is bounded on the west by 10th Street West and on the east by Division Street. The southern boundary is Avenue Q-8 while most of the northern boundary is Avenue P. A small triangular portion extends north of Avenue P and is enclosed by 10th Street West and the Antelope Valley Freeway. Several streets traverse the property, most notably the Antelope Valley Freeway, Avenue P-8, Avenue Q and Palmdale Boulevard. The approximate boundary of the study area is shown on the Index Map which appears on page 2 of this report.

Physiographically, the study area consists of a broad alluvial plain which gently rises to the south. A very subtle northeasterly trending ridge runs diagonally across the northern



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23352 MADERO, SUITE J
MISSION VIEJO, CA 92691
(714) 770-8042

Index Map: Portions of USGS Quadrangles Ritter Ridge, Calif. 1958. Photorevised 1974. and Palmdale, Calif. 1958. Photorevised 1974.

half of the project. The elevation ranges from a high of 853 meters in the south to a low of 805 meters in the north. An unnamed drainage runs diagonally across the property parallel to the southeastern edge of the ridge described above. Amargosa Creek runs across the extreme northwestern corner of the property.

Geologically, the surface of the study area consists of alluvial materials. The soil is predominantly medium grained sand mixed with loam. Concentrations of granitic and metamorphic cobbles and pebbles are found on areas of higher elevation. A few of these cobbles are also found throughout the property.

The vegetation found in the study area consists of a typical range of High Desert Scrub. Included in this floral zone are Sage, Juniper, Creosote and Joshua Trees. Many introduced species are found bordering the structures present on the property. Some expanses of introduced grasses are also evident throughout the study area.

CULTURAL SETTING

Numerous archaeological sites are known to exist in the local region, but excavation and study of these deposits has been quite limited. Because of this, a complete and reliable local chronology has yet to be developed. Furthermore, the little that is known is subject to modification as new information becomes available.

Gumerman (1986) describes two prehistoric eras. The earliest is known as the Rhyolite Tradition and spans the period from about 4000 B.C. to 2000 B.C. The Rhyolite Tradition is characterized by crude knives, choppers, scrapers, cores and some milling stones, all constructed of locally available lithic materials.

The Late Prehistoric Period has been locally dated from about 250 B.C. to A.D. 1650. The Late Prehistoric is characterized by large permanent or semipermanent villages and smaller seasonal or special use camps. Small projectile points, varied ornaments,

milling equipment and human interments are characteristic of the Late Prehistoric. There is much evidence of trade during the Late Prehistoric. Many projectile points, as well as other tools are made of obsidian, a material which is not available locally. Beads and ornaments manufactured from Pacific Ocean shell are also common in local deposits. It is possible that trade may have been the major reason for a human presence in the area during the Late Prehistoric. Certainly, a group of people located in the immediate region could have controlled a major portion of the trade between the ocean and the interior.

The apparent hiatus between the Rhyolite and the Late Prehistoric may be real, or merely the result of limited excavation. Additional regional work will either provide a complete sequence or confirm the reality of the hiatus.

The lack of archaeological detail in the region extends into ethnographic times. The latest detailed work which purports to describe the California Indians is Volume 8 of the Smithsonian Handbook of North American Indians. A careful review of the maps accompanying the tribal descriptions in this work reveals that the Antelope Valley is not assigned to any particular tribal group. The Kitanemuk are located to the north (Blackburn and Bean, 1978), the Tataviam to the south and west (King and Blackburn, 1978), and the Serrano to the east and south (Bean and Smith, 1978). If the supposition that trade was the major reason for a human presence in the area during the Late Prehistoric is correct, it is probable that elements from all the above listed societies, and perhaps others, are to be found in the Antelope Valley.

There is some dispute regarding the identity of the first European to visit the area. Most sources (Palmdale News, 1986) state that Pedro Fages passed through the Antelope Valley in 1772 while searching for deserters from the Spanish army. However, some other sources (Schoeler, 1984) credit Padre Frey Francisco Garces as the first European to visit the Antelope Valley in 1776. The Garces expedition was quite remarkable because he was

traveling alone and was totally dependent on the hospitality and generosity of the local Indians.

Jedidiah Smith crossed the valley in 1826, as did Kit Carson, in 1829. Jim Bridger supposedly wintered in the valley in 1846. In 1857 a group of Mormons passed through the valley on their way to Salt Lake City. They felt that the growth on one local variety of yucca was pointing their way, so they named them Joshua trees in remembrance of the man who led the Israelites into the promised land. The name is, of course, still in use today.

However, there was no local permanent presence until the Southern Pacific railway arrived in the area in 1876. In 1884 about 60 Swiss and Germans arrived from Nebraska and Illinois and settled in an area about three kilometers southeast of the current downtown Palmdale. The settlement was known as Palmenthal in the mistaken belief that the Joshua trees were a variety of palm. The post office was opened in 1888 and in 1890 the settlement name was changed to Palmdale.

A growing shortage of water caused the original settlement to fail, but some people moved to the area around the present downtown and a new settlement was begun. Area growth was quite slow until the 1950s when the aerospace industry began. Palmdale was incorporated on 24 August 1962.

PRIOR CULTURAL RESOURCES RESEARCH

The records maintained at the Archaeological Information Center, University of California, Los Angeles (AICUCLA) were examined by the author on 14 December 1989. The records indicate that the majority of the study area was previously examined for cultural resources. A historic archaeological site has been recorded within the boundaries of the current project. Several other reconnaissance projects had been completed in the immediate vicinity. Two prehistoric archaeological sites were recorded within two kilometers of the study area.

CA-LAn-1554-H: This historic site is located in the northwestern corner of the property south of the junction of 10th Street West and Avenue P. It was recorded by Jim Pledger and Bruce Love on 8 April 1989. They described the site as a scatter of soldered cans, purple glass, square and round nails, chicken wire, barbed wire, and several brick fragments. There was an indication that some of the brick observed in the area was a portion of a walkway. The dirt roads which cross the property appear to be wagon roads rather than automobile. It is possible that the site is a historic homestead.

CA-LAn-875: This site was originally recorded on 25 October 1972 by Croasdale. It is located approximately two kilometers southwest of the current project. The site was described as sandy blowouts exposing bone, soapstone, agate, beads and manos.

CA-LAn-876: Located approximately two kilometers southwest of the current project and about 700 meters east southeast of CA-LAn-875, this site is described as dark soil with obsidian and agate flakes, burnt bone, broken manos, portable mortar with check marks, rhyolite flakes and soapstone. It was recorded on 25 October 1972 by Ted Duran.

As was previously noted, the majority of the study area had been previously examined for evidence of cultural resources. At least three separate reconnaissance projects have included portions of it.

The reconnaissance project which covered the most extensive portion of the current project was conducted by the Northridge Center For Public Archaeology, California State University, Northridge (NCFPA) in June 1989. During the course of their work, they did not identify any new archaeological deposits either historic or prehistoric. They did, however, visit site CA-LAn-1554-H in an attempt to more completely evaluate the site. Upon close inspection of the surface of the area by Richard Wessell of the NCFPA (1989), it became evident that most of the material on the site was the result of the, "Disposal of comparatively recent domestic and construction refuse." A few

isolated glass fragments may date to the late 19th century. However, the significance of such artifacts lies not only in their age but, more importantly, in the contextual relationship in which they exist. Wessell believed that the artifacts were deposited out of context and are, therefore, insignificant. He also observed the bricks which Pledger and Love thought might be a portion of a walkway. Wessell described them as a single course of dry laid bricks which were laid in a parallel fashion in an area of 3 feet by 4 feet. However, he could find no functional interpretation for this feature and felt that the lack of structural remains, non recent building materials and window glass made it unlikely that the site contains significant resources.

The NCFPA recommended two alternative resource evaluation plans (see Appendix for a complete copy of the NCFPA recommended mitigation measures):

1. Resource evaluation through pre-construction archaeological testing, or:

2. Archaeological monitoring and associated data recovery, as required.

In 1988 Leslie Mouriquand Blodgett completed a cultural resource reconnaissance of a portion of Amargosa Creek including the part which crosses the current study area. She observed nothing of archaeological significance within or near the boundary of the current project. It is important to note that only the channel bottom and sides were inspected, the raised banks on either side were not. It is therefore not surprising that she did not locate site CA-LAn-1554-H, even though it is adjacent to Amargosa Creek.

The third cultural resource reconnaissance project including portions of the current study area was completed by Michael Zander in 1986. He examined a strip approximately 30 meters wide halfway between the Antelope Valley Freeway and Division Street. The course of the reconnaissance entered the property at Palmdale Boulevard, continued north to a point approximately 200 meters

north of Avenue P-8, and then turned ninety degrees to the east and exited the property at Division street. Zander reported finding nothing of archaeological significance on or near the current study area.

Several other reconnaissance projects have been completed in the general vicinity. All of these produced negative results in terms of archaeological significance.

CURRENT PROJECT

The surface of the current study area was examined by the field crew on 18, 19, and 28 December 1989 and on 3 January 1990. The entire parcel was inspected using a traditional transect method of archaeological survey with transects spaced at approximately twenty meter intervals. Ground visibility was good with about eighty percent of the surface visible. Areas of current development and those areas previously subjected to mass grading were not inspected. Archaeological site CA-LAn-1554-H was also visited during the reconnaissance.

Surface disturbance within the study area ranged from minimal to profound. Several areas along Palmdale Boulevard, 10th Street West, Avenue Q and Avenue P have been developed. Several graded roads cross the property. The most notable of these are Palmdale Boulevard, the Antelope Valley Freeway, Avenue P-8, and Avenue Q. Several unimproved dirt roads also traverse the property. Additionally, an area of finished grade is located near the center of the property. A large trench has been excavated in the northwestern portion of the property, presumably for the installation of storm drains.

A large pit approximately 100 meters long by 50 meters wide is located north of Avenue P-8 just west of Division Street. Its original function is unknown. The pit has been used for dumping refuse for many years. The body of a late model sedan, as well as the frame of a motorcycle, were found in it.

Concentrations of refuse, mainly cans and bottles, are located throughout the property. The refuse piles are usually,

but not always, located adjacent to or near some sort of road. The materials comprising these trash deposits date primarily from the late 1950s to the present.

A single basal bottle fragment of purple glass with a patent date of 1913 was collected from an area approximately 50 meters north of Avenue Q and 300 meters east of 10th Street West. A close inspection of the immediate area revealed nothing else of an archaeological nature.

Examination of the area designated as site CA-LAn-1554-H established that the site appears as described by Wessell with two notable exceptions. First, a current trenching project cuts across the extreme northern boundary of the site. The trench itself may have missed the site but the material excavated has been piled on a portion of it. Second, the possible brick walkway described by Pledger, Love and Wessell could not be relocated. Several deposits of brick were encountered but they did not appear to be purposefully laid in a parallel fashion as described by Wessell. During a personal communication with Bruce Love (1990), he mentioned that he may have covered the walkway during his last visit to the site in order to protect it.

Artifacts observed at the site during the current project included chicken wire, broken pottery, amethyst glass fragments and hole-in-top cans. A variety of much more recent household refuse, including boots and pieces of an electric vacuum cleaner, was seen. Most of the material appears to have been dumped in discreet piles. Often refuse piles of obviously different ages are found in close proximity to each other. No building foundations or evidence of a structure of any kind could be located on the site.

An interesting isolated artifact was collected from an area approximately 200 meters north of Avenue P-8 and 100 meters west of the Antelope Valley Freeway. The artifact is a .22 caliber double action revolver manufactured by Iver and Johnson some time between 1952 and the present. It is a model 55A with a possible serial number of 57327. The cylinder has an eight shell

capacity. At the time of discovery seven shells were in the cylinder, five spent and two unfired. Interestingly, the two intact bullets showed signs that the firing pin did strike the bullets but for some reason they did not fire.

The revolver appeared to be in working order. The firing mechanism still worked and oil was evident on the internal components. The surface of the gun which had been in contact with the ground was quite rusted. Curiously, one side of the barrel appeared to have been filed with a coarse steel file. Also, the serial number appears to have been gouged out of the frame. The revolver was taken to the Los Angeles County Sheriff's Office in Lancaster.

DISCUSSION

The Freeway Business Park parcel lies in an area of some archaeological sensitivity. The Palmdale area has been the scene of historical use since at least the 1880s. The disposal of trash in and around the city appears to have taken the form of indiscriminate dumping in open areas. This pattern of refuse disposal is evident throughout the study area. The ages of the materials found ranges from the early 1900s to the present.

Archaeological materials are generally considered significant when there is some contextual relationship between the artifacts on a site and between a given artifact and the site as a whole. The basal bottle fragment patented in 1913, which was collected during the current project, is an isolated artifact and does not indicate the existence of an intact archaeological deposit. Its significance is therefore minimal. The .22 caliber revolver collected is not of great enough antiquity to be significant. The weapon was given to the proper authorities on the off chance it could aid in any current criminal investigations.

The significance of site CA-LAn-1554-H is ambiguous. The surface expression of the deposit seems to indicate that the materials found at the site were utilized elsewhere and subsequently discarded at their present locations. The lack

of building materials and structural foundations further increases the probability that CA-LAn-1554-H is a dump site. However, the existence of an old fence line segment consisting of barbed and chicken wires, coupled with the reported existence of a brick pathway, could indicate a possible habitation of the site. Although this seems to be the less likely of the two explanations for the origin of the archaeological deposit, it cannot be discounted completely. Furthermore, it is possible that the placement of more recent materials combined with the effects of erosional and eolian deposition has buried earlier deposits, especially those which might indicate human habitation of the site. It is necessary, therefore, that this cultural resource be properly mitigated.

Of the two mitigation plans outlined by the NCFPA in their report, the one which shows the most promise for exposing the true nature of the deposit, and which would allow for the collection of the most pertinent data, is the second of their recommendations, namely archaeological monitoring and associated data recovery, as required. In addition to this mitigation plan it would be prudent to complete a surface collection of any diagnostic artifacts evident at the site. The surface collection would provide two advantages. First, it would provide some insight into the age of the site in the event that no subsurface deposit is encountered during monitoring. Secondly, it would delineate approximate areas of sensitivity, thus allowing the monitoring archaeologist better control during the initial stages of grading. This would reduce or eliminate unnecessary damage to any intact deposit.

CONCLUSIONS

1. No prehistoric archaeological sites are known to exist within the boundaries of the study area.

2. Site CA-LAn-1554-H is a historic archaeological site of undetermined significance. Although the surface of the site does

not obviously indicate the existence of a subsurface deposit, such a deposit may exist.

3. An isolated basal bottle fragment with a patent date of 1913 was collected from the surface of the study area. It has little significance.

4. A .22 caliber revolver was collected from the surface of the study area. The date of manufacture of the weapon was between 1952 and the present. The weapon was given to the proper authorities. The recent manufacture of the gun precludes any archaeological significance.

RECOMMENDATIONS

1. Site CA-LAn-1554-H should be subjected to a surface collection. Subsequently, the initial stages of grading should be monitored by a professional archaeologist in the manner described in the Appendix of this report.

2. No further work needs to be done on the remainder of the property unless:

3. Material of an archaeological nature is encountered during grading. In this event, a professional archaeologist shall be retained to collect and document the archaeological deposit as quickly as is consistent with good archaeological practice. The archaeologist shall have the power to stop or redirect the construction in order to properly recover the artifactual material.

Kenneth M. Becker

Kenneth M. Becker
Archaeologist

Ronald M. Bissell

Ronald M. Bissell
Principal Investigator

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1986 An Archaeological Resource Survey and Impact Assessment of the Antelope Valley Master Plan of Drainage, Anaverde Basin to Lockheed Basin, Los Angeles County, California. On file at the Archaeological Information Center, University of California, Los Angeles.

APPENDIX

RECOMMENDATIONS FROM THE NORTHRIDGE CENTER FOR PUBLIC ARCHAEOLOGY, CALIFORNIA STATE UNIVERSITY, NORTHRIDGE (NCFPA), RELATED TO THE TREATMENT OF CA-LAN-1554-H

It is our recommendation that the City of Palmdale consider implementation of one or the other of two alternative resource evaluation plans:

(1) Resource Evaluation Through Pre-Construction Archaeological Testing - In the area of site CA-LAn-1554H, systematic archaeological testing could be carried out in order to determine whether significant subsurface archaeological remains are present. This testing would have the purpose of locating buried cultural features that could not be seen on the surface. Features of this sort might include historical foundations or footings, trash dumps, wells, latrines, post-hole alignments and other features, including prehistoric artifacts. This work could be performed in a variety of ways, including use of systematic testing with soil augers, test pits or machine-cut trenches. If buried resources were discovered, recommendations could then be made as regards their significance and appropriate disposition.

(2) Archaeological monitoring And (sic) Associated Data Recovery, As Required - A second approach would involve archaeological monitoring of the locations indicated in Map 2 during initial grading, or "grubbing" phase of construction. "Monitoring" refers to having a qualified archaeologist(s) present during at least the initial phases of grading in order to identify archaeological remains that might be discovered, and to carry out appropriate resource protection measures. Under this treatment plan, if buried resources were discovered, they would be immediately investigated and recommendations forwarded about their disposition. Plans would have to be in place, under this treatment option, to carry out archaeological testing and evaluation, and to suspend grading in the immediate area of any discovery.

Each option confers advantages and disadvantages. The first option, if it is successful in locating buried cultural resources, offers the prospect of resolving cultural resources issues prior to construction. The disadvantage of this approach resides in the possibility that the testing may not find buried archaeological features. Particularly in the case of out-buildings, latrines and trash deposits, and foundations which may be dispersed over a considerable area, archaeological testing may not reveal their presence.

On the other hand, grading operations will almost certainly reveal such features if they are present. In fact, grading, done under controlled conditions, can be an excellent way to reveal the presence of cultural features. The key to this approach is machine operators making successive, shallow, well-controlled

cuts during initial grading (within about 1 meter of the surface), while these cuts are monitored by archaeologists.

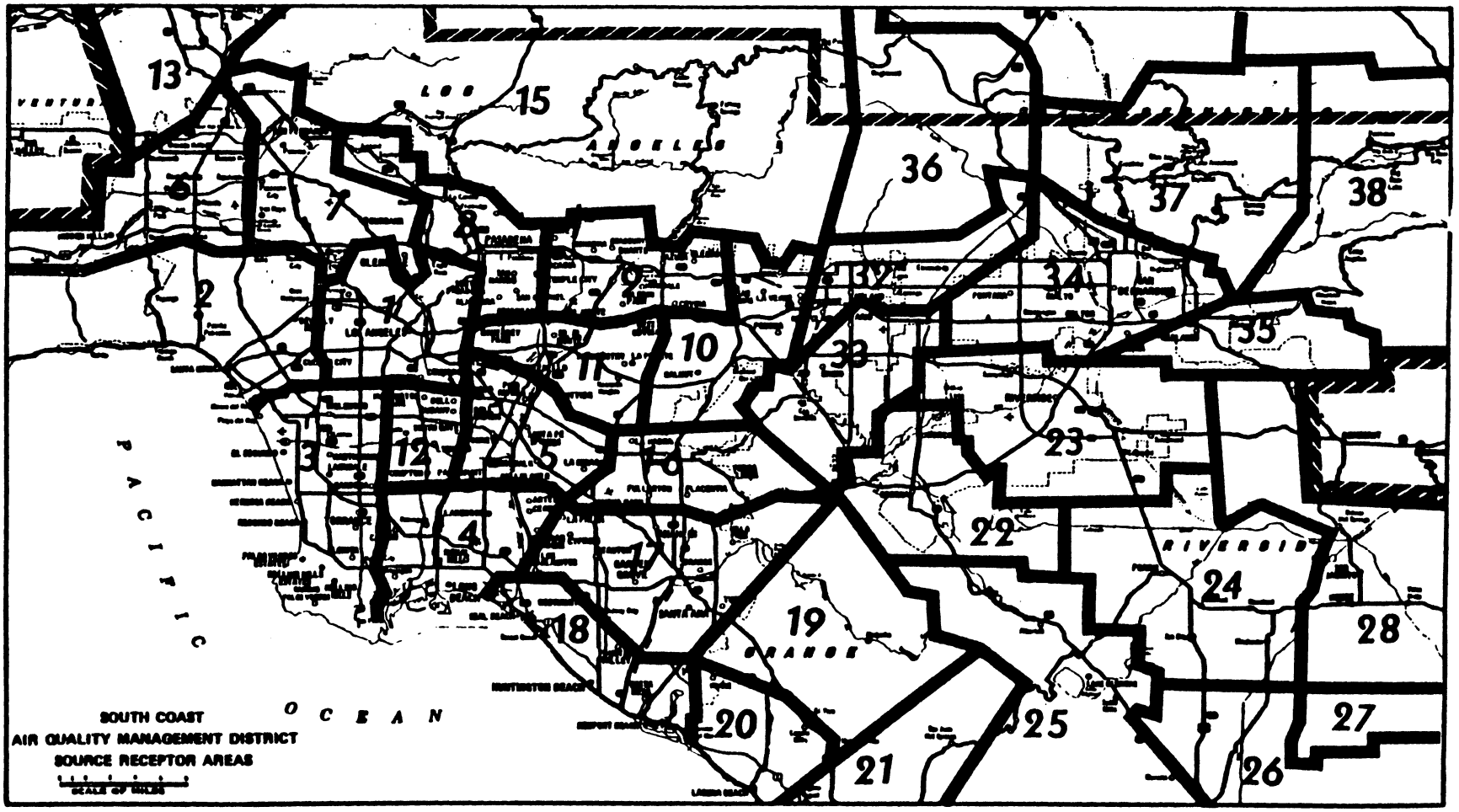
Construction delays can be minimized in this kind of operation. If cultural features are found during this phase of the work, the features can be evaluated while construction continues in other areas. Of course, the details of the grading plans also need to be consulted in order to determine exactly how cutting or filling would take place. Depending upon the depth of these cuts, it might only be necessary to salvage a portion of the archaeological features. The archaeological consultant should be working at all times to maximize preservation of cultural features in place, rather than remove the remains by excavation.

Clearly, the second alternative requires a more flexible approach than the first. It is our recommendation, however, that the second approach be adopted over the former because we believe that it has the best chance of identifying and preserving significant cultural remains, while allowing construction to move ahead at a reasonable pace.

It is also important to recognize that regardless of steps taken to guard against unwarranted loss of archaeological resources, the proponent of a construction project has the obligation to contact a qualified archaeologist if archaeological remains are found at any stage of construction. Such remains include, for example, prehistoric or historic artifacts, bones, hearths, areas of discolored soil, foundations or historic-era refuse deposits.

I. Air Quality Data

SOURCE-RECEPTOR AREAS



1988 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Source/ Receptor Area No.	Location of Air Monitoring Station	Carbon Monoxide: Max. Conc. in ppm 1-Hour	Carbon Monoxide: Max. Conc. in ppm 8-Hour	Carbon Monoxide: No. Days Standard Exceeded, Federal ≥ 9.5 ppm 8-Hr.	Carbon Monoxide: Federal > 35 ppm 1-Hr.	Carbon Monoxide: State ≥ 9.1 ppm 8-Hr.	Carbon Monoxide: State > 20 ppm 1-Hr.	Ozone: Max. Conc. in ppm 1-Hour	Ozone: No. Days Standard Exceeded, Federal > .12 ppm 1-Hour	Ozone: State ≥ .10 ppm 1-Hour	Nitrogen Dioxide: Max. Conc. in ppm 1-Hour	Nitrogen Dioxide: Average Compared to Federal Std.[a] Annual Avg. in ppm	Nitrogen Dioxide: % Above Std.	Nitrogen Dioxide: No. Days St'd. Exc'd. State > .25 ppm 1-Hour	Sulfur Dioxide: Max. Conc. in ppm 1-Hour	Sulfur Dioxide: Average Compared to Federal Std.[b] Annual Avg. in ppm	Sulfur Dioxide: No. Days St'd. Exc'd.[c] Federal > .14 ppm 24-Hr.	Sulfur Dioxide: State ≥ .05 ppm 24-Hr.[d]	Visibility* Location	Visibility* Days not Meeting State St'd.[e]
1	Los Angeles	16	11.43	3	0	5	0	.21	24	68	.54	.0613	14.8	6	.04	.0041	0	0	Burbank Airport	206
2	W. Los Angeles	15	8.57	0	0	0	0	.24	16	60	.26	.0343	0	1	.03	.0022	0	0		
3	Hawthorne	23	15.86	26	0	31	4	.22	5	11	.27	.0358	0	1	.15	.0048	0	0	Los Angeles International	145
4	Long Beach	13	10.29	1	0	2	0	.16	7	18	.28	.0475	0	1	.05	.0068	0	0		
5	Whittier	13	7.29	0	0	0	0	.29	29	72	.22	.0498	0	0	.10	.0055	0	0		
6	Reseda	16	13.13	3	0	4	0	.25	71	137	.20	.0378	0	0	.02	.0017	0	0	Long Beach Airport	175
7	Burbank	15	11.86	13	0	14	0	.24	64	135	.26	.0528	0	2	.02	.0022	0	0		
8	Pasadena	17	10.63	3	0	3	0	.29	119	175	.27	.0500	0	2	.03	.0023	0	0		
9	Azusa	8	6.00	0	0	0	0	.30	125	173	.24	.0530	0	0	.03	.0022	0	0		
9	Glendora	NM	NM	NM	NM	NM	NM	.34	148	193	.20	.0439	0	0	NM	NM	NM	NM	William J. Fox Airport (Lancaster)	5
10	Pomona	13	8.63	0	0	0	0	.29	91	145	.20	.0561	5.1	0	NM	NM	NM	NM		
11	Pico Rivera	14	9.86	1	0	3	0	.30	67	128	.24	.0539	0.9	0	.05	.0048	0	0		
12	Lynwood	32	27.50	51	0	57	20	.21	12	29	.31	.0478	0	1	.06	.0069	0	0		
13	Santa Clarita	NM	NM	NM	NM	NM	NM	.30	107	152	NM	NM	NM	NM	NM	NM	NM	NM		
14	Lancaster	11	5.00	0	0	0	0	.18	44	105	.09	.0162	0	0	NM	NM	NM	NM		
16	La Habra	20	9.86	2	0	4	0	.29	33	89	.24	.0424	0	0	.05	.0038	0	0		
17	Anaheim	17	12.00	5	0	6	0	.27	19	53	.28	.0458	0	1	.06	.0041	0	0		
17	Los Alamitos	NM	NM	NM	NM	NM	NM	.23	17	39	NM	NM	NM	NM	.04	.0029	0	0		
18	Costa Mesa	16	11.57	2	0	3	0	.15	2	15	.26	.0268	0	1	.03	.0018	0	0		
19	El Toro	10	5.13	0	0	0	0	.21	18	41	NM	NM	NM	NM	NM	NM	NM	NM		
22	Norco	NM	NM	NM	NM	NM	NM	.25	61	135	NM	NM	NM	NM	NM	NM	NM	NM	March Field (Riverside)	219
23	Rubidoux	9	6.75	0	0	0	0	.28	123	178	.19	.0368	0	0	.02	.0014	0	0		
23	Riverside	17	10.00	1	0	1	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
24	Perris[f]	NM	NM	NM	NM	NM	NM	.23	82	137	.14	.0310	0	0	NM	NM	NM	NM		
25	Lake Elsinore[g]	NM	NM	NM	NM	NM	NM	.15	1	3	NM	NM	NM	NM	NM	NM	NM	NM		
28	Hemet	NM	NM	NM	NM	NM	NM	.18	28	89	NM	NM	NM	NM	NM	NM	NM	NM		
29	Banning	NM	NM	NM	NM	NM	NM	.26	64	118	NM	NM	NM	NM	NM	NM	NM	NM		
30	Palm Springs	4	2.14	0	0	0	0	.20	35	99	.11	.0220	0	0	NM	NM	NM	NM		
30	Indio[g]	NM	NM	NM	NM	NM	NM	.11	0	1	NM	NM	NM	NM	NM	NM	NM	NM		
32	Upland	9	5.00	0	0	0	0	.35	122	165	.21	.0472	0	0	.03	.0017	0	0	Norton AFB (San Bernardino)	215
33	Ontario	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
34	Fontana	8	5.43	0	0	0	0	.29	124	179	.21	.0369	0	0	.04	.0016	0	0		
34	San Bernardino	9	7.57	0	0	0	0	.28	121	173	.19	.0421	0	0	.02	.0018	0	0	Ontario Airport	242
35	Redlands	NM	NM	NM	NM	NM	NM	.29	130	176	NM	NM	NM	NM	NM	NM	NM	NM		
37	Crestline	NM	NM	NM	NM	NM	NM	.29	128	160	NM	NM	NM	NM	NM	NM	NM	NM		

ppm - Parts by volume per million parts of air.
NM - Pollutant not monitored at this station.
* - Data received from FAA.
a) - The federal standard is annual arithmetic mean NO_2 greater than 0.0534 ppm.
b) - The federal standard is annual arithmetic mean SO_2 greater than 80 ug/m^3 (.03ppm). No location exceeded the standard in 1988.
c) - The other federal (3-hour average > 0.50 ppm) and state (1-hour > 0.25 ppm) standards were also not exceeded.
d) - Twenty-four hour average SO_2 ≥ 0.05 ppm with 1-hour Ozone ≥ 0.10 ppm, or with 24-hour TSP ≥ 100 ug/m^3.
e) - Visibility standard is less than 10 miles for hours with relative humidity less than 70%.
f) - Nitrogen dioxide monitored November 1 - December 31, 1988.
g) - Ozone monitored November 1 - December 31, 1988.

SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive
El Monte, CA 91731

1988 AIR QUALITY

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Source/ Receptor Area No.	Location of Air Monitoring Station	Suspended Particulates PM10[h] Number of Samples	Max. Conc. in ug/m³ 24-Hr.	No. (%) Samples Exceeding Standard: Federal > 150 ug/m³ 24-Hour	State > 50 ug/m³ 24-Hour	Annual Averages[j] AAM Conc. ug/m³	AGM Conc. ug/m³	Particulates TSP[i] Number of Samples	Max. Conc. in ug/m³ 24-Hour	AGM Conc. ug/m³	Lead[i] Max. Conc. in ug/m³ 24-Hour	Quarters/Months Exceeding Standard: Federal > 1.5 ug/m³ Qrtly Avg.	State ≥ 1.5 ug/m³ Mo. Avg.	Sulfate[i] Max Conc. in ug/m³ 24-Hr.	No. (%) Samples Exceeding Standard: State ≥ 25 ug/m³ 24-Hr.
1	Los Angeles	58	130	0	33 (56.9)	58.3	53.3	61	257	99.8	0.44	0	0	26.6	1 (1.6)
2	W. Los Angeles	NM	NM	NM	NM	NM	NM	56	125	62.9	NM	NM	NM	17.4	0
3	Hawthorne	NM	NM	NM	NM	NM	NM	58	248	79.7	0.27	0	0	19.0	0
4	Long Beach	60	149	0	24 (40.0)	52.4	47.1	61	292	85.3	0.38	0	0	27.8	1 (1.6)
5	Whittier	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6	Reseda	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
7	Burbank	59	138	0	40 (67.8)	62.1	57.1	61	217	101.9	1.02	0	0	25.1	1 (1.6)
8	Pasadena	NM	NM	NM	NM	NM	NM	59	180	78.9	NM	NM	NM	24.4	0
9	Azusa	61	127	0	41 (67.2)	63.3	55.9	58	220	109.4	NM	NM	NM	23.6	0
9	Glendora	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
10	Pomona	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
11	Pico Rivera	NM	NM	NM	NM	NM	NM	59	229	98.7	0.43	0	0	28.1	1 (1.7)
12	Lynwood	NM	NM	NM	NM	NM	NM	57	349	113.9	0.51	0	0	27.1	1 (1.8)
13	Santa Clarita	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
14	Lancaster	NM	NM	NM	NM	NM	NM	58	257	69.9	NM	NM	NM	5.7	0
16	La Habra	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
17	Anaheim	NM	NM	NM	NM	NM	NM	60	306	84.4	0.21	0	0	23.1	0
17	Los Alamitos	57	132	0	15 (26.3)	45.6	40.2	58	304	91.7	NM	NM	NM	27.3	1 (1.7)
18	Costa Mesa	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
19	El Toro	61	97	0	11 (18.0)	38.4	35.1	59	156	75.2	NM	NM	NM	16.2	0
22	Norco	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
23	Rubidoux	61	252	7 (11.5)	51 (83.6)	94.9	81.8	61	313	126.8	0.15	0	0	23.6	0
23	Riverside	NM	NM	NM	NM	NM	NM	61	307	119.6	0.20	0	0	19.0	0
24	Perris	60	164	1 (1.7)	38 (63.3)	59.4	51.9	60	260	91.4	NM	NM	NM	11.5	0
25	Lake Elsinore	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
28	Hemet	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
29	Banning	57	113	0	17 (29.8)	42.0	33.6	60	192	73.5	NM	NM	NM	10.6	0
30	Palm Springs	60	77	0	8 (13.3)	29.2	23.7	61	145	56.6	NM	NM	NM	11.2	0
30	Indio	61	115	0	22 (36.1)	48.5	42.7	59	309	101.1	NM	NM	NM	8.4	0
32	Upland	NM	NM	NM	NM	NM	NM	60	229	95.9	0.12	0	0	18.5	0
33	Ontario	60	192	2 (3.3)	47 (78.3)	78.4	66.7	59	283	106.8	NM	NM	NM	21.1	0
36	Fontana	60	287	4 (6.7)	46 (76.7)	81.0	66.9	61	564	126.0	NM	NM	NM	28.1	1 (1.6)
34	San Bernardino	56	209	3 (5.4)	40 (71.4)	80.2	66.8	59	486	116.7	0.19	0	0	15.8	0
35	Redlands	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
37	Crestline	NM	NM	NM	NM	NM	NM	60	108	51.5	NM	NM	NM	13.4	0

ug/m³ - Micrograms per cubic meter of air.
AAM - Annual Arithmetic Mean.
AGM - Annual Geometric Mean.
h) - PM10 suspended particulate samples were collected every 6 days using the size-selective inlet high volume sampler with quartz filter media (PM10 refers to fine articles with aerodynamic diameter of 10 micrometers or less.)
i) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media. Federal TSP standard superseded by PM10 standard July 1, 1987.
j) - Federal PM10 standard is AAM > 50 ug/m³; state standard is AGM > 30 ug/m³.

AIR QUALITY DATA 1987
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Source/ Receptor Area No.	Location of Air Monitoring Station	Suspended Particulates PM_{10} g)								Particulates TSP h)			Lead h)			Sulfate h)	
				No. (%) Samples Exceeding Standard				Percent Standard Exceeded i)					Occasions Exceeding Std.			Number of No. Samples Exceeding Std.	
		Number of Samples	Max. 24-Hr. Conc. ug/m^3	Federal >150 ug/m^3 24-Hour	State >50 ug/m^3 24-Hour	AAM Conc. ug/m^3	AGM Conc. ug/m^3	Federal >50 ug/m^3	State >30 ug/m^3	Number of Samples	Max. 24-Hr. Conc. ug/m^3	AGM Conc. ug/m^3	Max. 24-Hr. Conc. ug/m^3	Federal >1.5 ug/m^3 Qrtly Avg.	State ≥1.5 ug/m^3 No. Avg.	Max. 24-Hr. Conc. ug/m^3	State ≥25 ug/m^3 24-Hr.
1	Los Angeles	58	158	1 (1.7)	36 (62.1)	56.6	50.6	13.2	68.7	61	216	91.4	0.43	0	0	14.5	0
2	W. Los Angeles	---	---	---	---	---	---	---	---	59	125	57.2	---	---	---	15.2	0
3	Hawthorne	---	---	---	---	---	---	---	---	59	150	76.5	0.44	0	0	20.6	0
4	Long Beach	55	113	0 (0)	18 (32.7)	50.5	45.8	1.0	52.7	60	174	86.3	0.53	0	0	17.6	0
5	Whittier	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	Reseda	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7	Burbank	59	147	0 (0)	36 (61.0)	60.2	53.7	20.4	78.9	61	180	91.9	0.44	0	0	17.5	0
8	Pasadena	---	---	---	---	---	---	---	---	59	139	70.0	---	---	---	14.0	0
9	Azusa	59	188	2 (3.4)	38 (64.4)	68.2	58.7	36.4	95.7	61	254	111.8	---	---	---	15.4	0
9	Glendora	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10	Pomona	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11	Pico Rivera	---	---	---	---	---	---	---	---	60	263	95.0	0.72	0	0	17.8	0
12	Lynwood	---	---	---	---	---	---	---	---	53	221	115.2	0.54	0	0	18.2	0
13	Newhall	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14	Lancaster	---	---	---	---	---	---	---	---	60	187	64.2	---	---	---	7.3	0
16	La Habra	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	Anaheim	---	---	---	---	---	---	---	---	61	202	84.6	0.28	0	0	14.6	0
17	Los Alamitos	59	163	1 (1.7)	21 (35.6)	48.6	42.4	0	41.3	57	648 l)	91.9	---	---	---	18.2	0
18	Costa Mesa	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19	El Toro	61	107	0 (0)	15 (24.6)	40.0	36.1	0	20.3	60	150	68.8	---	---	---	14.3	0
22	Norco	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	Rubidoux	60	219	7 (11.7)	46 (76.7)	89.6	73.5	47.0	145.0	60	305	116.9	0.20	0	0	16.1	0
23	Riverside (Magnolia)	---	---	---	---	---	---	---	---	61	234	106.5	0.27	0	0	19.7	0
24	Perris	15 j)	187	0 (0)	5 (33.3)	49.2	31.8	0	6.0	59	255	88.2	---	---	---	15.6	0
28	Hemet	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
29	Banning	61	163	1 (1.6)	22 (36.1)	44.1	34.0	0	13.3	61	213	68.7	---	---	---	15.2	0
30	Palm Springs	20 k)	121	0 (0)	5 (25.0)	33.4	24.1	0	0	61	180	58.8	---	---	---	10.4	0
30	Indio	61	115	0 (0)	25 (41.0)	51.4	44.2	2.8	47.3	60	331	100.6	---	---	---	10.3	0
32	Upland	---	---	---	---	---	---	---	---	61	212	92.2	0.23	0	0	18.0	0
33	Ontario	60	182	1 (1.7)	41 (68.3)	69.8	60.3	39.6	101.0	55	242	106.0	---	---	---	17.8	0
33	Chino	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
34	Fontana	60	203	3 (5.0)	38 (63.3)	73.9	57.6	47.8	92.0	59	298	108.3	---	---	---	18.7	0
34	San Bernardino	61	211	2 (3.3)	36 (59.0)	70.0	55.2	40.0	84.0	60	271	107.6	0.23	0	0	17.6	0
35	Redlands	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
37	Crestline	---	---	---	---	---	---	---	---	60	218	48.2	---	---	---	13.1	0

ug/m^3 - Micrograms per cubic meter of air.

AGM - Annual Geometric Mean.

g) - suspended particulates PM_{10} samples were collected every 6 days using the size-selective inlet high volume sampler with quartz filter media (PM_{10} refers to fine particles with aerodynamic diameter of 10 micrometers or less).

h) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media. Federal TSP standard superseded by PM_{10} standard, July 1, 1987.

i) - Federal PM_{10} standard is AAM >50 ug/m^3; state standard is AGM >30 ug/m^3.

j) - Sampling period: October - December.

k) - Sampling period: September - December.

l) - Adjacent parking lot was being swept during sampling period. Second high concentration 310 ug/m^3

AIR QUALITY DATA 1987
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Source/ Receptor Area No.	Location of Air Monitoring Station	Carbon Monoxide: Max. Conc. in PPM 1-Hour	Carbon Monoxide: Max. Conc. in PPM 8-Hour	Carbon Monoxide: No. Days Standard Exceeded, Federal ≥ 9.5 PPM 8-Hr.	Carbon Monoxide: No. Days Standard Exceeded, Federal > 35 PPM 1-Hr.	Carbon Monoxide: No. Days Standard Exceeded, State ≥ 9.1 PPM 8-Hr.	Carbon Monoxide: No. Days Standard Exceeded, State > 20 PPM 1-Hr.	Ozone: Max. Conc. in PPM 1-Hour	Ozone: No. Days Standard Exceeded, Federal > .12 PPM 1-Hour	Ozone: No. Days Standard Exceeded, State ≥ .10 PPM 1-Hour	Nitrogen Dioxide: Max. Conc. in PPM 1-Hour	Nitrogen Dioxide: Standard Criterion[a], Federal AAM in PPM	Nitrogen Dioxide: Standard Criterion[a], Federal % AAM Exc'd.	Nitrogen Dioxide: No. Days St'd. Exc'd., State > .25 PPM 1-Hour	Sulfur Dioxide: Max. Conc. in PPM 1-Hour	Sulfur Dioxide: Standard Criterion, Federal AAM in PPM	Sulfur Dioxide: No. Days St'd. Exc'd.[b], Federal > .14 PPM 24-Hr.	Sulfur Dioxide: No. Days St'd. Exc'd.[b], State ≥ .05 PPM 24-Hr.[c]	Visibility: Location	Visibility: Days not Meeting State St'd.[d]
1	Los Angeles	15	10.9	1	0	1	0	.22	36	91	.42	.0537	0.56	4	.03	.0042	0	0	Burbank Airport	242
2	W. Los Angeles	13	7.5	0	0	0	0	.28	16	58	.27	.0378	0	1	.03	.0022	0	0		
3	Hawthorne	22	14.1	18	0	22	2	.20	3	10	.23	.0353	0	0	.03	.0038	0	0	Los Angeles	
4	Long Beach	13	9.4	0	0	1	0	.17	4	11	.26	.0432	0	1	.06	.0058	0	0	International	129
5	Whittier	13	9.7	1	0	1	0	.23	40	71	.25	.0486	0	0	.07	.0038	0	0		
6	Reseda	15	12.1	1	0	2	0	.22	60	121	.15	.0319	0	0	.02	.0022	0	0	Long Beach	
7	Burbank	15	12.5	9	0	11	0	.23	76	130	.26	.0516	0	1	.02	.0023	0	0	Airport	177
8	Pasadena	15	11.3	2	0	2	0	.28	95	150	.21	.0420	0	0	.02	.0020	0	0		
9	Azusa	9	6.0	0	0	0	0	.30	111	163	.23	.0498	0	0	.03	.0024	0	0		
9	Glendora	NM	NM	NM	NM	NM	NM	.33	135	180	.17	.0380	0	0	NM	NM	NM	NM	William J. Fox	
10	Pomona	14	10.0	1	0	1	0	.29	72	122	.22	.0547	2.40	0	NM	NM	NM	NM	Airport	1
11	Pico Rivera	12	10.0	1	0	2	0	.28	63	120	.24	.0486	0	0	.09	.0036	0	0	(Lancaster)	
12	Lynwood	26	19.6	40	0	47	10	.24	11	24	.26	.0429	0	1	.06	.0054	0	0		
13	Newhall	NM	NM	NM	NM	NM	NM	.21	67	129	NM	NM	NM	NM	NM	NM	NM	NM		
14	Lancaster	12	3.9	0	0	0	0	.17	32	105	.09	.0161	0	0	NM	NM	NM	NM		
16	La Habra	21	10.6	2	0	3	1	.24	41	77	.22	.0382	0	0	.04	.0042	0	0		
17	Anaheim	16	8.7	0	0	0	0	.22	25	48	.22	.0421	0	0	.03	.0028	0	0		
17	Los Alamitos	NM	NM	NM	NM	NM	NM	.17	4	15	NM	NM	NM	NM	.03	.0024	0	0		
18	Costa Mesa	12	8.4	0	0	0	0	.16	2	23	.19	.0281	0	0	.03	.0020	0	0		
19	El Toro	8	6.3	0	0	0	0	.20	16	36	NM	NM	NM	NM	NM	NM	NM	NM		
22	Norco	NM	NM	NM	NM	NM	NM	.24	73	139	NM	NM	NM	NM	NM	NM	NM	NM	March Field	
23	Rubidoux	9	6.1	0	0	0	0	.29	113	168	.21	.0269	0	0	.02	.0015	0	0	(Riverside)	215
23	Riverside (Magnolia)	13	7.6	0	0	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
24	Perris	NM	NM	NM	NM	NM	NM	.20	82	136	NM	NM	NM	NM	NM	NM	NM	NM		
28	Hemet	NM	NM	NM	NM	NM	NM	.18	27	83	NM	NM	NM	NM	NM	NM	NM	NM		
29	Banning	NM	NM	NM	NM	NM	NM	.21	53	96	NM	NM	NM	NM	NM	NM	NM	NM		
30	Palm Springs	5	2.9	0	0	0	0	.17	33	74	.08	.0190	0	0	NM	NM	NM	NM		
30	Indio[e]	NM	NM	NM	NM	NM	NM	.16	14	41	NM	NM	NM	NM	NM	NM	NM	NM		
32	Upland	7	5.1	0	0	0	0	.28	101	150	.20	.0472	0	0	.02	.0011	0	0	Norton Air	
33	Ontario	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	Force Base	237
33	Chino[f]	NM	NM	NM	NM	NM	NM	.04	0	0	NM	NM	NM	NM	NM	NM	NM	NM	(San Bernardino)	
34	Fontana	6	4.0	0	0	0	0	.29	116	165	.18	.0383	0	0	.02	.0014	0	0	Ontario	
34	San Bernardino	11	6.7	0	0	0	0	.25	117	166	.19	.0430	0	0	.03	.0019	0	0	Airport	235
35	Redlands	NM	NM	NM	NM	NM	NM	.24	120	161	NM	NM	NM	NM	NM	NM	NM	NM		
37	Crestline	NM	NM	NM	NM	NM	NM	.29	119	156	NM	NM	NM	NM	NM	NM	NM	NM		

PPM - Parts by volume per million parts of air.
AAM - Annual Arithmetic Mean.
NM - Pollutant not monitored.
* - Data received from FAA.
a) - The federal Standard is annual arithmetic mean NO_2 greater than 0.0534 ppm.
b) - The other federal (3-hour average > 0.50 PPM; 0.03 PPM, AAM) and state (1-hour > 0.25 PPM) standards were also not exceeded.
c) - Twenty-four hour average SO_2 ≥ 0.05 PPM with 1-hour Ozone ≥ 0.10 PPM, or with 24-hour TSP ≥ 100 ug/m^3.

SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive
El Monte, CA 91731

EPISODE CRITERIA

AIR POLLUTANT	SCAQMD AND CALIFORNIA STAGE 1	SCAQMD AND CALIFORNIA STAGE 2	SCAQMD AND CALIFORNIA STAGE 3	FEDERAL STAGE 1	FEDERAL STAGE 2	FEDERAL STAGE 3
Ozone	0.20 ppm, 1-hr. avg.	0.35 ppm, 1-hr. avg.	0.50 ppm, 1-hr. avg.	-	-	0.50 ppm, 1-hr. avg.
Carbon Monoxide	40 ppm, 1-hr. avg. 20 ppm, 12-hr. avg.	75 ppm, 1-hr. avg. 35 ppm, 12-hr. avg.	100 ppm, 1-hr. avg. 50 ppm, 12-hr. avg.	15 ppm, 8-hr. avg.	30 ppm, 8-hr. avg.	40 ppm, 8-hr. avg.
Nitrogen Dioxide	-	-	-	0.60 ppm, 1-hr. avg. 0.15 ppm, 24-hr. avg.	1.20 ppm, 1-hr. avg. 0.30 ppm, 24-hr. avg.	1.60 ppm, 1-hr. avg. 0.40 ppm, 24-hr.avg.
Sulfur Dioxide	0.50 ppm, 1-hr. avg. 0.20 ppm, 24-hr. avg.	1.00 ppm, 1-hr. avg. 0.70 ppm, 24-hr. avg.	2.00 ppm, 1-hr. avg. 0.90 ppm, 24-hr. avg.	-	-	-
Sulfur Dioxide/ Particulate Matter Combined	-	-	-	65,000*, 24-hr.avg.	261,000*, 24-hr.avg.	393,000*, 24-hr.avg
Particulate Matter	-	-	-	375 ug/m^3, 24-hr.avg.	625 ug/m^3, 24-hr.avg.	875 ug/m^3, 24-hr.avg.
Sulfates**	25 ug/m^3, 24-hr. avg. combined with ozone > 0.20 ppm, 1-hr. avg.			-	-	-
Actions to be Taken	Health advisory to a) Persons with respiratory and coronary disease. b) School officials in order to curtail students' participation in strenuous activities. First steps in abatement plans.	Intermediate Stage. Abatement actions taken to reduce concentration of pollutant at issue.	Mandatory abatement measures. Extensive actions taken to prevent exposure at indicated levels. State can take action if local efforts failed.	Open burning prohibited. Reduction in vehicle operation requested. Industrial curtailment.	Incinerator use prohibited. Reduction in vehicle operation required. Further industrial curtailment.	Vehicle use prohibited. Industry shut down or curtailment. Public activities ceased.

*Product of sulfur dioxide (ppm), particulate matter (ug/m^3) and a factor (2620).
**Episodes based upon these criteria are not classified according to stages.

AIR QUALITY DATA 1986
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Source/ Receptor Area No.	Location of Air Monitoring Station	Carbon Monoxide					Ozone			Nitrogen Dioxide			Sulfur Dioxide				Visibility	
		Max. Conc. in PPM 1-Hour	No. Days Standard Exceeded Federal > 9.5 PPM 8-Hrs	Federal > 35 PPM 1-Hr	State > 9.1 PPM 8-Hrs	State > 20 PPM 1-Hr	Max. Conc. in PPM 1-Hour	No. Days St'd. Exceeded Federal > .12 PPM 1-Hour	State > .10 PPM 1-Hour	Max. Conc. in PPM 1-Hour	No. Days St'd.Exc'd. State ≥ .25 PPM 1-Hour	% AAM Exc'd. Federal >.0534 PPM	Max. Conc. in PPM 1-Hour	No. Days St'd. Exceeded[a] Federal > .14 PPM 24-Hrs	State ≥ .05 PPM 24-Hrs[b]	% AAM Exc'd. Federal > .03 PPM	Location	Days not Meeting State St'd.[c]
1	Los Angeles	13	2	0	2	0	.22	48	99	.33	7	14.6	.03	0	0	0	L. A.	ND
2	W. Los Angeles	11	0	0	0	0	.20	30	81	.24	0	0	.02	0	0	0	BUR. AP	219
3	Hawthorne	21	18	0	23	1	.19	8	19	.23	0	0	.09	0	0	0	LAX AP	154
4	Long Beach	13	5	0	5	0	.18	10	29	.26	3	0	.07	0	0	0	L.B. AP	204
5	Whittier	15	0	0	0	0	.25	39	82	.28	1	0	.06	0	0	0	WJF	14
6	Reseda	19	11	0	11	0	.22	72	131	.22	0	0	.02	0	0	0		
7	Burbank	19	16	0	21	0	.28	93	142	.28	2	7.5	.02	0	0	0		
8	Pasadena	14	1	0	1	0	.26	110	166	.24	0	0	.02	0	0	0		
9	Azusa	10	0	0	0	0	.31	126	165	.21	0	0	.03	0	0	0		
9	Glendora[d]	NM	NM	NM	NM	NM	.35	148	191	.13	0	0	NM	NM	NM	NM		
10	Pomona	11	0	0	0	0	.27	89	133	.25	1	4.5	NM	NM	NM	NM		
11	Pico Rivera	14	1	0	1	0	.24	79	126	.26	1	0	.03	0	0	0		
12	Lynwood	27	41	0	44	11	.20	16	46	.26	3	0	.13	0	0	0		
13	Newhall	NM	NM	NM	NM	NM	.24	87	128	NM	NM	NM	NM	NM	NM	NM		
14	Lancaster	9	0	0	0	0	.20	46	108	.09	0	0	NM	NM	NM	NM		
16	La Habra	20	1	0	1	0	.25	49	95	.20	0	0	.06	0	0	0	EL TORO	ND
17	Anaheim	16	1	0	1	0	.20	28	64	.21	0	0	.03	0	0	0	MCAS	
17	Los Alamitos	NM	NM	NM	NM	NM	.15	5	30	NM	NM	NM	.03	0	0	0		
18	Costa Mesa	15	3	0	3	0	.17	10	24	.20	0	0	.02	0	0	0		
19	El Toro	7	0	0	0	0	.23	12	38	NM	NM	NM	NM	NM	NM	NM		
22	Norco-Corona	NM	NM	NM	NM	NM	.27	77	140	NM	NM	NM	NM	NM	NM	NM	MARCH	198
23	Riverside Rub.	9	0	0	0	0	.25	106	161	.16	0	0	.02	0	0	0	AFB	
23	Riverside Mag.	18	0	0	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
24	Perris	NM	NM	NM	NM	NM	.22	79	133	NM	NM	NM	NM	NM	NM	NM		
28	Hemet	NM	NM	NM	NM	NM	.18	9	40	NM	NM	NM	NM	NM	NM	NM		
29	Banning	NM	NM	NM	NM	NM	.22	45	80	NM	NM	NM	NM	NM	NM	NM		
30	Palm Springs	5	0	0	0	0	.18	31	80	.08	0	0	NM	NM	NM	NM		
30	Indio[e]	NM	NM	NM	NM	NM	.08	0	0	NM	NM	NM	NM	NM	NM	NM		
32	Upland	8	0	0	0	0	.29	111	151	.24	0	0	.01	0	0	0	NOR. AFB	228
33	Ontario	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	ONT. AP	255
33	Chino	NM	NM	NM	NM	NM	.25	69	127	NM	NM	NM	NM	NM	NM	NM		
34	Fontana	6	0	0	0	0	.31	121	164	.18	0	0	.02	0	0	0		
34	San Bernardino[f]	9	0	0	0	0	.30	108	149	.18	0	0	.05	0	0	0		
35	Redlands	NM	NM	NM	NM	NM	.29	93	144	NM	NM	NM	NM	NM	NM	NM		
37	Crestline	NM	NM	NM	NM	NM	.26	117	154	NM	NM	NM	NM	NM	NM	NM		

PPM - Parts by volume per million parts of air.
AAM - Annual Arithmetic Mean.
NM - Pollutant not monitored.
ND - No data available.
a) - The Federal (3-hours > .50 ppm) and State (1-hour ≥ .25 ppm) standards were not exceeded.
b) - Twenty-four hours ≥ .05 ppm with 1-hour ozone ≥ .10 ppm, or with 24 hours TSP > 100 ug/m^3.
c) - Visibility standard is less than 10 miles on days when relative humidity is less than 70%.
d) - Nitrogen oxides monitoring initiated December 9, 1986.
e) - Ozone monitoring terminated March 31, 1986.
f) - Ozone monitored entire year; carbon monoxide, sulfur dioxide and nitrogen oxides - reactivated June 1, 1986.

South Coast
AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive
El Monte, CA 91731

AIR QUALITY DATA 1986
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Source/ Receptor Area No.	Location of Air Monitoring Station	Total Suspended Particulates g)						Lead g)			Sulfate g)		Suspended Particulates PM_{10} h)			
		Number of Samples	Max. 24-Hr. Conc, ug/m^3	No. Samples Exceeded 24-Hr. Standard, Federal: > 260 ug/m^3	No. Samples Exceeded 24-Hr. Standard, Federal: > 150 ug/m^3	Percent AGM Standard Exceeded, Federal: > 75 ug/m^3	Percent AGM Standard Exceeded, Federal: > 60 ug/m^3	Max. 24-Hr. Conc, ug/m^3	Number of Occasions Standard Exceeded, Federal: > 1.5 ug/m^3 Qrtly Avg.	Number of Occasions Standard Exceeded, State: ≥ 1.5 ug/m^3 Mo. Avg.	Max. 24-Hr. Conc, ug/m^3	No. Samples Ex. St'd., State: > 25 ug/m^3 24-Hours	Number of Samples	Max. 24-Hr. Conc, ug/m^3	No. Samples Exceeded Standard, State: > 50 ug/m^3 24-Hours	Percent AGM St'd. Exc'd., State: > 30 ug/m^3
1	Los Angeles	60	235	0	3	18.9	48.7	0.64	0	0	20.4	0	58	178	38	79.7
2	W. Los Angeles	60	175	0	1	0	0	0.45	0	0	16.9	0	NM	NM	NM	NM
3	Hawthorne	59	182	0	2	0	16.0	0.45	0	0	25.2	1	NM	NM	NM	NM
4	Long Beach	58	174	0	3	8.1	35.2	0.60	0	0	25.2	1	52	136	21	68.4
5	Whittier	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6	Reseda i)	19	143	0	0	0	0	0.27	0	0	11.7	0	NM	NM	NM	NM
7	Burbank	59	241	0	3	19.5	49.3	0.74	0	0	19.1	0	58	211	39	88.7
8	Pasadena	54	208	0	2	0	24.9	0.35	0	0	15.6	0	NM	NM	NM	NM
9	Azusa	60	276	1	8	25.7	57.2	0.41	0	0	14.6	0	56	183	34	80.6
9	Glendora j)	7	160	0	1	0	0	0.18	0	0	11.2	0	NM	NM	NM	NM
10	Pomona	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
11	Pico Rivera	59	225	0	5	25.2	56.5	0.80	0	0	22.1	0	NM	NM	NM	NM
12	Lynwood	59	262	1	5	34.5	68.2	0.94	0	0	22.4	0	NM	NM	NM	NM
13	Newhall	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
14	Lancaster	60	137	0	0	0	2.3	0.26	0	0	8.9	0	NM	NM	NM	NM
16	La Habra i)	20	151	0	1	1.6	27.0	0.30	0	0	10.1	0	NM	NM	NM	NM
17	Anaheim	60	234	0	4	19.1	48.8	0.46	0	0	18.5	0	NM	NM	NM	NM
17	Los Alamitos	57	197	0	2	14.4	43.0	0.51	0	0	23.6	0	58	124	19	45.6
18	Costa Mesa	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
19	El Toro	60	157	0	2	0	12.0	0.18	0	0	14.9	0	59	109	5	13.1
22	Norco-Corona	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
23	Riverside Rub.	60	347	1	24	60.5	100.7	0.34	0	0	18.4	0	61	294	48	147.1
23	Riverside Mag.	61	326	1	8	28.7	60.8	0.51	0	0	18.5	0	NM	NM	NM	NM
24	Perris	60	215	0	8	18.8	48.5	0.16	0	0	14.0	0	NM	NM	NM	NM
28	Hemet	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
29	Banning	57	213	0	2	0	1.8	0.16	0	0	11.3	0	61	135	20	11.0
30	Palm Springs	59	175	0	3	0	0	0.13	0	0	8.8	0	NM	NM	NM	NM
30	Indio	60	242	0	11	30.5	63.2	0.27	0	0	7.9	0	58	111	26	52.2
32	Upland	61	280	1	5	16.9	46.2	0.48	0	0	15.7	0	NM	NM	NM	NM
33	Ontario	60	332	1	10	39.1	73.8	0.43	0	0	19.8	0	58	272	43	115.6
33	Chino i)	20	201	0	4	16.5	45.7	0.28	0	0	12.5	0	NM	NM	NM	NM
34	Fontana	61	378	2	17	42.8	78.5	0.40	0	0	18.1	0	56	275	38	110.5
34	San Bernardino	61	385	1	26	54.2	92.3	0.43	0	0	17.8	0	37 k)	285	28	145.8
35	Redlands i)	20	191	0	3	0	7.7	0.19	0	0	9.9	0	NM	NM	NM	NM
37	Crestline	58	122	0	0	0	0	0.13	0	0	8.0	0	NM	NM	NM	NM

ug/m^3 - Micrograms per cubic meter of air.
AGM - Annual Geometric Mean.
g) - Total suspended particulates, lead and sulfate were determined from samples collected by the high volume sampler method, glass fiber filter media.
h) - Suspended particulates PM_{10} samples were collected using the size-selective inlet high volume sampler with quartz filter media (PM_{10} refers to fine particles with an aerodynamic diameter of 10 micrometers or less).
i) - Sampling period: January through April 1986.
j) - Sampling period: January through February 7, 1986.
k) - Sampling period: May 26 through December 1986.

AMBIENT AIR QUALITY STANDARDS

AIR POLLUTANT	CALIFORNIA		FEDERAL		
	CONCENTRATION	DISTRICT METHOD	PRIMARY (>)	SECONDARY (>)	METHOD[a]
Ozone	0.10 ppm, 1-hr. avg. ≥	U.V. Photometry	0.12 ppm, 1-hr. avg.	0.12 ppm, 1-hr. avg.	Chemiluminescent
Carbon Monoxide	9 ppm, 8-hr. avg.[b] > 20 ppm, 1-hr. avg. >	Non-dispersive Infra-red Spectrophotometry	9 ppm, 8-hr. avg.e) 35 ppm, 1-hr. avg.	9 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.	Non-dispersive Infra-red Spectrophotometry
Nitrogen Dioxide	0.25 ppm, 1-hr. ave. ≥	Gas Phase Chemiluminescence	0.05 ppm, annual avg.[f]	0.053 ppm, annual avg.	Gas Phase Chemiluminescence
Sulfur Dioxide	0.05 ppm, 24-hr. avg. with Ozone > 0.10 ppm, 1-hr.avg. or TSP ≥ 100 ug/m^3, 24-hr. avg. 0.25 ppm, 1-hr. avg. > [c]	- Pulsed Fluorescence	0.03 ppm, annual avg. 0.14 ppm, 24-hr. avg.	0.53 ppm, 3-hr. avg.	Para-rosaniline
Total Suspended Particulate (TSP)			75 ug/m^3, annual geometric mean 260 ug/m^3, 24-hr. avg.	60 ug/m^3, annual geometric mean 150 ug/m^3, 24-hr.avg.	High Volume Sampling
Suspended Particulate Matter (PM 10)	30 ug/m^3, annual geometric mean[d] > 50 ug/m^3, 24-hour average >	Size segregated inlet high volume sampling			
Sulfates	25 ug/m^3, 24-hr. avg. ≥	High Vol. Sampling Methyl-thymol Blue	-	-	-
Lead	1.5 ug/m^3, 30-day avg. ≥	High Vol. Sampling x-ray fluorescence	1.5 ug/m^3, calendar quarter	1.5 ug/m^3, calendar quarter	High Volume Sampling Atomic absorption Spectrophotometry
Hydrogen Sulfide	0.03 ppm, 1-hr. avg. ≥	Cadmium Hydroxide Stractan	-	-	-
Vinyl Chloride	0.010 ppm, 24-hr. avg. ≥	Gas Chromatography	-	-	-
Ethylene	0.10 ppm, 8-hr. avg. > 0.50 ppm, 1-hr. avg. ≥	-	-	-	-
Visibility Reducing Particles	In sufficient amount to reduce the prevailing visibility to less than 10 miles at relative humidity less than 70%, 1 obs.	-	-	-	-

a)Reference method as described by the federal government. An equivalent method of measurement may be used as approved by the federal government.
b)Effective December 15, 1982. The standards were previously 10 ppm, 12-hour average and 40 ppm, 1-hour average.
c)Effective October 5, 1984. The standard was previously .5 ppm, 1 hour average.
d)Effective August 19, 1983. The standards were previously 60 ug/m^3 TSP, annual geometric mean, and 100 ug/m^3 TSP, 24-hour average.
e)Effective September 13, 1985, standard changed from > 10mg/m^3 (≥ 9.3 ppm) to > 9ppm(≥ 9.5 ppm).
f)Effective July 1, 1985, standard changed from > 100mg/m^3 (> .0532 ppm) to > .053 ppm (> .0534 ppm).

HEALTH EFFECTS OF AIR POLLUTANTS

POLLUTANT	CONCENTRATION/ EXPOSURE TIME	OBSERVED HEALTH EFFECTS AT SPECIFIED CONCENTRATIONS	1982 ANNUAL HIGH CONCENTRATION IN SOCAB	
			CONCENTRATION/ AVERAGING TIME	LOCATION, DATE
Ozone	0.25 ppm/1 hour	Increased frequency of asthma attacks.[1,2*]		
	0.30 ppm/1 hour	Cough, chest discomfort and headache.[3]	0.40 ppm/1 hour	Los Angeles 9/2/82
	0.37 ppm/2 hour	Decline in pulmonary function in healthy individuals.[4]		
Carbon Monoxide	15-18 ppm/8 hour	Can cause decreased exercise capacity in patients with angina pectoris.[6,7,8]	21.3 ppm/8 hour	Lynwood 12/9/82
	50 ppm/1 hour	Can cause impairment of time interval estimation and visual function.[9]	27 ppm/1 hour	Lynwood 12/17/82
Nitrogen Dioxide	0.11 ppm/few minutes	Sensory responses may be elicited or altered.[10]		
	Daily peak exceeds 0.45 ppm on 10% of days for 12 months	May cause some impairment of pulmonary function and increased incidence of acute respiratory disease.[10]	0.41 ppm/1 hour	Los Angeles 9/3/82
	1.50 ppm/short term	Can cause difficulty in breathing in healthy as well as bronchitic groups.[10]		
Lead	3.2 ug/m^3/7 weeks	Increase in blood lead levels which may impair or decrease hemoglobin synthesis.[11]	1.70 ug/m^3 monthly average	Lennox 10/82
Sulfur Dioxide/ Total Suspended Particulate (TSP)	0.037 ppm SO_2 annual average association with 100 ug/m^3 smoke**	May cause higher frequencies of acute respiratory symptoms and diminished ventilatory function in children.[12]	0.011 ppm SO_2 annual average combined with 76 ug/m^3 TSP/ annual average	Long Beach

*Superscripts refer to data sources shown in References to Health Effects.
**Smoke is a British measure of particulate matter concentration.

Threshold Levels for Land Uses

Land Use Category	Size Unit	Threshold Levels
Housing		
Single Family	dwelling	300 units
Apartments	unit	400 units
Parking	space	250 spaces
Shopping Center		
Regional	square feet	60,000 ft^2,
Neighborhood	floor area,	or 6 acres
Indiv. Store	or acres	of land area
Industry*		
Undifferentiated	acre	15 acres
Mass Production	acre	15 acres
Industrial Park	acre	20 acres
Administration	acre	20 acres
Warehouse	acre	20 acres
Research & Development	acre	40 acres
Office Building	square feet	100,000 ft^2
Govt. Building	square feet	30,000 ft^2
Motel	unit	200 units
Restaurant		
Full-serve	seat	700 seats
Fast-food	employee	40 employees
Drive-in	square feet	4,000 ft^2
Theater	seat	900 seats
Any Facility Attracting or Generating:		2000 motor trips/day (1000 vehicles in and out)

*Industrial sources typically are direct emitters of air contaminants and may require a permit from the SCAQMD. Developers should contact the South Coast Air Quality Management District at (818) 572-6200.

CALIFORNIA STATE COMPOSITE MOVING EXHAUST EMISSION RATES
(Grams Per Mile)
CALENDAR YEAR 1990
(continued)

SPEED (MPH)	CO	TOG	ROG	NO_X	PARTICULATES TIRE WEAR	PARTICULATES EXHAUST
5	31.56	2.70	2.43	1.93	.217	.091
10	21.41	1.86	1.66	1.72	.217	.091
15	15.95	1.38	1.24	1.58	.217	.091
20	12.40	1.08	.97	1.48	.217	.091
25	9.87	.87	.78	1.42	.217	.091
30	8.00	.72	.64	1.40	.217	.091
35	6.62	.60	.54	1.40	.217	.091
40	5.62	.52	.47	1.42	.217	.091
45	4.93	.47	.42	1.48	.217	.091
50	4.49	.43	.39	1.58	.217	.091
55	4.21	.40	.36	1.72	.217	.091
Crankcase Blowby Grams Per Mile		0.000	0.000			

Diurnal Emissions - 2.711 grams per vehicle per day, per mile (TOG or ROG)

Hot Soak - 1.794 grams per 1 hour soak, or grams per mile (TOG or ROG)

CALIFORNIA STATE COMPOSITE MOVING EXHAUST EMISSION RATES
(Grams Per Mile)
CALENDAR YEAR 2000
(continued)

SPEED (MPH)	CO	TOG	ROG	NO_X	PARTICULATES TIRE WEAR	PARTICULATES EXHAUST
5	16.40	1.47	1.30	1.55	.217	.052
10	12.41	1.09	.96	1.37	.217	.052
15	9.63	.84	.74	1.24	.217	.052
20	7.60	.66	.58	1.16	.217	.052
25	6.07	.53	.47	1.10	.217	.052
30	4.91	.44	.39	1.07	.217	.052
35	4.02	.37	.33	1.06	.217	.052
40	3.34	.32	.28	1.08	.217	.052
45	2.83	.28	.25	1.12	.217	.052
50	2.46	.25	.25	1.19	.217	.052
55	2.21	.23	.21	1.29	.217	.052
Crankcase Blowby Grams Per Mile		0.000	0.000			

Diurnal Emissions - 0.721 grams per vehicle per day, per mile (TOG or ROG)

Hot Soak - 0.646 grams per 1 hour soak, or grams per mile (TOG or ROG)

Emission Factors for Gasoline and Diesel-Powered Engines[1)]

Pollutant	Engine Category Gasoline	Diesel
Carbon Monoxide		
g/kWh	267	4.06
lb/hphr	199	3.03
Exhaust Hydrocarbons		
8/kWh	8.95	1.50
lb/hphr	6.68	1.21
Evaporative Hydrocarbons		
g/hr	62.0	-
lb/hr	0.137	0
Crankcase Hydrocarbons		
g/hr	38.0	-
lb/hr	0.084	0
Nitrogen Oxides		
g/kWh	6.92	18.8
g/hphr	5.16	14.0
Aldehydes		
g/kWh	0.30	0.28
g/hphr	0.22	0.21
Sulfur Oxides		
g/kWh	0.359	1.25
Particulates		
g/kWh	0.439	1.34
g/hphr	0.327	1.00

The best method for calculating emissions is on the basis of "brake specific" emission factors (g/kWh or lb/hphr). "Brake specific" is the method of measuring energy output from an engine. Emissions are calculated by taking the brake specific emission factor, the usage in hours (hours per day or hours per year), the power available (rated power), and the load factor (the power actually used divided by the power available).

1) Source: U.S. Environmental Protection Agency, Compilation of Air Pollutant Emission Factors, Research Triangle Park, North Carolina, Sept. 1985.

CONSTRUCTION EMISSIONS
Emission Factors for Heavy-Duty
Diesel-Powered Construction Equipment[a)]

Type Of Equipment	POLLUTANT (gm/hr)				
	Carbon Monoxide	Exhaust Hydrocarbons	Nitrogen Oxides	Sulfur Oxides	Particulates
Tracktype Tractor	157.01	55.06	570.70	62.3	50.7
Wheeled Tractor	1622.77	85.26	575.84	40.9	61.5
Wheeled[b)] Dozer	--	--	--	158	75
Scraper	568.19	128.15	1740.74	210	184
Motor Grader	68.46	18.07	24.43	39	27.7
Wheeled Loader	259.58	113.17	858.19	82.5	77.7
Tracktype Loader	91.15	44.55	375.22	34.4	26.6
Off-Highway Truck	816.81	86.84	1889.16	206	116
Roller	137.97	30.58	392.9	30.5	22.7
Miscel-laneous	306.37	69.35	767.3	64.7	63.2

a) Source: EPA-AP-42, Volume II, September 1985
b) The wheeled dozer HC/CO/NOx emissions are included in the off-highway truck category.

(continued)
Emission Factors for Heavy-Duty
Gasoline-Powered Construction Equipment

	POLLUTANT (gm/hr)						
Type of Equipment	Carbon Mono-oxide	Exhaust Hydro-carbons	Evapo-rative Hydro-carbons	Crank-case Hydro-carbons	Nitrogen Oxides	Sulfur Dioxide	Partic-ulates
Wheeled Tractor	4320	164	30.9	32.6	195	7.03	10.9
Motor Grader	5490	186	30.0	37.1	145	7.59	9.4
Wheeled Loader	7060	241	29.7	48.2	235	10.6	13.5
Roller	6080	277	28.2	55.5	164	8.38	11.8
Miscel laneous	7720	254	25.4	50.7	187	10.6	11.7

Dust Emissions

1.2 tons per acre are of construction per month of activity, or 110 lbs. per acre per working day.

Source for all above data: EPA-AP-42, Volume II, September 1985

HEAVY DUTY DIESEL TRUCK EMISSION FACTORS
gm/mi for year 1987

ROG	2.93
CO	8.37
NO_x	17.20
PM	3.3
SO_x	3.2

Source: EMFAC7C, November 1986

(Adopted May 7, 1976)

RULE 402. NUISANCE

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

(Adopted May 7, 1976)

RULE 403. FUGITIVE DUST

(a) A person shall not cause or allow the emissions of fugitive dust from any transport, handling, construction or storage activity so that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source. (Does not apply to emissions emanating from unpaved roadways open to public travel or farm roads. This exclusion shall not apply to industrial or commercial facilities.)

(b) A person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land and solid waste disposal operations.

(c) A person shall not cause or allow particulate matter to exceed 100 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on high volume samplers at the property line for a minimum of five hours.

(d) A person shall take every reasonable precaution to prevent visible particulate matter from being deposited upon public roadways as a direct result of their operations. Reasonable precautions shall include, but are not limited to, the removal of particulate matter from equipment prior to movement on paved streets or the prompt removal of any material from paved streets onto which such material has been deposited.

(e) Subsections (a) and (c) shall not be applicable when the wind speed instantaneously exceeds 40 kilometers (25 miles) per hour, or when the average wind speed is greater than 24 kilometers (15 miles) per hour. The average wind speed determination shall be on a 15 minute average at the nearest official air-monitoring station or by wind instrument located at the site being checked.

(f) The provisions of this rule shall not apply to agricultural operations.

Tier I Control Measures-

Transportation System and Land Use

AQMP Measure No.	Title	AQMP Appendix No., Page No.
H-1	Banning of New Drive-Through Facilities [ROG, NOx, CO]	IV-A, pp. H3-H4
1.a	Alternative Work Weeks and Flextime [ROG, NOx, CO]	IV-G, pp. 47-52
1.b	Telecommunications [ROG, NOx, CO]	IV-G, pp. 53-62
2.a	Employer Rideshare and Transit Incentives[ROG, NOx, CO]	IV-G, pp. 65-70
2.b	Parking Management [ROG, NOx, CO]	IV-G, pp. 71-76
2.c	Vanpool Purchase Incentives [ROG, NOx, CO]	IV-G, pp. 77-82
2.d	Merchant Transportation Incentives [ROG, NOx, CO]	IV-G, pp. 83-88
2.e	Auto Use Restrictions [ROG, NOx, CO]	IV-G, pp. 89-94
2.f	HOV Facilities [ROG, NOx, CO]	IV-G, pp. 95-98
2.g	Transit Improvements [ROG, NOx, CO]	IV-G, pp. 99-102
3.a	Truck Dispatching, Rescheduling and Rerouting [ROG, NOx, CO]	IV-G, pp. 105-112
3.b	Diverting Port-Related Truck Traffic to Rail [ROG, NOx, CO]	IV-G, pp. 113-118
4	Traffic Flow Improvements [ROG, NOx, CO]	IV-G, pp. 119-124
5	Nonrecurrent Congestion Relief [ROG, NOx, CO]	IV-G, pp. 125-134

Tier I Control Measures-
Transportation System and Land Use
(Continued)

AQMP Measure No.	Title	AQMP Appendix No., Page No.
7	Centralized Ground Power Systems [ROG, NOx]	IV-G, pp. 141-146
8	Airport Ground Access [ROG, NOx, CO]	IV-G, pp. 147-154
11.	Rail Consolidation to Reduce Grade Crossings [ROG, NOx, CO]	IV-G, pp. 165-170
13	Freeway & Highway Capacity Enhancements [ROG, NOx, CO]	IV-G, pp. 185-190
16	High Speed Rail [ROG, NOx]	IV-G, pp. 203-208
17	Growth Management [ROG, NOx, CO]	IV-G, pp. 209-216

J. Correspondence

RECEIVED
JAN 30 1990
ROBERT BEIN, WM. FROST

SHERMAN BLOCK, SHERIFF

County of Los Angeles
Office of the Sheriff
Hall of Justice
Los Angeles, California 90012
(805) 948-8466

January 25, 1990

Robert Bein, William Frost
and Associates
14725 Alton Parkway
Irvine, California 92718

Attention: Mr. Kevin Erbe
Assistant Environmental Analyst

Dear Mr. Erbe:

The Los Angeles County Sheriff's Department, Antelope Valley Station is located at 1010 West Avenue J, Lancaster. Antelope Valley Station provides general law enforcement services covering 1368 square miles and serving a population of 220,000. The city of Palmdale contracts with the Sheriff's Department for both general law and traffic enforcement.

The project area is approximately (7) seven miles from the Antelope Valley Station. Our average emergency response time to the project area is approximately (3) three minutes and the immediate response is approximately (7) seven minutes.

A development in this area will have an impact on the Los Angeles County Sheriff's Department's ability to provide law enforcement services. Manpower increases necessary to accommodate such a project are determined by computing response times, calls-for-service and population, not only by the trade and commerce center, but by the numerous projects under construction in the area.

To help reduce impacts in both the construction and final phases of the project we ask that you provide adequate emergency access and circulation throughout the project and provide adequate lighting to enhance crime prevention. Enforcement efforts require proper street and address signs for easy identification of locations during emergencies and include landscape standards that do not conceal potential criminal activities around commercial buildings and parking areas.

If we may be of further assistance, please contact Deputy James Murren at (805) 948-8466, Monday through Friday, 8:00 AM to 4:00 PM.

Sincerely,

SHERMAN BLOCK, SHERIFF

Gary E. Vance, Captain
Commander, Antelope Valley Station

CITY OF PALMDALE

Wm. J. "Pete" Knight
MAYOR
Thomas H. Smith
MAYOR PRO TEM
Daniel C. Becker
COUNCILMEMBER
Joseph P. "Joe" Davies, Jr.
COUNCILMEMBER
Janis C. Hamm
COUNCILMEMBER

RECEIVED
FEB 1 1990
ROBERT BEIN, WM. FROST

January 26, 1990

Mr. Kevin Erbe
Robert Bein, William Frost & Assoc.
14725 Alton Parkway
P.O. Box 19739
Irvine, CA 92718

Re: Environmental Impact Report for Palmdale Trade and Commerce Center

Dear Mr. Erbe:

This is to provide responses to the Park and Recreation Facilities Questionnaire which was attached to your correspondence dated January 17, 1990.

Following are the questions with responses:

1. Please indicate the location of the facilities which serve the project site.

   Manzanita Park: This is a 5-acre park located at the northeast corner of Mesa Verde and 5th Street West. The site is approximately 1/2 mile south of Palmdale Boulevard.

   Desert Sands Park: This site is 20 acres in size and located at the southwest corner of Avenue P-8 and 3rd Street East. The site is approximately 1/8 mile east of Division Street.

2. What are the generation factors for the proposed land use?

   This question does not apply.

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3. Do you anticipate impacts to the park and recreational facilities?

   Yes, however, anticipated impacts should not be significant.

4. Please indicate if there will be any required fees to help mitigate potential impacts to park and recreation facilities.

   Compliance to City of Palmdale Ordinance No. 789 (Collection of Parkland Fees) and City of Palmdale Resolution No. 88-195 (Establishing the Parkland Development Fee) shall mitigate potential impacts to parks and recreation facilities.

5. Will park dedication be required as part of this project to mitigate potential impacts?

   No. However, development of drainage basins for compatible utilization for park and recreation purposes shall assist in reducing impacts.

6. Do you have any required or recommended mitigation measures for significant impacts?

   Recommended mitigation measures for significant impacts, if they did occur, may include:

   Development of additional park and recreation facilities within, or in close proximity to, the area

   Increasing the number of staff to adequately supervise park facilities and program offerings

7. Is there any other relevant information regarding potential impacts of the project?

   No.

Please call me at (805) 273-0513 if additional information is required.

Sincerely,

John Lasagna
Director of Parks and Recreation

JL/ab

cc: Robert Stanley, Planner
City of Palmdale

Palmdale City Library
Linda L. Storsteen
City Librarian

January 25, 1990

Robert Bein, William Frost & Associates
14725 Alton Parkway
P.O. Box 19739
Irvine, CA 92718

Attention: Kevin Erbe

Re: Environmental Impact Report for Palmdale Trade and Commerce Center

Dear Mr. Erbe:

I received your letter of January 17, 1990 requesting information on any possible impacts to the library from your proposed commercial project. Currently, the city operates a 12,000 square foot library facility on the corner of Palmdale Boulevard and Sierra Highway. This library facility is not adequate for the existing population. However, serious negotiations are underway to relocate the library into a larger site as an interim measure until the City is able to construct a facility capable of servicing the population needs for the next twenty years.

It is anticipated that the interim site will be centrally located in Palmdale and will be able to provide adequate service for the next few years. I do not believe that your project will adversely affect library operations in any way.

If I can be of any further assistance in this matter, please do not hesitate to contact me.

Sincerely,

Linda L. Storsteen
City Librarian

LLS/klp

RECEIVED
JAN 30 1990
ROBERT BEIN, WM. FROST

(805) 273-2820 700 E. Palmdale Boulevard, Palmdale, California 93550

2730 Ward Avenue
Simi Valley, California 93065

PACIFIC BELL
A Pacific Telesis Company

ROBERT BEIN, WILLIAM FROST
AND ASSOCIATES

MR KEVIN ERBE.
RE: ENVIRONMENTAL IMPACT REPORT PALMDALE TRADE CENTER

IN RESPONSE TO YOUR TELEPHONE SERVICE QUESTIONNAIRE.

AS TO THE LOCATION OF TELEPHONE LINES WITHIN THE IMMEDIATE PROJECT VICINITY THERE ARE NONE.

WE HAVE MAIN CONDUIT STRUCTURE WEST ON PALMDALE TO 10TH ST WEST AND NORTH ON 10TH ST. WE ARE PRESENTLY WORKING WITH THE CITY TO PLACE A CABLE BOXE STRUCTURE UP 5TH ST WEST WHICH WILL EVENTUALLY SERVE THIS AREA WEST OF THE FWY, BETWEEN AVENUE P AND PALMDALE BL.

THE IMPACT ON PACIFIC BELL WILL BE WITH THE EXTENSION OF FACILITIES IN A TIMELY MANNER TO MEET SERVICE REQUIREMENTS.

IN ORDER TO ALLEVIATE SOME OF THE PROBLEMS THAT MAY ARISE THE FOLLOWING ITEMS ARE REQUIRED BEFORE PACIFIC BELL CAN EFFECTIVELY PLAN AND DEVELOPE LINE EXTENSION AND/OR SERVICE CONNECTIONS.

PLOT MAPS, TENTATIVE TRACT MAPS, RECORDED TRACT MAPS, STREET IMPROVEMENT PLANS, WATER PLANS, SEWER PLANS, STORM DRAIN PLANS AND EDISON PLANS.

PACIFIC BELL REQUIRES 90 DAYS AFTER RECEIPT OF ALL THESE ITEMS BEFORE OUR DRAWING WILL BE READY.

THANK YOU
SINCERELY
SCOTT CLISSOLD
PACIFIC BELL ENGINEER
805 583-1019

RECEIVED

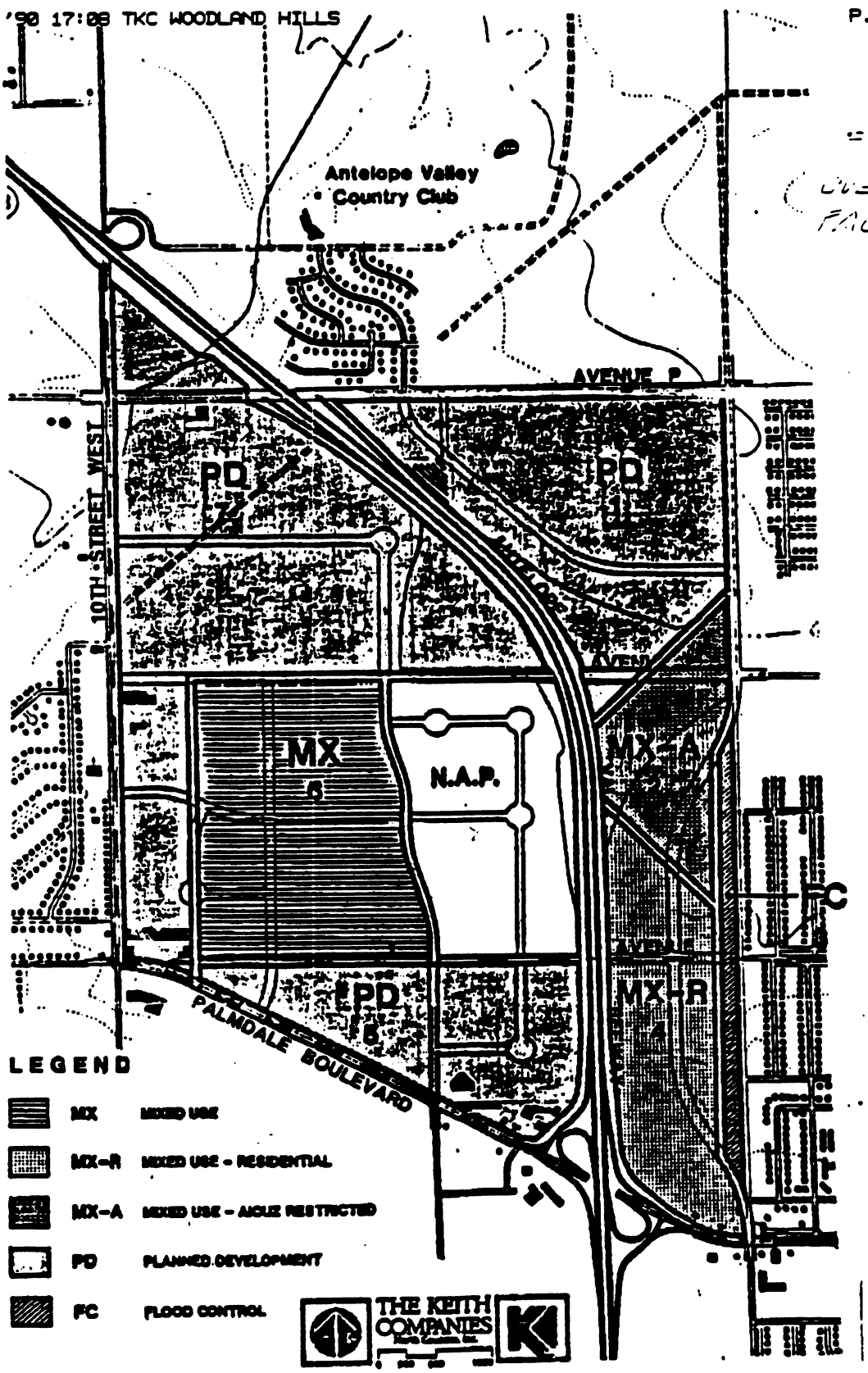
JAN 26 1990

ROBERT BEIN, WM. FRUSH

ELECTRIC SERVICE QUESTIONNAIRE

Please respond to the following questions on a separate sheet of paper as your reply will be included in the Appendix of the Final EIR.

1. What is the present service area and/or locations of your facilities? Are any of these facilities within the proposed project boundaries as shown on the attached Site Vicinity map? S/S OF AVE P, W/S OF 10TH ST. WEST, N/S OF AVE Q, E/S OF DIVISION STREET. E/S OF 5TH ST. WEST.
2. What is the present capacity and/or nature of your facilities? (Please provide any available information necessary to evaluate existing conditions in the project area and potential impacts). ALL FACILITIES ARE OVERHEAD 12KV LINES.
3. What is the projected electrical demand for the project based upon the information provided? MORE INFO IS REQUIRED TO DETERMINE ELT LOAD
4. Can your facilities in the service area supply the required additional electricity currently or on project completion? YES
5. Do you anticipate any project related impacts to your facilities? Specifically, will the proposed project impact service or require new or modified facilities? If so, please list/summarize additions or modifications. NO
6. Do you anticipate any short-term construction or related impacts, such as a possible disruption of service? NO
7. Do you require or recommend any mitigation measures for any project impacts noted in Items 3, 4, or 5? OVERHEAD LINES ARE REQUIRED TO BE PLACED UNDERGROUND. ALL LINES ABOVE 50KV ARE EXEMPT.
8. Is there any other relevant information regarding potential significant impacts of the project? NO



Palmdale Trade & Commerce Center
SPECIFIC PLAN

RECEIVED
FEB 14 1990
ROBERT DEIN, WM. FROST

SOUTHERN CALIFORNIA gas COMPANY

February 9, 1990

6520 FOOTHILL BOULEVARD • TUJUNGA, CALIFORNIA

MAILING ADDRESS: BOX 457 • TUJUNGA, CALIFORNIA 91043

R. B. F. Engineering
P.O. Box 19739
14725 Alton Parkway
Irvine. CA 92718
Attention: Kevin Erbe

REGARDING: JB 25957

The following is in response to your January 31, 1990 letter requesting informaton relative to an Enviromental Impact Report on the proposed development of Palmdale Trade and Commerce Center.

Within areas of interest and responsibilities of the Southern California Gas Company, we find the proposed development reasonable and acceptable.

This letter is not to be interpretered as a contractual commitment to serve the subject development, but only as an information service. Its intent is to notify you that the proposed project can be served from existing mains in the area. This can be done without a major impact on overall system capacity, service to existing customers, or the environment.

Industrial or commercial customers' loads vary with types of equipment used. The availability of natural gas service, as set forth in this letter is based upon present conditions of gas supply and regulatory policies. As a public Utility, the Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of federal regulatory agencies. Should these agencies take any action which affects gas supply or the condition under which service is available, gas service will be provided in accordance with the revised conditions.

We have developed several programs which are available, upon request, to provide assistance in selecting the most effective applications of energy conservation techniques for a particular project. If you desire further information on any of our energy conservations programs, please contact the following for assistance: Area Market Services Manager at (818) 951-2451.

Sincerely,

Ray D. Rawls /SP

Ray D. Rawls
Distribution Planning Supervisor

SP/RR/alt

cc: G. Baca
N. Stevenson
(a:JB25957)

CITY OF PALMDALE

Wm. J. "Pete" Knight
MAYOR
Thomas H. Smith
MAYOR PRO TEM
Daniel C. Becker
COUNCILMEMBER
Joseph P. "Joe" Davies, Jr.
COUNCILMEMBER
Janis C. Hamm
COUNCILMEMBER

January 30, 1990

RECEIVED
FEB 5 1990
ROBERT BEIN, WM. FROST

Robert Bein, William Frost & Associates
14725 Alton Parkway
P.O. Box 19739
Irvine, CA. 92718
Attn: Kevin Erbe, Assistant Environmental Analyst

Subject: Environmental Impact Report for Palmdale Trade and Commerce Center.

Dear Mr. Erbe:

Reference is made to your letter dated January 17,1990. The following are responses to your questions:

1. Trunk lines and the treatment plant are facilitated by the Los Angeles County Sanitation District. Locations of any facilities pertinent to above referenced development are shown in Exhibit "A" on the attached map.

2. Sewage flow will be estimated by using the methods outlined in the Standard Procedures for Processing Private Contract Sanitary Sewer Plans, published by the L.A. County Sewer Maintenance Department.

3. Portions of the above referenced development lie within the Amargosa Creek Assessment District No. 88-1 and will be subject to the appropriate fees. The rest of the development is within the Anaverde basin. Any construction of regional drainage facility that is in compliance to the City's Master Drainage Plan will be credited to the project against the development drainage fees.

4. Yes, the implementation of the project will represent a significant increase in service demand.

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5. The above referenced project will be required to conform to the City's drainage policy and all other development standards.

If you have any further questions, please do not hesitate to contact my office.

Sincerely,

John Mundweil
Acting City Engineer

JM/MM/gs
104301301990

cc: Kehar S. Dhinsa, Assistant City Engineer
Andie Briones, Senior Civil Engineer

MAP

Palmdale School District
ROY R. MARMOR EDUCATION CENTER
POST OFFICE BOX 900218
38300 SIERRA HIGHWAY
PALMDALE, CALIFORNIA 93590
PHONE (805) 947-7191
FAX (805) 272-0515

RECEIVED
FEB 23 1990
ROBERT BEIN, WM. FROST

February 16, 1990

Mr. Kevin Erbe
Robert Bein, William Frost
and Associates
Post Office Box 19739
Irvine, California 92718

RE: Environmental Impact Report for Palmdale Trade and Commerce Center

Dear Mr Erbe,

This letter is submitted in response to your request for information to be included in the EIR document for this project:

1. Please indicate the name and location of schools which are available to serve the project site.

   The project site is located within attendance zones established for the school year 1989-90 currently served by Summerwind School (grades K-5) and Juniper School (grades 6-8). Each of these facilities is functioning at capacity. The district continually reviews it zoning assignments in order to maximize utilization of it facilities.

2. What is the current enrollment of each school in the vicinity of the project, and what is the distance of the school from the project site?

   Current enrollment of Summerwind School is 391; current enrollment at Juniper School is 831. Both schools are within 2 miles of the proposed project.

3. What are the student generation rates for the proposed project? Will new facilities be required?

   The district does not apply student generation rates to commercial projects. New facilities for actual students generated from the project will be required.

4. In consideration of A.B. 2926, are there any assessment fees or other required or recommended mitigation measures for the project?

   Developer fees are in place.

5. Is there any other relevant information regarding significant project impacts?

   No.

Sincerely,

Pamela Johnson
Facilities Coordinator

PJ/bpc