Pappi's motion sequence #33.

SOUTH NATOMAS BUSINESS PARKS (P-9317, P-9114 and P-9145)
Council meeting of May 11, 1982, Items 21, 22 and 23

FINAL ACTION OF COUNCIL:

A. Certify the adequacy of the Creekside EIR;

B. Approve in concept only and subject to the conditions contained in this motion:

~~1. 630,000 square feet of office on 45 acres within Natomas Eastside (14,000 square feet per acre);~~

~~755,000 square feet of office on 52 acres within Gateway Centre (14,500 square feet per acre); and~~

~~572,000 square feet of office on 52 acres within Creekside (11,000 square feet per acre).~~

2. Applicants negotiate in good faith with City staff a development agreement or agreements, providing for:

   a. a PUD/schematic plan mechanism to insure that the three projects are developed as a unified regional office park, designed to attract large users. The PUD/schematic plan shall also inclue non-office land uses.

   b. the developers contribution to the financing of public facility, public service, and infrastructure costs, including land dedication capital, maintenance and operation expenses, to be located within the Community Plan.

      The developers contributions to such costs shall be beyond that apportionable solely to needs generated by their projects and shall be equitably shared between the three developers based on the amount of office approved for each project. In negotiating the development agreement, special consideration shall be given to:

      1. traffic improvements;

      2. a park, parkway strips, and the I-5 open space corridors, including the existing parkway strip to the east of I-5 and south of West El Camino to 880;

      3. a fire station;

      4. a library;

      5. development of elderly housing;

      6. include mitigation factors to diminish impact on downtown (the cutting at least in half of commercial square footage on site);

      7. contributions by developers to create a more transit-oriented society area within the Community Plan.

   c. time deadlines to insure a rational sequencing of the build-out of office, residential and necessary infrastructure.

   d. other measures determined by staff as needed to mitigate adverse environmental impacts identified in the EIRs for these projects.

3. Staff shall return to both the City Planning Commission and City Council within 90 days with a development agreement meeting the intent of this motion.

4. Applicants waive all statutory time deadlines for a minimum of 90 days following this hearing.

File
(sent 5-19)

CITY OF SACRAMENTO

OFFICE OF THE CITY CLERK
915 I STREET
CITY HALL ROOM 203
SACRAMENTO, CALIFORNIA 95814
TELEPHONE (916) 449-5426

LORRAINE MAGANA
CITY CLERK

May 18, 1982

TO: INTERESTED PARTIES

On May 11, 1982, the Sacramento City Council heard testimony and considered various requests for property as follows:

1. Property located on the northwest quadrant of Interstate 5, north and south of West El Camino Avenue (P-9114);

2. Property located south of West El Camino Avenue, west of Interstate 5, north of Garden Highway and east of Natomas Oaks Drive (P-9145); and,

3. Property located north of Garden Highway, south of West El Camino Avenue, west of Bannon Slough, and east of Interstate 5 (P-9317)

The attached document, Final Action of the City Council, reflects the actions taken and approved by the City Council at this meeting.

Sincerely,

Lorraine Magana
City Clerk

LM/mm/21-23
Attachment

cc: 885 Investment Co. (425 University Ave, Ste 208)
Wm. G. Holliman (555 Capitol Mall, Ste 950)
Morrison Homes (4441 Auburn Ave, Ste P, 95814))
P G & E (77 Beale St, Rm 2C48, S.F. 94106)
Gateway Centre Assoc. (1451 River Park Dr, 110)
Bob Bell (555 Capitol Mall, 95814))
Carl Durling (7700 College Town Dr, 95826)
Jack Diepenbrock (455 Capitol Mall, 95814)
City Planning Department

SOUTH NATOMAS BUSINESS PARKS (P-9317, P-9145 and P-9145)
FINAL ACTION OF THE CITY COUNCIL

A. Certify the adequacy of the Creekside Environmental Impact Report;

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   572,000 square feet of office on 52 acres within Creekside (11,000 square feet per acre).

2. Applicants negotiate in good faith with City staff a development of agreement or agreements, providing for

   a. A PUD/Schematic Plan mechanism to insure that the three projects are developed as a unified regional office park, designed to attract large users. The PUD/Schematic Plan shall also include non-office uses.

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      3. A fire station;

      4. A library;

      5. Development of elderly housing;

      6. Include mitigation factors to diminish impact on downtown (the cutting at least in half of commercial square footage on site); and,

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LM/mm/21-23
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SOUTH NATOMAS BUSINESS PARKS (P-9317, P-9145 and P-9145)
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Items 21, 22 & 23

May 11, 1982

SOUTH NATOMAS OFFICE PARK HEARING PROGRAM

Order of Presentation

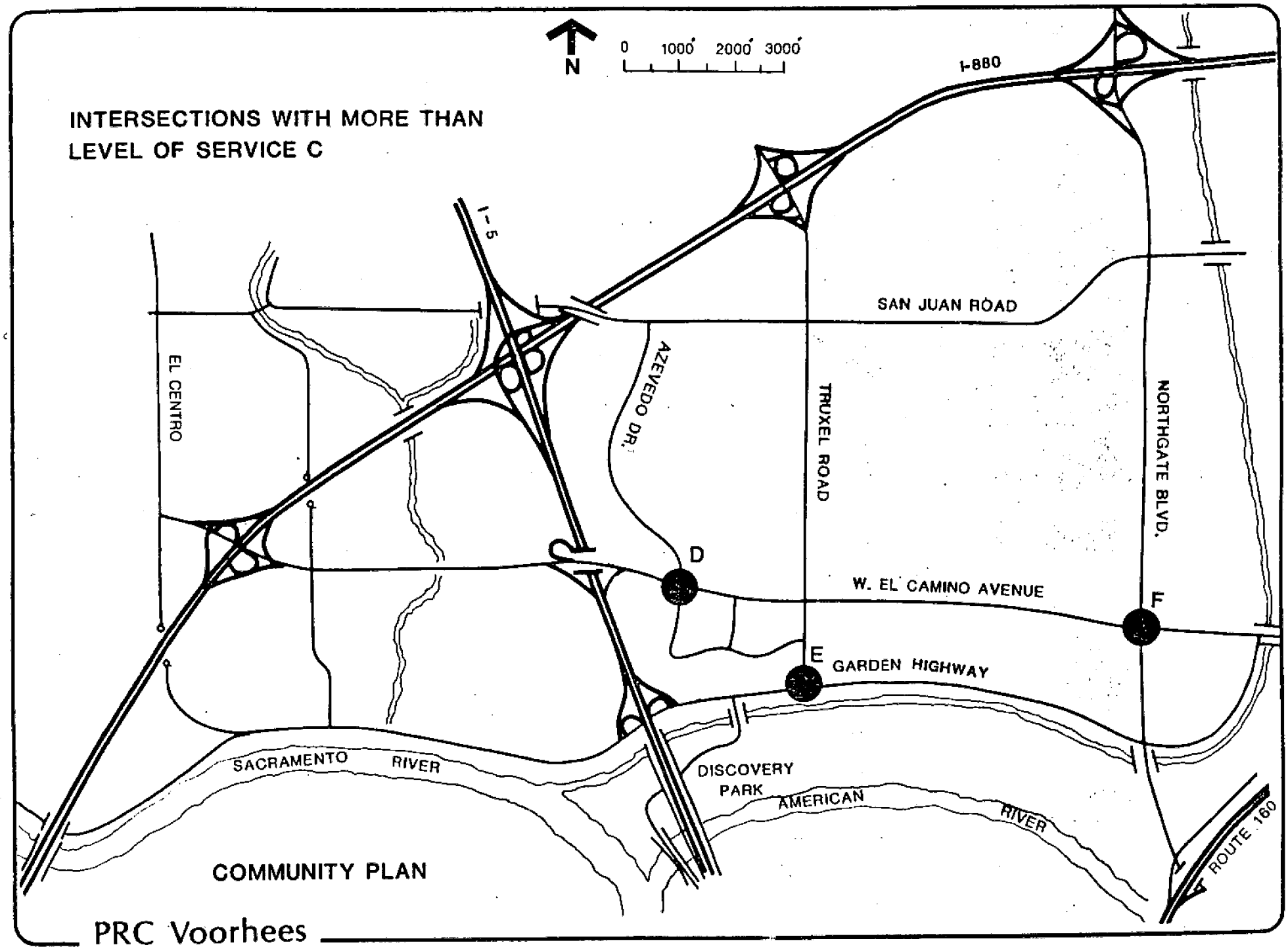
City Staff	15 minutes
Creekside - Bob Bell	15 minutes
Natomas Eastside - Bill Holliman	15 minutes
Gateway Centre - Jack Diepenbrock	15 minutes
Proponents	
Opponents	
Close Public Hearing on EIR and Projects	
Discussion - (The Council may ask questions of any party: staff, applicants, witnesses)	
Motion	

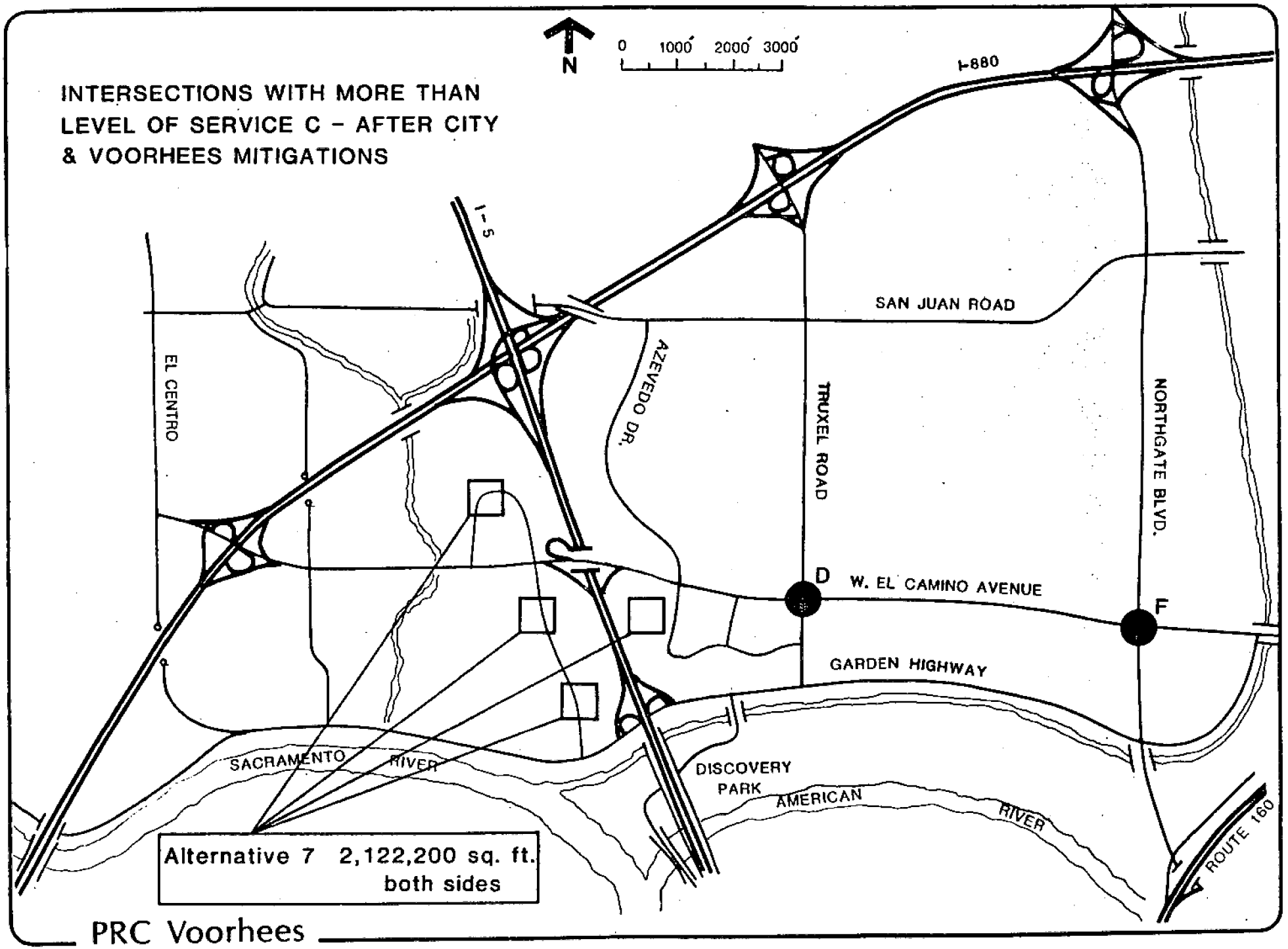
21

Traffic Level of Service with Community Plan and Various Office Alternatives

Intersection	Community Plan		Alt #1 614,000 sq. ft. East Side		Alt #2 1,256,200 sq. ft. West Side		Alt #3 1,508,200 sq. ft. West Side		Alt #4 1,508,200 sq. ft. Both Sides		Alt #5 2,180,000 sq. ft. West Side		Alt #6 3,446,574 sq. ft. Both Sides		Alt #7 (1+3) 2,122,200 sq. ft. Both Sides	
	Table 1 (City Report)		W/out Mit. Meas.	With Mit. Meas.	W/out Mit. Meas.	With Mit. Meas.	W/out Mit. Meas.	With Mit. Meas.	W/out Mit. Meas.	With Mit. Meas.	W/out Mit. Meas.	With Mit. Meas.	W/out Mit. Meas.	With Mit. Meas.	W/out Mit. Meas.	With Mit. Meas.
Garden & Natomas Oaks	A	A	A	A(A)[1]	C		C	A/B	C	A	D		D	C/D	—	A/B
Garden & I-5 W, Ramp	E	C	C	B(B)	E		E	B	E	A/B	E		E	C	—	B
Garden & I-5 E, Ramp	E	B	B	B/C(B)	C		C	C	C	C	C		C	C/D	—	C(B/C)
Garden & Discovery Park	-	-	-	A/B -	-		-	B	-	A	-		-	A	—	A/B
Garden & Truxel	E	E	E	A(C)	E		E	A	E	A	E		E	A	—	A (C)
Garden & Northgate	E	C	C	C(C)	C		C	C	D	C	D		D	C	—	C
El Camino & Orchard	A	A	A	A(A)	A		A	A	A	A	A		A	B	—	A
El Camino & Natomas Oaks	B	B	B	A(A)	C		C	B	C	A/B	D		D	C/D	—	B
El Camino & I-5 Ramp	D	B	B	A(A)	B		B	A	B	A	B		C	A	—	A
El Camino & Asevedo	D	D	E	A/B(B/C)	D		D	A	D	A	D		E	C	—	B(B/C)
El Camino & Truxel	C	C	D	D(D)	D		D	C	D	C	D		D	D/E	—	D (D)
El Camino & Northgate	F*	F*	F*	F(F)	F*		F*	F	F*	F	F*		F*	F	—	F
D's	2	1	1	1 1	2		2	0	3	0	5		4	2		1
E's	4	1	2	0 0	2		2	0	2	0	2		3	1		0
F's	1	1	1	1 1	1		1	1	1	1	1		1	1		1

Note: "Without Mitigation Measure" levels of service estimates developed by City of Sacramento, except where noted by an asterisk. "With Mitigation Measure" levels of service estimates developed by PRC Voorhees. Mitigation Measures include additional lanes within existing right-of-way, and a roadway connection to Garden Highway between I-5 and Truxel. The affects of a successful TSM program are not reflected in these levels of service. Alternative 1 was also analyzed without the Garden Highway connection and these levels of service are enclosed in parenthesis.


INTERSECTIONS WITH MORE THAN
LEVEL OF SERVICE C
N
0 1000' 2000' 3000'
I-880
I-5
SAN JUAN ROAD
EL CENTRO
AZEVEDO DR.
TRUXEL ROAD
NORTHGATE BLVD.
D
W. EL CAMINO AVENUE
F
E
GARDEN HIGHWAY
SACRAMENTO RIVER
DISCOVERY PARK
AMERICAN RIVER
ROUTE 160
COMMUNITY PLAN
PRC Voorhees


INTERSECTIONS WITH MORE THAN LEVEL OF SERVICE C - AFTER CITY & VOORHEES MITIGATIONS
N
0 1000' 2000' 3000'
I-880
I-5
SAN JUAN ROAD
EL CENTRO
AZEVEDO DR.
TRUXEL ROAD
NORTHGATE BLVD.
D
W. EL CAMINO AVENUE
F
GARDEN HIGHWAY
SACRAMENTO RIVER
DISCOVERY PARK
AMERICAN RIVER
ROUTE 160
Alternative 7 2,122,200 sq. ft. both sides
PRC Voorhees

91-23

May 11, 1982

City Council
Sacramento, California

Honorable Members in Session:

We are concerned that the Sacramento City Council is currently considering applications to develop business parks in South Natomas. It is obvious that the development of such business parks would be totally inconsistent with the South Natomas Community Plan. Such business parks would contribute to severe traffic problems for North Sacramento as well as South Natomas, particularly along West El Camino east of Northgate Boulevard.

The location of such business parks in South Natomas will negatively affect the opportunity of North Sacramento to attract similar land uses for the foreseeable future despite the availability of suitable land for such uses.

The dramatic diversion from the South Natomas Community Plan which the business parks would constitute, if approved, only four years after adoption of the Plan, represents an action which undermines public confidence in the planning process and makes it more difficult to sustain public support for and participation in the development of the North Sacramento Community Plan.

In light of the above concerns, the members of the North Sacramento Community Plan Citizens Advisory Committee present at the May 10th meeting urge the City Council to deny the applications to amend the South Natomas Community Plan to permit any business parks as are currently proposed.

Respectfully submitted;

Mattie Evans

Mattie Evans, Chairperson
North Sacramento Citizens Advisory Committee

CITY OF SACRAMENTO

21

CITY PLANNING DEPARTMENT
927 TENTH STREET
SUITE 300
SACRAMENTO, CA 95814
TELEPHONE (916) 449-5604

MARTY VAN DUYN
PLANNING DIRECTOR

May 5, 1982

City Council
Sacramento, California

Honorable Members in Session:

SUBJECT: 1. Environmental Impact Report;

2. Amend 1974 General Plan from residential to commercial and offices (52± acres);

3. Amend the 1978 South Natomas Community Plan from residential 17av and 22av to business and professional offices (52± acres);

4. Amend the Creekside PUD from Garden Apartment and Light Density Residential to office park and add 14± acres to the PUD for office park; and

5. Rezone 52± vacant acres from Agriculture (A), Garden Apartment (R-2-PUD and R-2A-PUD), and Light Density Residential (R-3-PUD) to Office Building (OB-PUD) or more restrictive zoning. (P-9317)

LOCATION: East of I-5, south of West El Camino Avenue and north of the Garden Highway. The subject site is bounded to the east by Bannon Slough and to the west by I-5 and a vacant parcel.

SUMMARY:

In 1978, the City Council adopted the South Natomas Community Plan. The plan promoted higher residential densities to provide close-in housing to the Central Business District.

In 1980, the City Council approved the Creekside Residential PUD that provides 672 residential units on 39± acres. The proposed project would introduce a suburban office park on 52± acres and would displace approximately 911 dwelling units.

The Planning Commission recommended denial of the General, Community and PUD Plan amendments and denial of the rezoning.

The staff report to the Planning Commission and the Commission's voting records are attached for the Council's information.

VOTE OF PLANNING COMMISSION

On April 29, 1982, the Planning Commission certified the EIR and recommended denial of the General and Community Plan amendments, of the amendment and addition to the Creekside PUD, and of the rezone by a vote of six ayes, two noes and one abstention.

RECOMMENDATION:

The staff and Planning Commission recommend the following:

1. Determine that the Final EIR is adequate;

2. Certify that the EIR has been prepared in compliance with CEQA and that the City Council has considered the information contained in the Final EIR;

3. Determine that the project will have a significant effect on the environment based on the findings included in the staff report to the Planning Commission;

4. Deny the amendment to the 1974 General Plan from residential to commercial and offices;

5. Deny the amendment to the 1978 South Natomas Community Plan from residential 17av and 22av to business and professional offices;

6. Deny the amendment to the Creekside Residential PUD from residential to business park development and to include an additional 14± acres; and

7. Deny the rezone of 52± acres from Agriculture (A), Garden Apartment (R-2-PUD and R-2A-PUD), and Light Density Multiple Family (R-3-PUD) to Office Building (OB-PUD) or more restrictive zoning.

Respectfully submitted,

Marty Van Duyn
Planning Director

FOR CITY COUNCIL INFORMATION
WALTER J. SLIPE
CITY MANAGER

MVD:DP:cp
Attachments
P-9317

May 11, 1982
District No. 1

21

SACRAMENTO CITY PLANNING COMMISSION

MEETING DATE 4-29-82
ITEM NO. 10a FILE NO. P-9317
M-

GENERAL PLAN AMENDMENT ☐
COMMUNITY PLAN AMENDMENT ☐
REZONING ☐
SPECIAL PERMIT ☐
VARIANCE ☐
TENTATIVE MAP ☐
SUBDIVISION MODIFICATION ☐
ENVIRONMENTAL DET. ☑
OTHER EIR - FINAL

Recommendation:
☐ Favorable
☐ Unfavorable ☐ Petition ☐ Correspondence

LOCATION: EAST OF I-5 SOUTH OF W. El Camino Ave, north of the Garden Highway - CREEKSIDE OFFICE PARK

PROPONENTS

NAME		ADDRESS
Robert Bell	555 Capitol Mall	Sacramento, CA
Jack Peers	Voorhees Assoc. (TRAFFIC)	Berkeley, CA.
Jim Cassis	David Butler Co.	Sacramento, CA.

OPPONENTS

NAME	ADDRESS
Ray Threetheway	SNCA Association P.O. Box 15362 Sacto. CA.
Maryanne Alden	So. Natomas Com. Assoc. Resident

MOTION NO. 1

	YES	NO	MOTION	2ND
Augusta	✓			
Fong	absent			
Goodin	✓			
Holloway	✓			
Larson	✓			
Muraki	✓		✓	
Silva	✓			✓
Simpson	✓			
Hunter	✓			

MOTION:

☐ TO APPROVE
☐ TO DENY
☐ TO APPROVE SUBJECT TO COND. & BASED ON FINDINGS OF FACT IN STAFF REPORT
☐ INTENT TO APPROVE SUBJ. TO COND. & BASED ON FINDINGS OF FACT DUE _____
☐ TO RECOMMEND APPROVAL _____ & FORWARD TO CITY COUNCIL
☐ TO RATIFY NEGATIVE DECLARATION
☐ TO CONTINUE TO _____ MEETING
☑ OTHER Determine FINAL EIR as Adequate

3

SACRAMENTO CITY PLANNING COMMISSION

21

MEETING DATE 4-29-82

ITEM NO. 18 FILE NO. P-9317

M-

- [x] GENERAL PLAN AMENDMENT
- [x] COMMUNITY PLAN AMENDMENT
- [x] REZONING
- [ ] SPECIAL PERMIT
- [ ] VARIANCE
- [ ] TENTATIVE MAP
- [ ] SUBDIVISION MODIFICATION
- [ ] ENVIRONMENTAL DET.
- [ ] OTHER PUD Amendment (CREEKSIDE PUD)

Recommendation:
- [ ] Favorable
- [x] Unfavorable

[ ] Petition [ ] Correspondence

LOCATION: EAST of I-5 So. of west El Camino Ave. and north of The Garden Highway CREEKSIDE OFFICE PARK

PROPONENTS

NAME		ADDRESS
Robert Bell (attorney representing applic.)		555 Capitol Mall
Jack Peers	Voorhees Associates (traffic)	Berkeley, Ca.
Jim Cassis	David Butler Co.	Sacramento, Ca.

OPPONENTS

NAME	ADDRESS
Ray Threlkeway	So. Natomas Comm. Association
Maryanne Alden	So. Natomas resident

MOTION NO. 3

	YES	NO	MOTION	2ND
Augusta		✓		
Fong	absent			
Goodin		✓		
Holloway	✓			
Larson	✓			
Muraki	✓			✓
Silva	✓		✓	
Simpson	✓			
Hunter	✓			

MOTION:

- [ ] TO APPROVE
- [ ] TO DENY
- [ ] TO APPROVE SUBJECT TO COND. & BASED ON FINDINGS OF FACT IN STAFF REPORT
- [ ] INTENT TO APPROVE SUBJ. TO COND. & BASED ON FINDINGS OF FACT DUE _____
- [x] TO RECOMMEND APPROVAL of STAFF Recommendation & FORWARD TO CITY COUNCIL
- [ ] TO RATIFY NEGATIVE DECLARATION
- [ ] TO CONTINUE TO _____ MEETING
- [ ] OTHER _____

4

CITY PLANNING COMMISSION

915 "I" STREET - SACRAMENTO, CALIFORNIA 95814

APPLICANT Isakapolous Land Development Co., 7700 College Town Drive., Ste., 101 Sacto.
OWNER Northridge Estates 1451 Quail Street, Newport Beach, CA
PLANS BY Spink Corporation
FILING DATE 4/7/82 AB 884 ~~50 DAY CPC ACTION~~ DATE 5/28/81 REPORT BY: DP:dgh
~~NEGATIVE DEC~~ Application Completed 5/28/81 EIR 5/11/81 ASSESSOR'S PCL. NO. 274-042-11, 16, 17, & 19

Application:
1. Certification of the Final EIR;
2. Amend the 1974 General Plan from Residential to Office (52± acres);
3. Amend the 1978 South Natomas Community Plan from Residential 17av and 22av to Business and Professional Office (52± acres);
4. Amend the Creekside Residential PUD from Residential to Office Park and to add 14± acres to the PUD for Office Park;
5. Rezone 52± vacant acres from Agriculture (A), Garden Apartment (R-2 PUD and R-2A PUD), and Light Density Multiple Family (R-3 PUD) to Office Building (OB-PUD) or more restrictive zoning.

Location: East of I-5, south of West El Camino Avenue and north of the Garden Highway. The subject site is bounded to the east by Bannon Slough and to the west by I-5 and a vacant parcel.

Proposal: The applicant is requesting the necessary entitlements to establish a 52± acre Office Park PUD containing 614,000 square feet of office building.

Project Information:

	EXISTING	PROPOSED
General Plan Designation:	Residential	Office
South Natomas Community Plan:	Residential -17av & 22av	Offices
PUD Designation	Residential	Offices
Zoning:	Agriculture (A), Garden Apartment (R-2 PUD and R-2A PUD), and Light Density Residential (R-3 PUD)	Office Building (OB-PUD)

Existing Land Use: Vacant

Surrounding Land Use:
North: Discovery Park Apartments
South: Garden Highway, American River Parkway
East: Bannon Slough, Vacant (designated Residential)
West: I-5, Vacant (designated Residential)

APPLC. NO. P-9317 MEETING DATE 4/29/82 CPC ITEM NO. 1

STAFF EVALUATION: On December 3, 1981, the Planning Commission reviewed the Creekside Office Park Draft Environmental Impact Report (DEIR) and forwarded it to the Environmental Coordinator for preparation of the Final EIR (FEIR). The FEIR consists of the DEIR and the Addendum containing comments received on the Draft. The Addendum was distributed on March 15, 1982, to all persons and organizations who received copies of the DEIR.

The Final EIR constitutes the environmental impact report for Creekside Office Park. Additionally, the document analyzes the study area: 1) as designated by the 1978 South Natomas Community Plan; 2) as containing 1.5 million square feet of office land use on the east and west sides of I-5; and 3) as containing 3.4 million square feet of office land use on the east and west sides of I-5. The study area encompasses the Creekside, Natomas Eastside, Gateway Centre and Natomas Corporate Center (BD Properties) project sites.

Note: In the staff report, the cumulative impacts referred to encompass those impacts defined in the Creekside Final EIR for the 3.4 million square foot alternative. This alternative studied Creekside Office Park as proposed (614,000 sq. ft. of office), Natomas Eastside at 1.5 million square feet of office, Gateway Centre at 1.2 million square feet of office, and the BD Properties site at 117,000 square feet of office. Since preparation of the Creekside Final EIR, an application (Natomas Corporate Center) has been submitted to the city on the BD Properties site requesting 140,000 square feet of office.

BACKGROUND INFORMATION: In 1977, an office proposal alternative representing a conceptual office development scheme along the west and east sides of I-5, north of the Garden Highway and south of West El Camino Avenue, was evaluated in the EIR prepared for the South Natomas Community Plan. The conceptual alternative encompassed 105 acres and comprised 3.5 million square feet in two-story office buildings. A portion of the Creekside Office Park site represents a portion of the conceptual office proposal alternative. The South Natomas Community Plan EIR, certified in 1978, indicated that an office proposal would create major impacts on traffic congestion, noise and air quality. The environmental document also concluded that although the project would generate substantial revenues for the City, it would compete with and threaten the viability of the downtown central business district partly because of the close proximity of the two locales.

In 1978, the City Council adopted the South Natomas Community Plan. The plan promoted higher residential densities and a variety of housing types. The higher densities were designed to provide close-in housing to the Central City Core. The Core represents that area bounded by the Sacramento River and 16th, H and R Streets. The Central Business District and governmental offices are contained within the Core.

Besides designating residential density minimums in South Natomas to accommodate increased numbers of people and to retard the need for urban

expansion to the north, the City Council adopted the following goals and objectives:

- Assure that new development is healthy and of long lasting benefit to the community;

- Prohibit the intrusion of incompatible land uses and disruptive traffic into new and existing residential areas;

- Limit commercial and office development to neighborhood and community services and retail sales. Do not permit regional scale developments, especially those which compete with the Central Business District of downtown Sacramento;

- Provide a balanced circulation system that serves local residents and through traffic with a minimum of conflict with residential neighborhoods, shopping areas and other land uses;

- Encourage development which promotes the conservation of fossil fuels and minimizes air, noise, and water pollution;

- Require the proponent of additional commercial and office development to clearly justify demand to the satisfaction of the Planning Commission and City Council. Such justification shall consider resident concerns, the cited standards pertaining to land and building space, vacancy rates and location criteria.

Thirty-nine acres of the proposed fifty-two acre Creekside Office Park site represents the Creekside Residential PUD (P-8717) approved by the City Planning Commission and the City Council in November 1979 and January 1980, respectively. The PUD contains 404 apartments, 168 airspace condominiums and 100 townhouse-condominium units for an average density of 21 units per net acre. The remining acreage located outside of the adopted PUD is designated residential 22 average (239± du) by the South Natomas Community Plan.

LAND USE

1. The proposed project, Creekside Office Park, would alter the designated residential character of the South Natomas Community by introducing a regional business park. The South Natomas Community Plan, adopted in February 1978, was designed to provide a close-in residential community with neighborhood oriented commercial and office land uses to support the Central City Core. At the time of adoption, the City determined that the higher densities provided in the plan would fulfill the social need for diversified housing in close proximity to the region's major employment center, the Central City Core, and would reduce development pressure on prime agricultural land north of Interstate 880.

The residential densities and holding capacities adopted for the South Natomas area reflect a balancing of City-wide housing needs. Amendments to the planned residential capacity will effect not only the South Natomas community but other City of Sacramento communities as well. Recently, the Central City Community Plan residential densities were adopted partially on the basis that South Natomas would play a major role in providing "close-in" housing.

The South Natomas Plan appears to be successful. Approximately twenty (20) percent of the residential units called for in the community plan have been built and occupied. The average number of dwelling units built and occupied annually during 1979 and 1980 has been 469 du/yr. In 1980, 1,501 units were tentatively approved for development. Presently, only twenty-five (25) percent of the residentially designated land in South Natomas remains unmapped. The area provides a variety of housing types within the median price range for Sacramento at a locale in close proximity to the region's major employment center, the Central City.

2. Creekside Office Park would displace approximately 911 residential units. This number represents approximately four percent of the theoretical total holding capacity (23,046 du) of the South Natomas Community Plan and 100 percent of the Creekside Residential PUD. The displacement is compounded by the additional demand for housing that will be created as a result of the new jobs, both direct and indirect, generated by the project. Additionally, the project may be growth inducing by encouraging similar business park proposals within the South Natomas Community Plan area. As you know, the City currently has three additional business park applications in the vicinity of Creekside--Natomas Eastside, Gateway Centre and Natomas Corporate Center. If 3.4 million square feet of office is approved on the four subject sites in the configuration presented in the Creekside FEIR, total residential displacement would be 2,331 dwelling units (10% of the theoretical holding capacity of the South Natomas Community Plan area) designated to support the Central City Core.

   The cumulative impact of the reduced number of housing units is compounded by the corresponding increased demand for housing associated with new employment centers. Creekside Office Park is expected to create a demand for an additional 850 to 1,510 dwelling units. Cumulatively, 3.4 million square feet of office would create a demand for as many as 6,616 additional dwelling units.

3. Office square footage and developable land designated for office use in suburban locations is existing in residentially developed and residentially developing areas in the City. For instance, developable land at the proposed Park Arden site and remaining developable parcels in Point West can provide 1.4 million square feet along Interstate 80. Southwest Five, a 600,000 square foot business park PUD, was recently approved in the Pocket area.

   The removal of land designated for residential uses forces the cost of housing upward because available land supply becomes more limited. The findings of the Questor Affordable Housing Study, supported by the City Council, emphasized that each growth community and the City

overall should have ample land available for residential uses in order to keep housing as affordable as possible. These findings are emphasized in the adopted 1980 Housing Element. The conversion of approximately 52 acres of residentially designated land to non-residential uses in the northern portion of the City, where further development would be restricted to infill because land north of South Natomas is designated urban reserve and permanent agriculture, will affect the supply of land and the affordability of housing. There are areas of the City containing considerable amounts of vacant developable land for residential use where a job-housing link might be achieved without severely impacting housing affordability.

Traffic and Circulation

While the South Natomas Community Plan was being drafted, a great deal of attention was focused on traffic and circulation. In an effort to encourage transit patronage at residential buildout, the plan was designed to provide transit availability within a one-quarter mile radius of residences. Constraints with regard to intersection capacity within the community plan and to freeway interchanges along I-5 were identified during preparation of the Community Plan and the Creekside EIR. Unacceptable levels of service have been identified at six critical intersections within the community plan area. The Garden Highway/I-5 interchange provides for travel in all directions, however, four left turn movements are required. Due to Cal Trans' standards regarding minimum weaving distances between interchanges, the West El Camino Avenue/I-5 interchange lacks north bound ramps as a result of its proximity to the I-5 interchange.

The proposed Creekside Office Park would generate 9,200 trips per day and 71,380 vehicle miles traveled per day. These figures represent a forty-four (44%) percent increase over the already congested circulation system that will occur at community plan buildout. Cumulatively, 3.4 million square feet of office would generate 263,000 average daily trips (20% increase over the community plan land uses and 2,170,800 average vehicle miles traveled (14.5% over the community plan land uses).

The EIR presents several mitigation measures, including transportation systems management (TSM) programs and increasing the planned number of lanes. The EIR cautions that enforcement of TSM programs by the City would be difficult.

Air Quality

The analysis of air quality impacts conducted for the EIR indicates that there would be very little difference in carbon monoxide (CO) emissions at the studied receptor locations between Creekside Office Park and the designated residential uses for the site. The EIR does indicate that there would be a minor increase in hydrocarbon and nitrous oxide emmissions from traffic. Cumulatively 3.4 million square feet of office would exceed the 8-hour federal CO standard at four locations.

In 1977, the Sacramento Air Quality Maintenance Area was designated a non-attainment area for ozone and carbon monoxides. The adopted 1981 Air Quality Plan proposes control strategies to attain pollutant standards by 1987. The Plan's strategies are based on the assumption that land uses in South Natomas reflect those designated on the 1978 Community Plan. The 3.4 million office land use alternative would generate approximately 15 percent more emissions that the land uses currently designated for the sites. This increase in emissions would contribute in preventing the Sacramento area from meeting the 1987 attainment goal set forth in the 1981 Air Quality Plan.

Employment, Population and Housing

The EIR estimates that Creekside Office Park will generate approximately 2,000 new direct and secondary jobs. While the new source of employment would assist in alleviating the area's SMSA unemployment rate, the project would displace 911 residential units while creating a demand for additional housing units. Cumulatively, 3.4 million square feet of office are estimated to generate 9,263 new direct and secondary jobs, to displace approximately 2,331 dwelling units, and to create a demand for an additional 6,616 residential units.

South Natomas has provided Sacramento with diversified housing in the median price range. Condominiums, townhouses, half-plexes, patio homes and single family detached units have been selling in the low end of the median price range for the Sacramento area. The project may adversely affect the price of housing in South Natomas in the following ways:
1) creating a demand for residences by generating new jobs while reducing the supply of dwelling units via displacement may prompt an increase in housing costs; 2) property values may increase on those parcels adjacent to the project site, thereby inflating the cost of housing; 3) because of sewer capacity limitations in South Natomas, attempting to increase densities on the remaining unmapped parcels might affect the cost of housing in South Natomas as a result of the expense required to expand the sewer capacity.

Public Services and Fiscal Impacts

Compared to the community plan land uses, the proposed project would result in increased fire flow requirements, a decrease in water demand, a decrease in sewage flow, an increase in peak runoff flows, no net impact on solid waste costs, elimination of approximately 12 acres of parkland, a reduction of 237 students, and a land use pattern less amenable to efficient transit service.

The fiscal analysis in the EIR concluded that the Creekside Office Park would result in a $327,780 savings in capital costs and an increase of $271,792 in capital revenue over the community plan. The proposed park would result in savings of $73,560 in operating costs and a decrease of $8,686 in operating revenues for a net increase of $64,874 over the community plan. The project would appear to result in a net increase in one-time revenues compared to the Community Plan. Annual project revenues would exceed operating costs compared with the Community Plan.

Economic Growth and Business Park Demand

The City recognizes a demand for suburban business parks exists. However, the City is interested in directing business park development in locations that will provide the least number of adverse impacts. The proposed 614,000 square feet of office may result in a "drag" on the 2.6 million square feet of private office space existing in the downtown and three million square feet currently under construction or proposed in the downtown. A minimum of 2.1 million square feet is available or proposed in the City at the Point West, Arden Park, and Southwest Five suburban office parks alone. The competition of Creekside Office Park could result in a decline in the absorption of existing and proposed square footage in suburban office parks and office structures in the Central Business District.

The traffic impacts have been noted earlier in the report as have air quality impacts. It would seem prudent to direct business park development to sites already available for development, to those with close proximity to light rail lines, and to those areas located farther from the Central Core where residential development is existing or has been increasing without associated employment centers.

Conclusion

Creekside Office Park will impact the South Natomas community and the City of Sacramento. While generating new jobs, the project will displace residential units in an area designed to provide diversified, close-in housing to Sacramento's regional employment center, the Central Core, and will create a demand for additional housing units. The project will result in increased average daily trips and vehicle miles traveled. Unacceptable levels of service will result at several critical intersections.

A study of the cumulative effects of 3.4 million square feet of office indicates that an increase in displaced residences, in demand for additional dwelling units, and in the number of roadways at unacceptable levels of service results. The increased vehicle emissions from the projects will inhibit the Sacramento area from meeting its 1987 attainment goal set forth in the 1981 Air Quality Plan.

Creekside Office Park is contrary to a number of goals and objectives in the 1978 South Natomas and 1980 Central City Community Plans, including those emphasizing higher residential densities in South Natomas and continued revitalization of the Central Business District. The project is inconsistent with the 1980 Housing Element which sets forth goals to attain a sufficient housing supply to assure existing and future residents of a safe and sanitary dwelling at an affordable price.

Staff Recommendation: Staff recommends that the Planning Commission:

1. Determine that the Final EIR is adequate.

2. Certify that the EIR has been prepared in compliance with CEQA and that the City Planning Commission has considered the information contained in the Final EIR.

//

3. Determine that the project will have a significant effect on the environment in that:

   a. The project has the potential to degrade the quality of the environment because

      i) the land uses will result in increased vehicular traffic resulting in less than acceptable levels of service on roadways; and

      ii) the project will be growth inducing by creating a demand for secondary commercial/office/distribution uses and by encouraging similar business park developments within the community plan area; and

      iii) the project will reduce the total number of residential units in a community plan area where higher housing densities were designated to provide close-in housing to the region's major employment center, the Central City Core, and to reduce development pressure on urban reserve and permanent agricultural lands to the north of I-880.

   b. The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals because:

      i) the project will provide additional employment opportunities while displacing planned residential units and increasing the demand for residential units;

      ii) the project will provide additional primary and secondary employment opportunities while increasing vehicular traffic congestion; and

      iii) the project will provide additional employment opportunities but encourge similar business park development which will result in greater vehicle movements and greater deterioration of air quality.

   c. The project has possible environmental effects which are individually limited but cumulatively considerable because:

      i) the project will increase average daily trips and vehicle miles traveled by forty-four percent over the community plan designated land use and will result in less than acceptable levels of service at several critical intersections. Cumulatively 3.4 million square feet of office will generate 252,160 average daily trips and result in less than acceptable levels of service at as many as 11 intersections.

ii) the project will displace 911 residential units while creating a demand for an additional 1200 residential units. Cumulatively, 3.4 million square feet of office would displace 2,331 dwelling units (10% of the residential holding capacity of the South Natomas community plan) while creating a demand for as many as 6,616 additional residential units (29% of the dwelling units called for in the South Natomas Community Plan).

4. Recommend denial of the amendment to the 1974 General Plan from residential to commercial and offices.

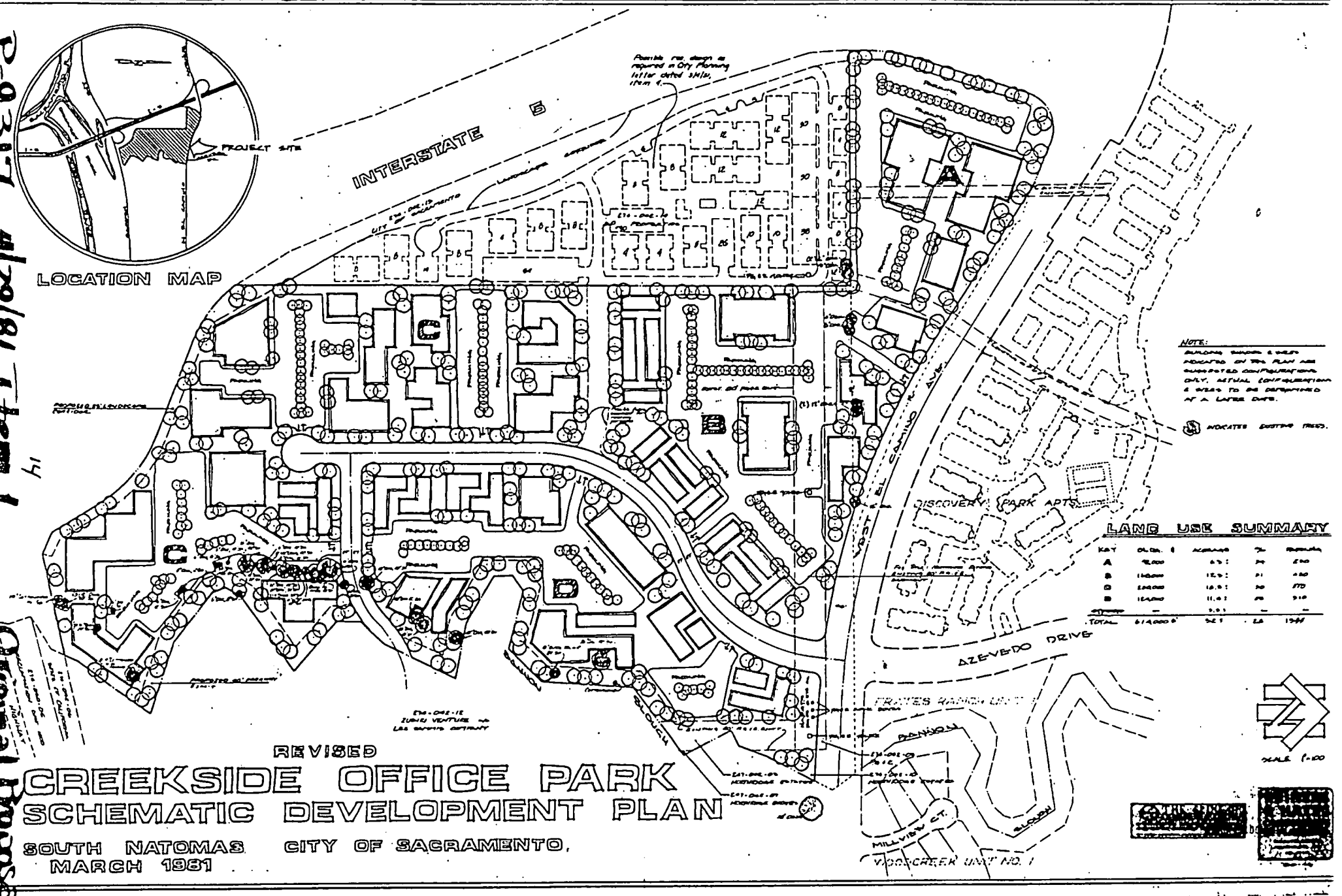
5. Recommend denial of the amendment to the 1978 South Natomas Community Plan from residential 17av and 22av to business and professional offices.

6. Recommend denial of the amendment to the Creekside Residential PUD from residential to business park development and to include an additional 14± acres.

7. Recommend denial of the request to rezone 52± acres from Agriculture (A), Garden Apartment (R-2PUD and R-2A PUD), and Light Density Multiple Family (R-3 PUD) to Office Building (OB-PUD) or more restrictive zoning.

P-8317 4/29/81 Item 1

LOCATION MAP



REVISED

CREEKSIDE OFFICE PARK
SCHEMATIC DEVELOPMENT PLAN

SOUTH NATOMAS CITY OF SACRAMENTO,
MARCH 1981

Original Proposal

Item 1

21

P-0317

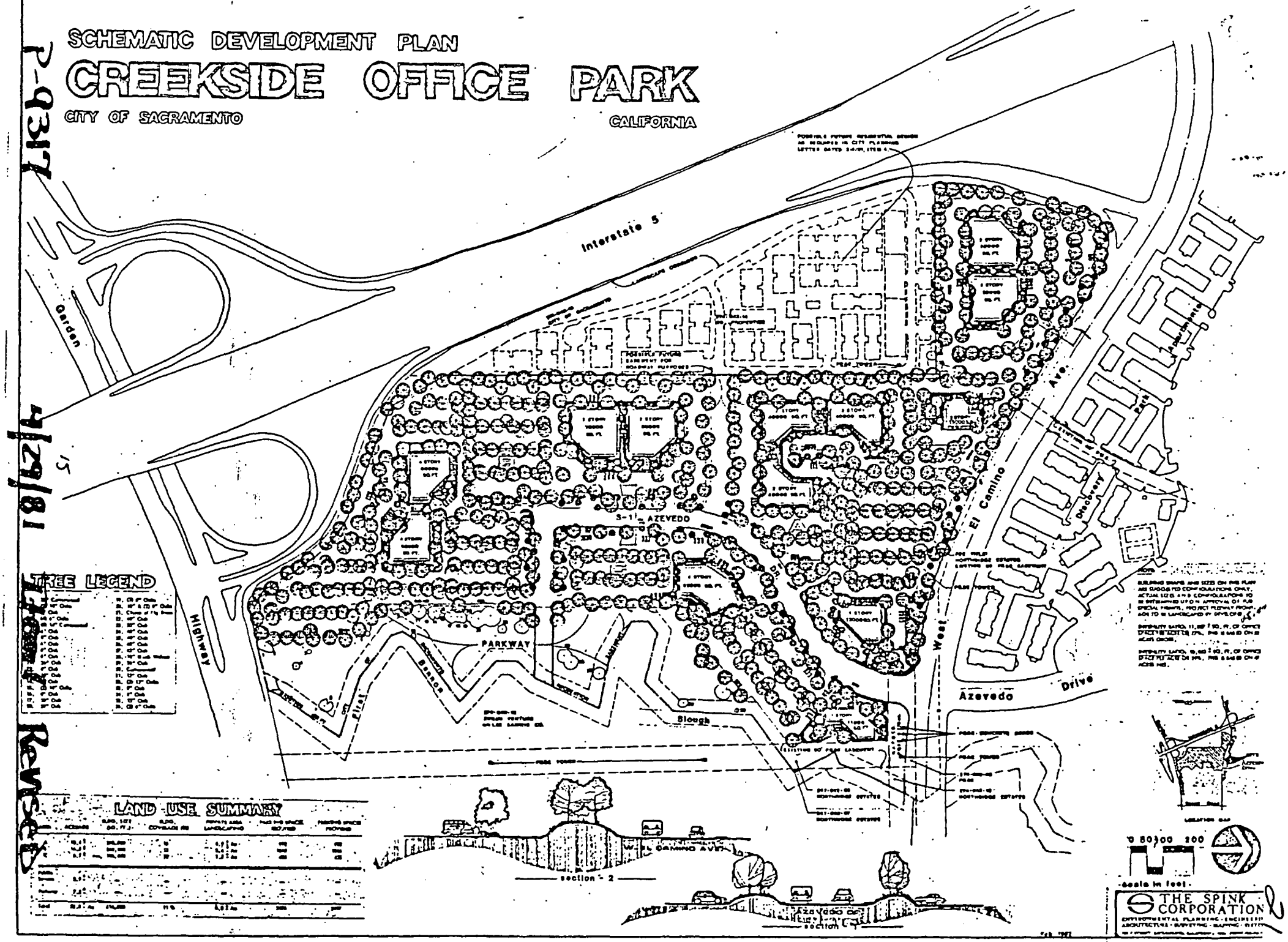
4/29/81

Revised

SCHEMATIC DEVELOPMENT PLAN

CREEKSIDE OFFICE PARK

CITY OF SACRAMENTO CALIFORNIA



SACRAMENTO CITY
PLANNING DEPARTMENT
725 J STREET
SACRAMENTO, CA 95814
TELEPHONE (916) 449-5604

PLANNING DEVELOPMENT PERMIT

P № 9317
Application date 4-7-81

Project Location North quadrant I-5 & Garden Highway
Assessor Parcel No. 274-042-04, 03, 07, 10, 11, 225-230-19 Comm. Pln. S. Natomas
Owner Northridge Estates Phone No.
Address 1451 Quail Street, Newport Beach, CA
Applicant Carl XXXXX Durling Phone No. 383-9273
Address 7700 College Town Dr., Sacto., CA 95826
Signature *Brenda Jeu Waters for The Spink Corp* CPC Mtg. Date

REQUESTED ENTITLEMENTS	Commission Action/Date	Council Action/Date	Filing Fees
☒ Environ. Determination: Neg. Dec. ___, Exempt ___ EIR Reviewed			$ 90.00
☒ General Plan Amend the 1974 Gen. Plan from res. to comm. and offices.		Res.	$ 150.00
☒ Community Plan Amend S. Natomas Comm. Plan from res. (17 units/ *22 units*) to Bus. & Prof. offices.		Res.	$ N/C
☒ Rezone *39+* vacant acres from Multiple Family *Garden Apartment* (R-3R) to Office Building (OB-R), or more restrictive XXXXX zoning.		Ord.	$ 550.00
☐ Tentative Map		Res.	$
☐ Special Permit			$
☐ Variance			$
☐ Plan Review			$
☒ PUD--to amend Creekside PUD from res. to office building *and to establish ... park PUD* to allow 614,000 square feet of office land use in 1 and 2 story buildings.		Res.	$ 230.00
☐ Other			$

NOTIFICATION AND POSTING $ 36.00
FEE TOTAL $ 1,056.00

Permit Sent to Applicant: ______ Date ______ By: ______ Sec. to Planning Commission
Receipt No. *0014*
By/date *GM 4-21-81*

Key to Actions

R - Ratified	D - Denied	IAF - Intent to Approve based on Findings of Fact
Cd - Continued	RD - Recommend Denial	AFF - Approved based on Findings of Fact
A - Approved	RA - Recommend Approval	RPC - Return to Planning Commission
AC - Approved w/Conditions	RAC - Recommend Approval w/Conditions	CSR - Condition indicated on attached Staff Report
AA - Approved w/Amended Conditions	RAA - Recommend Approval w/Amended Conditions	

NOTE: There is a ten (10) calendar day appeal period from commission action date and a thirty (30) calendar day appeal period from council action date. Action authorized by this document shall not be conducted in such a manner as to constitute a public nuisance. Violation of any condition(s) will constitute grounds for revocation of this permit. Building permits are required in the event of any building construction. The County Assessor is notified of actions taken on rezoning, special permits and variances.

Gold - applicant Receipt White - applicant permit Green - expiration book Yellow - department file Pink - permit book

P № 9317

SOUTH NATOMAS BUSINESS PARKS (P-9317, P-9145 and P-9145)
FINAL ACTION OF THE CITY COUNCIL

A. Certify the adequacy of the Creekside Environmental Impact Report;

B. Approve in concept only and subject to the conditions contained in this motion:

1. 630,000 square feet of office on 45 acres within Natomas Eastside (14,000 square feet per acre);

   755,000 square feet of office on 52 acres within Gateway Centre (14,500 square feet per acre); and,

   572,000 square feet of office on 52 acres within Creekside (11,000 square feet per acre).

2. Applicants negotiate in good faith with City staff a development of agreement or agreements, providing for

   a. A PUD/Schematic Plan mechanism to insure that the three projects are developed as a unified regional office park, designed to attract large users. The PUD/Schematic Plan shall also include non-office uses.

   b. The developers contribution to the financing of public facility, public service, and infrastructure costs, including land dedication, capital, maintenance and operations expenses, to be located within the Community Plan.

      The developers contributions to such costs shall be beyond that apportionable solely to needs generated by their projects and shall be equitably shared between the three developers based on the amount of office approved for each project. In negotiating the development agreement, special consideration shall be given to funding for:

      1. Traffic improvements;

      2. A park, parkway strips, and the Interstate 5 open space corridors, including the existing parkway strip to the east of Interstate 5 and south of West El Camino to Interstate 880;

      3. A fire station;

      4. A library;

      5. Development of elderly housing;

      6. Include mitigation factors to diminish impact on downtown (the cutting at least in half of commercial square footage on site); and,

      7. Contributions by developers to create a more transit-oriented society area within the Community Plan.

   c. Time deadlines to insure a rational sequencing of the build-out of office, residential and necessary infrastructure.

   d. Other measures detemmined by staff as needed to mitigate adverse environmental impacts identified in the Environmental Impact Reports for these projects.

3. Staff shall return to both the City Planning Commission and City Council within ninety days with a development agreement meeting the intent of this motion.

4. Applicants waive all statutory time deadlines for a minimum of ninety days following this hearing.

5-11-82 meeting

FINAL ENVIRONMENTAL IMPACT REPORT ADDENDUM:

Creekside Office Park

City of Sacramento
Planning Department

Prepared By:

JONES & STOKES ASSOCIATES, INC.
Sacramento, Ca.

WITH THE ASSISTANCE OF:
CH2M HILL, TRANSPORTATION
AND ENVIRONMENTAL
ENGINEERING

SCH No.81110553

March, 1982

CITY OF SACRAMENTO

CITY PLANNING DEPARTMENT
927 TENTH STREET
SUITE 300
SACRAMENTO, CA 95814
TELEPHONE (916) 449-5604

MARTY VAN DUYN
PLANNING DIRECTOR

March 8, 1982

To: Interested Persons

Subject: Final EIR - Creekside Office Park Proposal

The City Planning Department is forwarding this document for a 25-day review period to persons who commented on the Draft EIR and who originally received the Draft EIR. Commentors should determine if the responses sufficiently address their comments.

The Final EIR consists of an addendum containing an analysis of the cumulative impacts of the Creekside Office Park project when combined with the adjacent BD Properties site and with the business parks studied in the South Natomas Business Parks FEIR (S.C.H. No. 81090406) and of the responses to comments made on the Creekside Draft EIR. The comments have been paraphrased from the commentors' letters and from oral comments. Copies of the commentors' letters and oral comments submitted in written form are included in the appendix of this addendum. Comments and responses are grouped by topic in the same order found in the Draft EIR.

Comments on the Final EIR and/or merits of the project should be received by the Planning Department no later than April 8, 1982, to be considered by the staff.

The Sacramento City Planning Commission will consider the Creekside Final EIR and project, as well as the Natomas Eastside and Gateway Centre business park proposals, at a meeting on Thursday, April 29, 1982, at 5:15 in the Council Chambers of City Hall, 915 "I" Street, Sacramento, California.

A copy of this document has been forwarded for public review to the libraries indicated on the enclosed distribution list. In addition, a copy may be reviewed or obtained at the City Planning Department.

Please contact Clif Carstens (449-5604) or me (449-5381) if you have any questions regarding this matter.

With regards,

Diana Parker

Diana Parker
Associate Planner

DP:cp

Attachments

Rev. 3/82

SACRAMENTO CITY DISTRIBUTION LIST

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Jack Orr
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Sacramento CA 95804
Attn: Gary Stonehouse

Regional Transit
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Sacramento CA 95810

Modern Transit Society
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Sacramento CA 95821

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Sacramento CA 95838

Natomas Union School Dist.
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Sacramento CA 95841

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c/o John Anderson
6230 Coyle
Carmichael CA 95608

Env. Council of Sacramento
Rob McCray
660 "J" Street, Suite 490
Sacramento CA 95814

Sierra Club
Conservation Committee
Sacto. Valley-Sierra Group
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Sacramento CA 95608

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Sacramento CA 95819

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CSUS
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Advisory Council
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Sacramento CA 95837

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Sacramento CA 95841

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Sacramento CA 95825

Stanford Settlement
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Attn: Sharon Wright

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Sacramento CA 95833

Gardenland Community Council
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Sacramento CA 95833

Willard E. Nielsen
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Sacramento CA 95814

Mary Alden
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Sacramento CA 95833

David Butler
1234 "H" Street
Sacramento CA 95814

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LIST OF TABLES

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LIST OF FIGURES

Chapter 1

INTRODUCTION

This Final EIR has been prepared in the form of an addendum to the Draft EIR for the Creekside Office Park. The Draft EIR, together with this addendum, constitute the Final EIR for the project.

Following this introduction, Chapter 2 analyzes the cumulative impacts of the Creekside Office Park when combined with the impacts of business park/office development on three nearby South Natomas parcels: the Gateway Centre site, the Natomas Eastside site, and the BD Properties site. Chapter 3 presents responses to comments received on the Draft EIR. Chapter 4 presents errata for the Draft EIR, which include both corrections and additions in response to comments.

Appendix A of the addendum discusses the concept of Levels of Service (LOS) used in the transportation impact section. Copies of all comments received are included in Appendix B to this addendum.

Chapter 2

CUMULATIVE IMPACT ANALYSIS

Introduction

This chapter analyzes the cumulative impacts of the Creekside Office Park when considered together with the impacts of business/office park development on three other nearby South Natomas sites: Natomas Eastside, Gateway Centre, and BD Properties. The locations of all four project sites are shown in Figure 2-1.

The individual impacts of the Creekside Office Park are described in the Creekside Office Park Draft EIR. The individual impacts of the proposed Natomas Eastside and Gateway Centre projects are described in the Draft and Final EIRs for the South Natomas Business Parks. Impacts of office development on the BD Properties site have not been previously analyzed in the City environmental documents since no development application for the site has been received. The BD Properties site has been included in the cumulative impact analysis because it is likely to be proposed for office use if the adjacent Creekside Office Park is approved.

The objective of the cumulative analysis is to provide a summary of the cumulative impacts of all four projects. Detailed information regarding the project sites' environmental setting and the impacts of the individual projects may be found in the individual project EIRs, and such information is not duplicated here.

The remainder of this chapter describes the alternatives considered in the cumulative impact analysis, summarizes the cumulative impacts of developing all four project sites; summarizes the mitigation measures proposed in the individual project EIRs; and presents cumulative impact analyses for individual impact categories. Particular attention is paid to cumulative traffic impacts, as these are the most significant and have been of greatest concern to reviewers of the individual project EIRs.

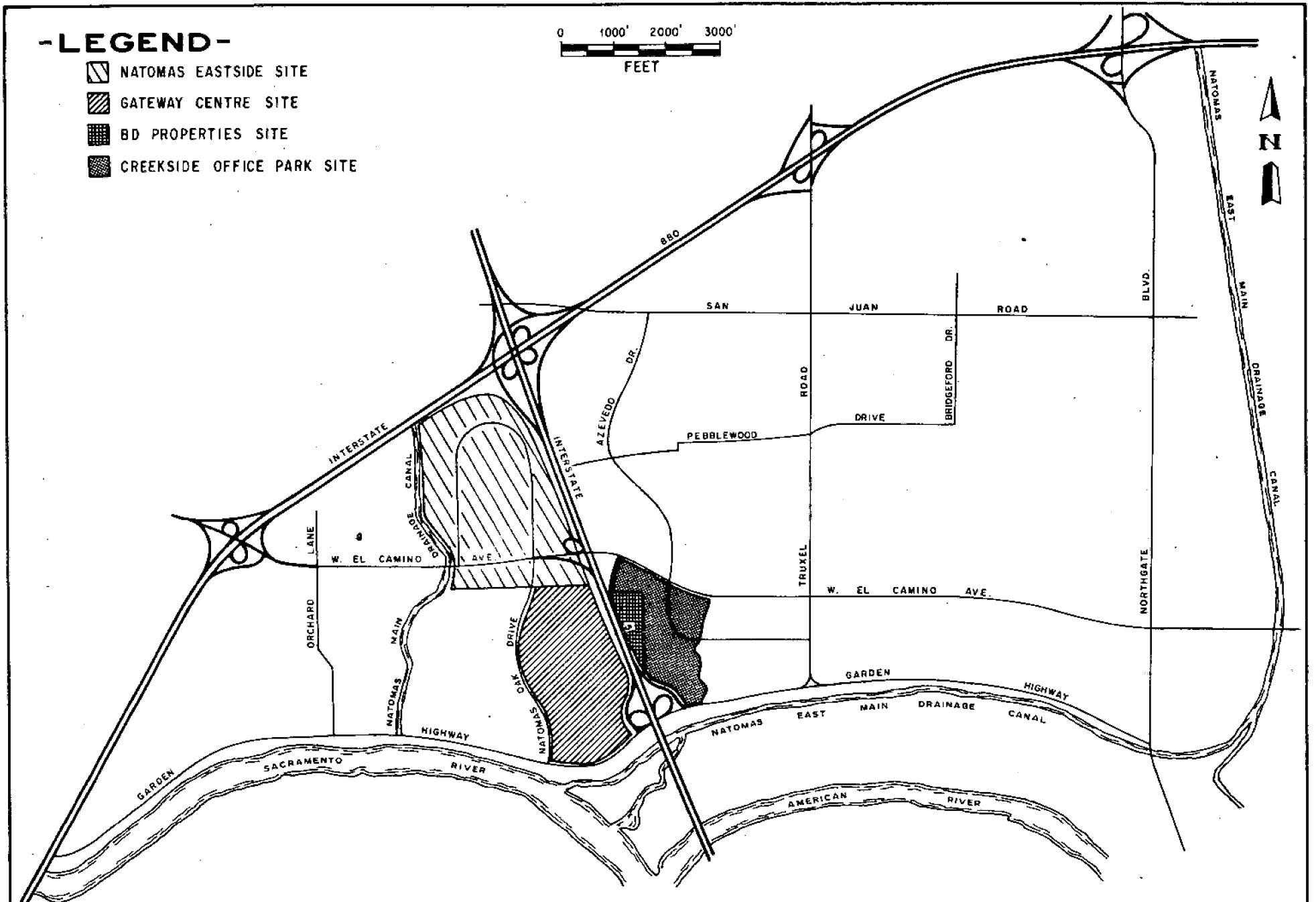


FIGURE 2-1. LOCATIONS OF PROJECT SITES

Alternatives Considered for Cumulative Impact Analysis

Three alternative development scenarios were developed by the City Planning Department staff for cumulative impacts analysis: the no-project alternative, the 1.5 million square feet office alternative, and the 3.4 million square feet office alternative. The no-project alternative represents current land use policy for the project sites, based on the South Natomas Community Plan (SNCP) and subsequently-approved Planned Unit Developments. The other alternatives assume that current land use policy will be changed to allow increased levels of business/office park development.

No-Project Alternative

The no-project alternative is illustrated in Figure 2-2, and its features are summarized in Table 2-1. Under this alternative, the Creekside Office Park, BD Properties, and Gateway Centre sites would be developed in medium and high density housing, and the Natomas Eastside site would be developed in low and high density housing, with some office and commercial/ shopping center use.

1.5 Million Square Feet Office Alternative

This alternative is illustrated in Figure 2-3, and its features are summarized in Table 2-2. Under this alternative, additional amounts of office development, at 17,000 square feet office space/acre, would be substituted for residential uses on the Creekside, Natomas Eastside, and Gateway Centre sites. On the Natomas Eastside site, additional park acreage would be added.

3.4 Million Square Feet Office Alternative

This alternative is illustrated in Figure 2-4, and its features are summarized in Table 2-3. Under this alternative, greater amounts of office space would be substituted for residential uses on all four sites. For the Creekside site, the amount of office space provided corresponds to that proposed by the project applicant. For the Natomas Eastside and Gateway Centre sites, the amount of office space provided generally corresponds to that in project modifications proposed by the project applicants following certification of the South Natomas Business Parks Final EIR; these modifications call for reductions in the amount of office space as compared to the previously-proposed projects analyzed in the South Natomas Business Park EIR.

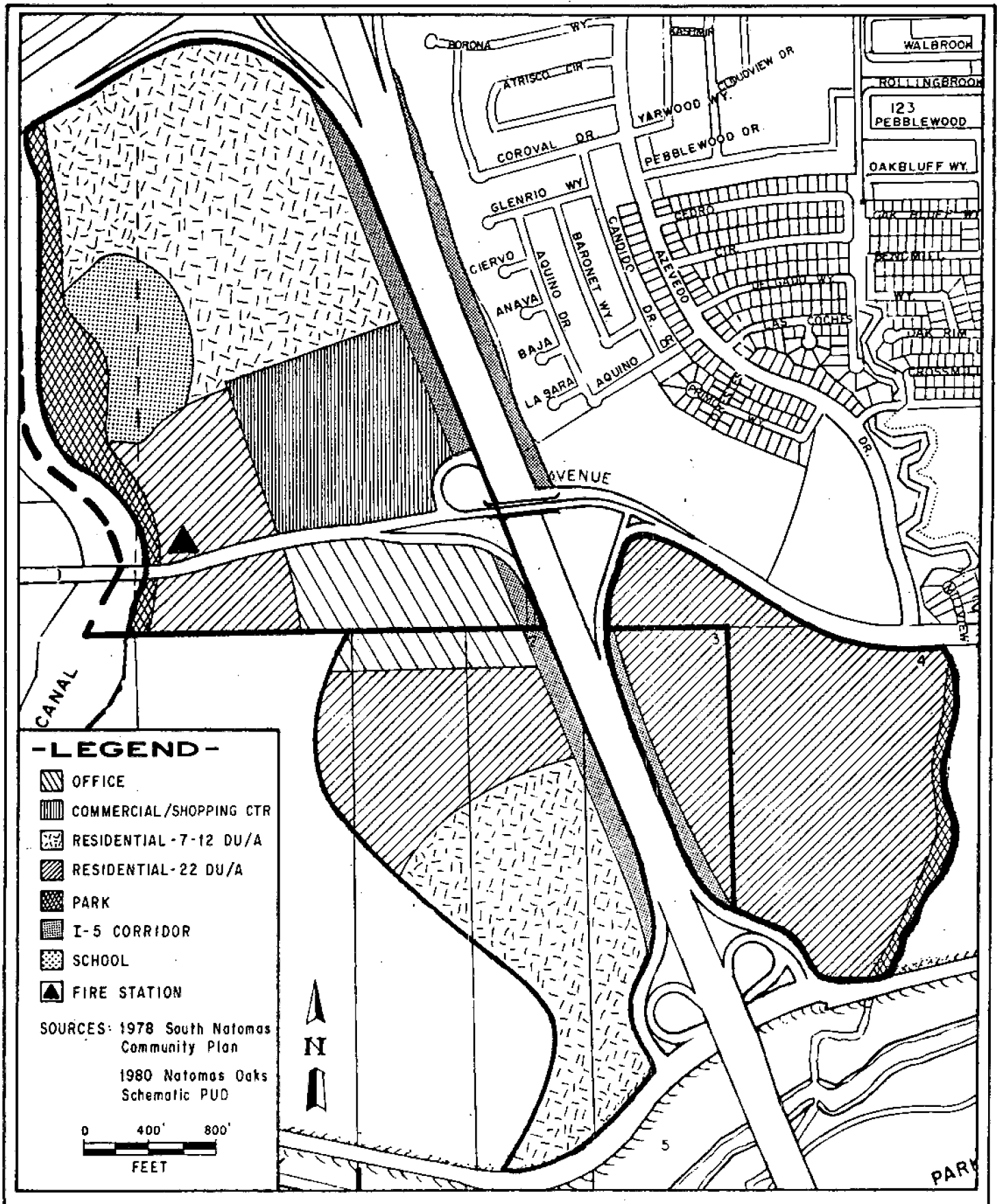


FIGURE 2-2. CURRENT LAND USE POLICY

Table 2-1. Site Features: No-Project Alternative
(Current Land Use Policy)

Site	Acreage (rounded)	Square Feet/Dwelling Units (du)
Creekside Office Park		
Residential		
21 du/ac	32 net acres	672 du
17 du/ac	14 net acres	239 du
BD Properties		
Residential		
22 du/ac	9 net acres	198 du
Natomas Eastside		
Office[1]	16 net acres	272,000 square feet
Commercial/Shopping Center	22 net acres	154,000 square feet
Residential		
5 du/ac	91 net acres	455 du
22 du/ac	24 net acres	532 du
School	10 net acres	
Park	0 acres	
Fire Station	0.5 acres	
Gateway Centre		
Residential		
12 du/ac	53 net acres	657 du
22 du/ac	29 net acres	634 du

FOOTNOTES:

[1]Based on 17,000 square feet office space per net acre
[2]Based on 7,000 square feet commercial/shopping center space per net acre

SOURCE: City of Sacramento Planning Department, based on 1978 South Natomas Community Plan; 1980 Natomas Oaks Schematic PUD; and 1980 Creekside Schematic PUD.

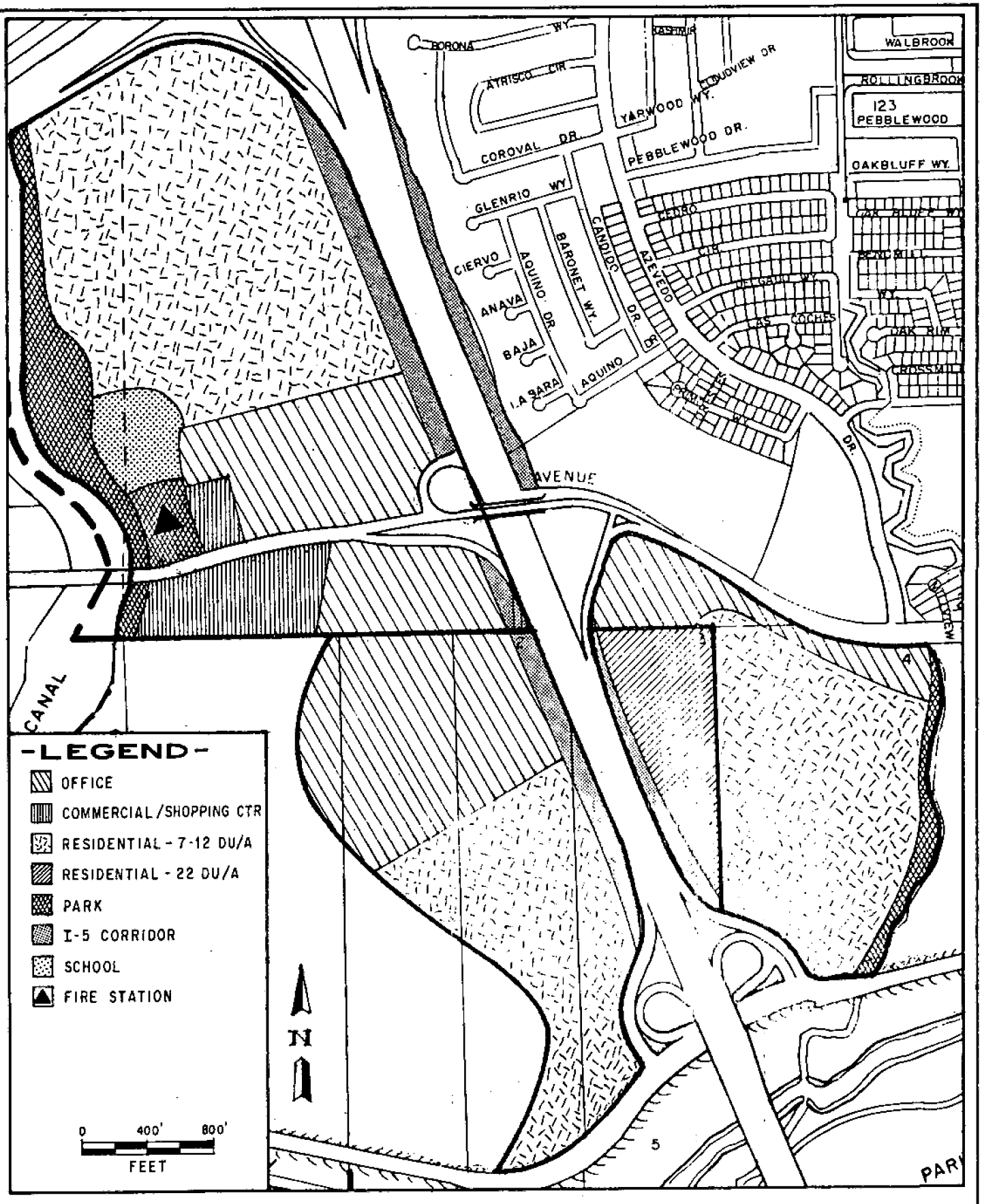


FIGURE 2-3. 1.5 MILLION SQUARE FEET OFFICE ALTERNATIVE

Table 2-2. Site Features: 1.5 Million Square Feet Office Alternative

Site	Acreage (rounded)	Square Feet/Dwelling Units (du)
Creekside Office Park		
Office	14.8 net acres	252,000 square feet
Residential 12 du/ac	32 net acres	384 du
BD Properties		
Residential 22 du/ac	9 net acres	198 du
Natomas Eastside		
Office	41.9 net acres	712,500 square feet
Commercial/Shopping Center	20 net acres	140,000 square feet
Residential		
7 du/ac	46 net acres	322 du
12 du/ac	30 net acres	360 du
School	10 acres	
Park	10 acres	
Fire Station	.5 acre	
Gateway Centre		
Office	31.98 net acres	543,700 square feet
Residential 12 du/ac	50 net acres	600 du

SOURCE: City of Sacramento Planning Department

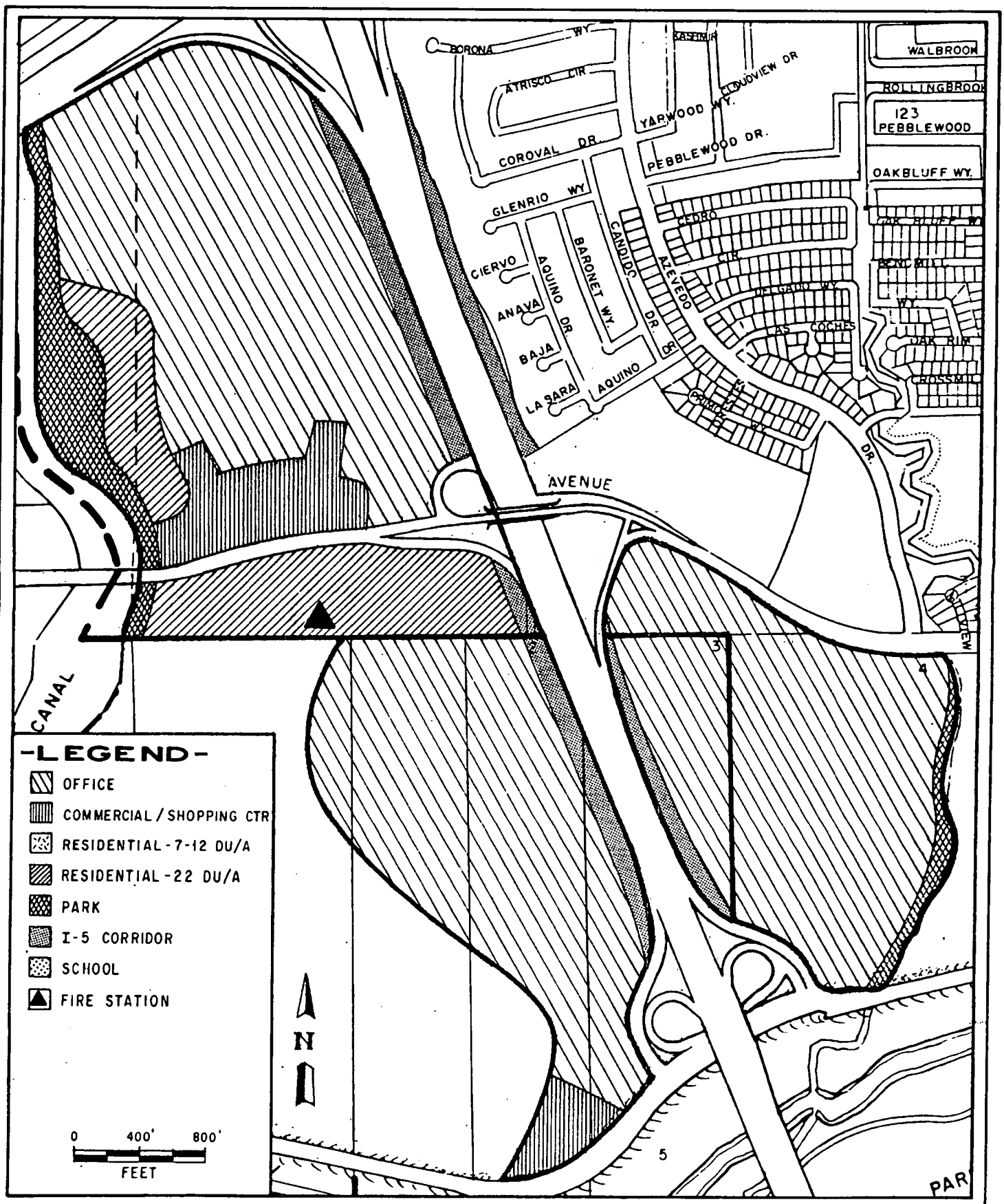


FIGURE 2-4. 3.4 MILLION SQUARE FEET OFFICE ALTERNATIVE

Table 2-3. Site Features: 3.4 Million Square Feet Office Alternative

Site	Acreage (rounded)	Square Feet/Dwelling Units (du)
Creekside Office Park		
Office	47 net acres	614,000 square feet
BD Properties		
Office	9 net acres	117,574 square feet
Natomas Eastside		
Office	90 net acres	1,515,000 square feet
Commercial/Shopping Center	20 net acres	131,000 square feet
Residential (22 du/ac)	48 net acres	1,056 du
Fire Station	1.5 net acres	
Gateway Centre		
Office	72 net acres	1,200,000 square feet
Commercial/Shopping Center	10 net acres	75,000 square feet

SOURCE: City of Sacramento Planning Department

Summary of Cumulative Impacts and Mitigation Measures

Table 2-4 compares the cumulative impacts of the no-project alternative, the 1.5 million square feet office alternative, and the 3.4 million square feet alternative. Each of the alternatives would have a number of adverse cumulative environmental impacts, with the 1.5 million square feet alternative generally producing greater adverse impacts than the no-project alternative, and the 3.4 million square feet alternative generally producing greater adverse impacts than the 1.5 million square feet alternative.

Major adverse cumulative environmental impacts shown in Table 2-4 include the following:

- Land use: the office alternatives are inconsistent with the policies of the SNCP and a number of other City plans.

- Population, housing, and employment: the office alternatives would reduce population and number of dwelling units in South Natomas at buildout, at the same time increasing employment opportunities, which will create additional demand for remaining South Natomas housing and potentially lead to increased South Natomas housing prices.

- Public services: the no-project alternative would exceed the capacities of existing South Natomas schools, and the two office alternatives would reduce these impacts; the two office alternatives would exceed the capacity of existing South Natomas drainage systems.

- Traffic and circulation: the two office alternatives would increase South Natomas average daily traffic considerably, and would result in more intersections with an unacceptable Level of Service (D and E).

- Air quality and noise: the two office alternatives would result in increased violations of federal carbon monoxide standards and City noise standards because of increased traffic generation.

Table 2-4. Summary of Cumulative Impacts

Impact Area	No-Project Alternative	Comparison of Office Alternatives to No-Project Alternative: 1.5 Million Square Feet Office Alternative	Comparison of Office Alternatives to No-Project Alternative: 3.4 Million Square Feet Office Alternative
Land Use	On four project sites, allocates 252 net acres for residential use, 16 net acres for office use, and 22 net acres for commercial/ shopping center use, totaling 426,000 square feet of office/ commercial floor area.	On four project sites, allocates 167 net acres to residential use (34% decrease), 89 net acres to office use, (454% increase), and 20 net acres to commercial/shopping center use (similar to no-project), totaling 1.6 million square feet of office/commercial floor area (287% increase).	On four project sites, allocates 48 net acres to residential use (81% decrease), 218 net acres to office use (1,262% increase), and 30 net acres to commercial/shopping center use (36% increase), totaling 3.6 million square feet of office/ commercial floor area (757% increase).
	This alternative based on South Natomas Community Plan (SNCP) which proposes South Natomas area as a high-density transit-oriented residential community close to CBD.	Inconsistent with policies of SNCP, Central City Community Plan, Natomas Oaks PUD, and Creekside PUD. Could result in increased demand for additional office/commercial space and higher density housing on remaining residentially-designated land.	Inconsistent with policies of SNCP, Central City Community Plan, Natomas Oaks PUD, and Creekside PUD. Could result in increased demand for additional office/commercial space and higher density housing on remaining residentially-designated land.
Population	Provides 8,466 new direct residents and 2,282 new employment-induced residents, of which 520 would live in South Natomas.	Provides 4,660 new direct residents (45% decrease), and 7,592 new employment-induced residents, of which 1,740 would live in South Natomas (235% increase).	Provides 2,640 new direct residents (69% decrease) and 16,539 new employment-induced residents, of which 3,800 would live in South Natomas (631% increase).
Housing	Provides 3,387 dwelling units and 913 employment-induced households, of which 208 would be located in South Natomas.	Provides 1,864 dwelling units (45% decrease) and 3,037 employment-induced households, of which 698 would locate in South Natomas (235% increase); potential for increased housing demand and prices.	Provides 1,056 dwelling units (69% decrease) and 6,616 employment-induced households, of which 1,522 would locate in South Natomas (631% increase); potential for increased housing demand and prices.
Employment	Generates 731 new direct jobs and 548 secondary jobs, for a total of 1,279 new direct and secondary jobs.	Generates 2,430 new direct jobs and 1,823 secondary jobs, for a total of 4,253 new direct and secondary jobs (232% increase).	Generates 5,292 new direct jobs and 3,971 secondary jobs, for a total of 9,263 new direct and secondary jobs (624% increase).
Public Facilities and Services			
o Police	Increases service demand; present police force is understaffed to meet demand.	Increases service demand; present police force is understaffed to meet demand.	Increases service demand; present police force is understaffed to meet demand.
o Fire	Requires 1,500-4,500 gallons per minute (gpm) for fire flows; flows will be sufficient once 24-inch transmission main completed across American River; developer(s) will need to provide connecting mains to project sites.	Requires 4,500-8,000 gpm for fire flows; flows will be sufficient once 24-inch transmission main is completed across American River; developer(s) will need to provide connecting mains to project sites.	Requires 4,500-8,000 gpm for fire flows; flows will be sufficient once 24-inch transmission main is completed across American River; developer(s) will need to provide connecting mains to project sites.
o Water	Requires water demand of 1,090 acre-feet per year; demand can be met once 24-inch transmission main completed across American River; developer(s) will need to provide connecting mains to project sites.	Requires water demand of 891.9 acre-feet per year; demand can be met once 24-inch transmission main completed across American River; developer(s) will need to provide connecting mains to project sites.	Requires water demand of 575 acre-feet per year; demand can be met once 24-inch transmission main completed across American River; developer(s) will need to provide connecting mains to project sites.
o Sewer	Produces 2.6 million gallons per day (mgd) of wastewater; present sewer system can accommodate this increase.	Produces 1.7 mgd of wastewater; present sewer system can accommodate this increase.	Produces 1.4 mgd of wastewater; present sewer system can accommodate this increase.
o Solid Waste Management	Increases solid waste generation; can be accommodated by City.	Increases solid waste generation; can be accommodated by City.	Increases solid waste generation; can be accommodated by City.
o Recreation and Open Space	Requires 42.5 acres of parklands; demand is partially met by Bannon Slough Parkway and greenbelt along Natomas Main Drainage Canal.	Requires 23 acres of parkland; demand is partially met by Bannon Slough Parkway and green belt along Natomas Main Drainage Canal.	Requires 13 acres of parkland; demand is met by Bannon Slough Parkway and greenbelt along Natomas Main Drainage Canal.

Table 2-4. Cont'd.

Impact Area	No-Project Alternative	Comparison of Office Alternatives to No-Project Alternative: 1.5 Million Square Feet Office Alternative	Comparison of Office Alternatives to No-Project Alternative: 3.4 Million Square Feet Office Alternative
o Schools	Increases enrollment in K-8th grades by 595 students and 373 students in grades 9-12th; present K-8th grade system cannot accommodate increase until additional facilities are provided; high school system can.	Increases enrollment in K-8th grades by 340 students and 205 students in grades 9-12th; present K-8th grade system cannot accommodate increase until additional facilities are provided; high school system can.	Increases enrollment in K-8th grades by 158 students and 116 students in grades 9-12th; present K-8th grade system cannot accommodate increase until additional facilities are provided; high school system can.
o Transit	Increases ridership demand; ridership served by Route 14 and possibly Route 86-87 if it is not discontinued in June 1982.	Increases ridership demand; ridership served by Route 14 and possibly Route 86-87 if it is not discontinued in June 1982; additional office uses would create a land use pattern less amenable to efficient transit service.	Increases ridership demand; ridership served by Route 14 and possibly Route 86-87 if it is not discontinued in June 1982; additional office uses would create a land use pattern less amenable to efficient transit service.
o Drainage	Generates peak runoff flow of 84.4 cubic feet per second (cfs); present system can accommodate this rate.	Generates peak runoff flow of 96.5 cfs; present system cannot accommodate this rate.	Generates peak runoff flow of 131.0 cfs; present system cannot accommodate this rate.
Fiscal	Requires $1,317,500 for park acquisition and operation and $74,000 to accommodate additional students; increases one-time revenues to City by $1,773,361 and annual revenues by $957,428 at project build-out.	Requires $443,000 for park acquisition and operation and $40,000 to accommodate additional students; increases one-time revenues to City by $2,349,215 and annual revenues by $1,144,962 at build-out.	Requires $403,000 for park acquisition and operation and $18,000 to accommodate additional students; increases one-time revenues to City by $3,866,097 and annual revenues by $1,482,392 at build-out.
Transportation	Generates 210,140 average daily trips (ADT) in South Natomas Planning area; Levels of Service (LOS) D and E occur at six intersections during p.m. peak and at two intersections during a.m. peak.	Generates 232,770 ADT in South Natomas Planning area; LOS D and E occur at eight intersections during p.m. peak and at seven intersections during a.m. peak.	Generates 252,160 ADT in South Natomas Planning area; LOS D and E occur at 11 intersections during p.m. peak and at seven intersections during a.m. peak.
Air Quality	Exceeds 8-hour federal carbon monoxide (CO) standard of 9 parts per million (ppm) at one location; generates 50.1 tons of daily gross emissions.	Exceeds 8-hour federal CO standard at two locations; generates 53.9 tons of daily gross emissions.	Exceeds 8-hour federal CO standard at four locations; generates 57.4 tons of daily gross emissions.
Noise	Exceeds City's noise standards for residential uses along I-5 and I-880 and major arterials.	Exceeds City's noise standards at many locations where residential uses abut an arterial or freeway; office and commercial noise standards are not exceeded.	Exceeds City's noise standards at many locations where residential uses abut an arterial or freeway; office and commercial noise standards are not exceeded.
Energy	Requires 8.38-8.87 million therms of energy annually.	Requires 10.79-12.16 million therms of energy annually.	Requires 15.47-18.50 million therms of energy annually.
Aesthetics	Replaces rural landscape with predominantly residential uses; includes parkways along Natomas Main Drainage Canal, I-5, and Bannon Slough.	Results in incongruous landscape on project sites by interspersing high-bulk office buildings with residential uses; potential visual conflicts for residential uses; includes 10-acre park and parkways along Natomas Main Drainage Canal, I-5 and Bannon Slough.	Results in distinct separation between residential uses located on either sides of project sites with high-contrast central office area; potential visual conflicts for residential uses, includes parkways along Natomas Main Drainage Canal, I-5 and Bannon Slough.
Hydrology and Water Quality	Generates peak runoff flows of 84.4 cfs and 46,650 pounds per year of nonpoint source suspended solids.	Generates peak runoff flows of 96.5 cfs and 50,000 pounds per year of nonpoint source suspended solids.	Generates peak runoff flows of 131.0 cfs and 62,720 pounds per year of nonpoint source suspended solids.
Geology and Soils	Results in potential for soil erosion, differential movement of building foundations and pavements, subsidence and liquefaction.	Results in potential for soil erosion, differential movement of building foundations and pavements, subsidence, and liquefaction.	Results in potential for soil erosion, differential movement of building foundations and pavements, subsidence, and liquefaction.
Biology	Results in loss of fence row habitat along I-5, majority of riparian habitat, portion of mature trees on sites, and associated habitats.	Results in loss of fence row habitat along I-5, majority of riparian habitat, portion of mature trees on sites and associated habitats.	Results in loss of fence row habitat along I-5, majority of riparian habitat, portion of mature trees on sites, and associated habitats.
Cultural Resources	Sites have low archeological sensitivity.	Sites have low archeological sensitivity.	Sites have low archeological sensitivity.

Table 2-5 summarizes the project-specific mitigation measures for adverse impacts presented in the Creekside Draft EIR and the South Natomas Business Parks Draft and Final EIRs. Although implementation of these measures would reduce many of the adverse cumulative environmental impacts, no attempt has been made here to refine the mitigation measures to specifically apply to the cumulative impacts of the 1.5 million and 3.4 million square feet office alternatives. The measures listed in Table 2-5 represent a full range of previously considered mitigation options which the Planning Commission and the City Council may wish to consider.

Table 2-5. Summary of Mitigation Measures Identified in Project EIRs

Category	Mitigation Measures Identified in Creekside Draft EIR	Mitigation Measures Identified in South Natomas Business Parks Final EIR (for Gateway Centre and Natomas Eastside)	Comments
Land Use	o Increase allowable densities on remaining South Natomas residentially-designated parcels. o Require increased buffering of contiguous parcels to east and west. o Require applicant to justify office demand. o Implement a mixed-use office/residential project.	o Increase South Natomas average residential densities on one or both sides of I-5. o Consider fair-share applicant contributions toward cost of revising westside land use policies and development criteria to properly guide mixed-use residential/office development. o Reduce land use conflicts between Natomas Oaks residential PUD and Gateway Centre through: inward orientation of Natomas Oaks units and landscaped buffer along westside of Natomas Oaks Drive. o Apply design considerations specified in EIR to landscaped corridor along Main Drainage Canal. o Consider project design review criteria listed in EIR in evaluating requests for height variances.	o Infrastructure constraints and land availability may limit feasibility of increasing residential densities.
Population, Housing and Employment	o Increase allowable densities on remaining South Natomas residentially-designated parcels (infrastructure constraints may limit the feasibility of this measure). o Implement housing element measures to increase housing affordability.	o To offset housing displacement impacts: allow slight increase in average residential densities in off-site South Natomas and/or north Sacramento communities; and/or allow residential conversion of up to 240 acres beyond existing urbanization. o To reduce general housing affordability impacts: consider average density increases in South Natomas and north Sacramento; and offset monthly housing costs through voluntary or mandatory residential energy conservation programs. o In response to below-market-rate housing demands: implement related measures in City's 1980 Housing Element; consider density bonuses and adoption of "inclusionary zoning".	o Infrastructure constraints and land availability may limit the feasibility of increasing residential densities.
Public Facilities/ Services and Fiscal Impacts	o Provide adequate lighting. o Provide additional access to site. o Consult with County Public Works Water Quality Division regarding collector sewer locations. o Increase building setbacks from proposed 40-foot Bannon Slough Parkway. o Eliminate east-west collector road from site plan. o Provide designated bus turnout on the southside of West El Camino at Azevedo. o Provide and maintain a bus shelter or covered waiting area for the above bus stop. o Provide walkways throughout the project connecting directly to the bus stop. o Payment of one-time drainage fee.	o Require fair-share contributions from applicants and other new projects in area toward a vicinity capital improvements program which includes the planning, designing, and construction of recommended road improvements herein.	o Additional school construction may require that developers pay an impaction fee. o Extension of transit services into newly developing areas may require developer contributions.

Table 2-5. Cont'd.

Category	Mitigation Measures Identified in Creekside Draft EIR	Mitigation Measures Identified in South Natomas Business Parks Final EIR (for Gateway Centre and Natomas Eastside)	Comments
Transportation	o Signalize the intersections of West El Camino/Azevedo, West El Camino/ Truxel, and Truxel Road/east-west local collector. o Widen El Camino to six lanes from I-5 past Truxel, improving Levels of Service for Azevedo and Truxel intersections from E to D. (Feasibility and financing of this measure is uncertain). o Implement trip reduction measures. o Design 30-foot driveway off West El Camino for right-in/right-out only. o Widen 30-foot driveway off West El Camino to 35 feet. o Prepare updated South Natomas transportation study and comprehensive capital improvements program. o Review proposed project parking requirements. o Complete planning to Bannon Slough bicycle path. o Construct bicycle path through project.	o Improve Natomas Oaks Drive/West El Camino Avenue intersection. o Improve I-5 northbound off-ramp/ West El Camino Avenue interchange. o Improve Natomas Oaks Drive/Garden Highway intersection. o Improve I-5 southbound off-ramp/ Garden Highway intersection. o Establish "flex-time" programs to diffuse peak-hour traffic generation.	o Feasibility and financing for many of the proposed roadway improvements are uncertain. o Trip reduction measures are difficult for City to enforce.
Air Quality	o Implement trip reduction measures.	o Project point-source impacts would be mitigated through Sacramento County Air Pollution Control District "Authority-to-Construct" permit process.	o Trip reduction measures are difficult for City to enforce.
Noise	o Construction of noise barriers. o Use of noise-reducing building designs and materials.	o Title 25 noise analysis (California Administrative Code, Noise Insulation Standards) required for residential portion of Natomas Eastside. o Measures to meet desirable interior noise levels (L_{dn}) 45 dB) listed in EIR. o Shield outdoor activities from traffic noise through building location and noise barriers. o I-5 corridor noise controls appropriate to business park structures (listed in EIR) should be considered in lieu of a noise wall. o Construction period measures; restrict construction activity to daytime weekday hours within 500 feet of Natomas Oaks residences; and equipment should be properly muffled and maintained.	
Energy	o Implement energy conservation measures beyond Title 24 and UBC requirements. o Implement trip reduction measures.	o All new commercial/industrial construction must meet state's minimum energy conservation standards (Title 24, California Administrative Code). o Measures beyond those mandated by UBC and Title 24 should also be considered, including: preparation of project-specific, energy conservation programs, subject to review by SMUD and PG&E and approval by City; and set of energy conservation criteria could be included in CC & Rs and considered in design review.	o Trip reduction measures are difficult for City to enforce.

Table 2-5. Cont'd.

Category	Mitigation Measures Identified in Creekside Draft EIR	Mitigation Measures Identified in South Natomas Business Parks Final EIR (for Gateway Centre and Natomas Eastside)	Comments
Aesthetics	o Increase building setbacks from proposed 40-foot Bannon Slough Parkway. o Maintain native vegetation along I-5 right-of-way and PG&E transmission line easement, and within proposed 40-foot Bannon Slough Parkway. o Avoid or minimize development within the riparian woodland habitat lying outside proposed Bannon Slough Parkway.	o Specific design measures described in EIR for: project visual compatibility with surrounding uses; drainage canal parkway treatment (Natomas Eastside); I-5 corridor treatments; I-880 corridor treatments; Garden Highway treatments; rooftop mechanical equipment screening; exterior lighting design; specific on-site Natomas Eastside design concerns; and specific on-site Gateway Centre design concerns.	
Hydrology/Water Quality	o Payment of one-time drainage fee. o Implement measures to reduce non-point source pollutant loads. o Implement engineering measures to protect against seepage and high groundwater.	o Drainage recommendations include: prepare engineered drainage plans utilizing standard engineering approaches listed in the EIR; and require 35-foot maintenance easement along Natomas Main Drainage Canal. o Water quality measures: establish long-term, private project street cleaning program; and make payments to Reclamation District 1000 fair-share of canal silt removal costs.	
Geology and Soils	o Implement standard construction practices to reduce erosion. o Design structures to minimize soils and geologic hazards.	o Use standard engineering measures to reduce shrink-swell effects, differential settlement, and other potential soil impacts. o Require a geotechnical study to evaluate site potentials for liquefaction. o Require standard building code (UBC) measures to assure structural earthquake resistance.	
Biology	o Maintain native vegetation along I-5 and PG&E transmission line easement, and within proposed 40-foot Bannon Slough Parkway. o Avoid or minimize development within the riparian woodland habitat lying outside proposed 40-foot Bannon Slough Parkway. o Locate collector road crossing farther north where riparian woodland habitat is nonexistent or narrow. o Avoid construction activities and irrigated landscaping within drip-lines or retained oak trees. o Limit public access to areas of native woodland habitat.	o SNCP EIR lists general mitigation measures applicable to projects, including: drainage canal parkway designation; preservation of riparian habitats; protection of mature trees; and protection of giant garter snake habitat. o Additional specific measures recommended in this EIR include: provision of a landscaped parkway along drainage canal frontage (Natomas Eastside); mature tree preservation; and design, operation, and maintenance measures for Natomas Eastside lake. o Recommended construction period measures include measures for protection of snakes and mature trees.	
Cultural Resources	o Participation of archeologists during construction.	o Measures listed in EIR in event subsurface cultural deposits are discovered during construction.	
Economic Growth/ Business Park Demand	o No specific mitigation measures proposed because of relatively small project size.	o If proposed action is approved, and after two or three years of absorption the project appears to be having a significant effect on the annual surburban (regional) and CBD office market, a 10-year rather than 7-year project construction phasing should be considered. o Continue and increase implementation of Sacramento Central City Community Plan improvement measures (light rail connection, etc.) to reinforce CBD office market.	

Impact Analysis

Land Use Impacts

No-Project Alternative. Table 2-6 compares land use impacts of each of the three alternatives. The no-project alternative allocates 2,949 gross acres for residential use, 35 gross acres for office use, and 117 gross acres for commercial use. On the four project sites the no-project alternative allocates 252 net acres for residential use, 16 net acres for office use, and 22 net acres for commercial/shopping center uses. The no-project alternative also includes a school and a fire station.

1.5 Millon Square Feet Office Alternative. This alternative allocates 167 net acres to residential uses, 89 acres to office uses, and 20 acres to commercial/shopping center uses. Implementation of this alternative, relative to the no-project alternative, would result in a 34 percent decrease in residential acreage and a 454 percent increase in office space acreage on the project sites. Both this alternative and the no-project alternative designate approximately 20 net acres to commercial/shopping center uses. This alternative also includes a school and a fire station.

Currently, there are approximately 900 net acres of residential land in South Natomas area for which subdivisions have not yet been approved. By adding the Creekside and Natomas Oaks PUD's (Gateway Centre comprises approximately 82 net acres of the Natomas Oaks PUD), this total increases to approximately 1,014 net acres. Implementation of the 1.5 million square feet office alternative would therefore reduce the amount of available residential land in South Natomas by 8 percent.

In terms of gross floor space, this alternative would result in an 287 percent increase in office/commercial/shopping center gross floor space on the project site. Gateway Centre accounts for 44 percent of this increase in gross floor space; Natomas Eastside accounts for 35 percent; and Creekside Office Park accounts for 21 percent; Natomas Eastside and Gateway Centre have the greatest amount of total commercial-related floor space, with Natomas Eastside having 852,500 square feet and Gateway Centre having 543,700 square feet.

3.4 Million Square Feet Office Alternative. This alternative allocates 48 net acres to residential uses, 218 net acres to office space uses, and 30 acres to commercial/shopping center uses. This alternative includes a fire station, but not a school or park. Implementation of this alternative

Table 2-6. Individual Project and Cumulative Land Use Impacts (Net Acreage)

	No-Project	Alternatives: 1.5 Million Square Feet Office	Alternatives: 3.4 Million Square Feet Office
Creekside Office Park			
Residential	46.0	32.0	0
Office	0	14.8	47.0
BD Properties			
Residential	9.0	9.0	0
Office	0	0	9.0
Natomas Eastside			
Residential	115.0	76.0	48.0
Office	16.0	41.9	90.0
Commercial/Shopping Center	22.0	20.0	20.0
School	10.0	10.0	0
Fire Station	0.5	0.5	1.5
Park	0	10.0	0
Gateway Centre			
Residential	82.0	50.0	0
Office	0	31.98	72.0
Commercial/Shopping Center	0	0	10.0
Cumulative Impacts - Project Sites			
Residential	252	167.0	48.0
Office	16.0	88.68	218.0
Commercial/Shopping Center	22.0	20.0	30.0
School	10.0	10.0	0
Fire Station	0.5	0.5	1.5
Park	0	10.0	0

would result in an 81 percent decrease in residential acreage, a 1,262 percent increase in office space acreage and a 36 percent increase in commercial/shopping center acreage on the project sites, compared to the no-project alternative. Approximately 20 percent of the available residential land in South Natomas would be eliminated with implementation of this alternative.

In terms of gross floor space, this alternative would result in a 757 percent increase in office/commercial/shopping center gross floor space on the project site. Creekside Office Park accounts for 19 percent of this increase in gross floor space; BD Properties accounts for 4 percent; Natomas Eastside accounts for 38 percent; and Gateway Centre accounts for 39 percent. In absolute terms, Natomas Eastside would have 1.6 million square feet of gross floor space, whereas Gateway Centre would include 1.3 million square feet.

Comparison.

Consistency With Land Use Plans. Both the 1.5 and the 3.4 million square feet office alternatives would be inconsistent with the general intent of the SNCP to develop the South Natomas area as a residential community close to the CBD. Because the 3.4 million square feet office alternative calls for a more intense level of office development, this alternative is a greater deviation from the intent of the plan than the 1.5 million square feet office alternative.

Both alternatives are also potentially inconsistent with a number of Central City Community Plan goals which encourage revitalization and expansion of the Central City as a commercial/office center. The Creekside Office Park and the Gateway Centre developments, as proposed under both alternatives, are also not consistent with the Creekside PUD Schematic Land Use Plan and the Natomas Oaks Schematic Plan, respectively. Specific policy inconsistencies of the office alternatives are identified in detail in the Creekside Draft EIR and the South Natomas Business Parks Draft and Final EIRs.

Regional Land Use Impacts. Both the 1.5 and the 3.4 million square feet office alternatives would result in a decrease in the SNCP's residential allocation and an increase in the SNCP's office allocation. The 3.4 million square feet office alternative calls for 71 percent less residential acreage and 146 percent more office acreage than does the 1.5 million square feet office alternative.

Both alternatives would also have secondary land use effects on the South Natomas area. One potential secondary effect would be an increased demand for additional office or commercial uses on the remaining residentially-designated

land in the South Natomas area. Higher density housing may also occur on the remaining land in the South Natomas area if the City seeks to retain its goal of providing 2,949 gross acres of residential land. The 3.4 million square feet office alternative would have more severe secondary impacts than the 1.5 million square feet office alternative due to this alternative's more intense level of office development.

Local Land Use Impacts. Both alternatives would create potential conflicts with the planned residential uses of the contiguous vacant parcels. The 1.5 million square feet office alternative would have fewer potential adjacent land use conflicts since it calls for less office development. Specific land use conflicts of the individual project sites are identified in the Creekside Draft EIR and the South Natomas Business Park's Draft and Final EIRs.

Population Impacts

No-Project Alternative. Table 2-7 compares the population impacts of each of the three alternatives. The no-project alternative provides for 8,466 new direct residents on the project sites, assuming an average of 2.5 persons per dwelling unit. This alternative would have an indirect population impact of 2,282 additional residents resulting from the creation of new direct and secondary jobs (see Employment Impacts section). Of these new employment-induced residents, approximately 520 are projected to live in the South Natomas area.

1.5 Million Square Feet Office Alternative. This alternative would generate 4,660 new direct residents living in the site's 1,864 new dwelling units. This is 45 percent fewer residents than the no-project alternative. Based on the projected increase in the South Natomas population of 56,100 residents between 1980 and 2020, the decrease represents a reduction of 7 percent of the area's projected population increase. With regard to indirect population impacts, this alternative would result in 7,590 employment-induced residents, of which approximately 1,740 are projected to live in the South Natomas area. This is 235 percent greater than the no-project alternative.

3.4 Million Square Feet Office Alternative. This alternative would generate 2,640 new direct residents living at the site's dwelling units, 69 percent fewer than that projected in the no-project alternative. This decrease would result in a 10 percent reduction in the projected population increase of the community between 1980 and 2020. Due to the intense

Table 2-7. Individual Project and Cumulative Population and Growth-Inducing Impacts

	No-Project	Alternatives: 1.5 Million Square Feet Office	Alternatives: 3.4 Million Square Feet Office
Creekside Office Park			
Direct Impact			
New Residential Population[1]	2,277	960	0
Potential Growth-Inducing Impact[2]			
New Employment-Induced Households[3]	0	441	1,075
New Employment-Induced Population[4]	0	1,102	2,687
BD Properties			
Direct Impact			
New Residential Population[1]	495	495	0
Potential Growth-Inducing Impact[2]			
New Employment-Induced Households[3]	0	0	205
New Employment-Induced Population[4]	0	0	512
Natomas Eastside			
Direct Impact			
New Residential Population[1]	2,467	1,705	2,640
Potential Growth-Inducing Impact[2]			
New Employment-Induced Households[3]	913	1,645	3,023
New Employment-Induced Population[4]	2,282	4,112	7,557
Gateway Centre			
Direct Impact			
New Residential Population[1]	3,227	1,500	0
Potential Growth-Inducing Impact[2]			
New Employment-Induced Households[3]	0	951	2,313
New Employment-Induced Population[4]	0	2,378	5,783
Cumulative Impacts			
Direct Impacts			
New Residential Population[1]	8,466	4,660	2,640
Potential Growth-Induced Impact[2]			
New Employment-Induced Households[3]	913	3,037	6,616
New Employment-Induced Population[4]	2,282	7,592	16,539

FOOTNOTES:

[1]Based on 2.5 new residents per dwelling unit (see Tabel 2-8).
[2]The direct and growth-inducing population impacts are not additive since there could be a potential overlap between these groups.
[3]Based on 1.4 jobs (total new direct and secondary jobs) per household (see Table 2-9).
[4]Based on 2.5 new residents per household.

Table 2-7. Individual Project and Cumulative Population and Growth-Inducing Impacts

	No-Project	Alternatives: 1.5 Million Square Feet Office	Alternatives: 3.4 Million Square Feet Office
Creekside Office Park			
Direct Impact			
New Residential Population[1]	2,277	960	0
Potential Growth-Inducing Impact[2]			
New Employment-Induced Households[3]	0	441	1,075
New Employment-Induced Population[4]	0	1,102	2,687
BD Properties			
Direct Impact			
New Residential Population[1]	495	495	0
Potential Growth-Inducing Impact[2]			
New Employment-Induced Households[3]	0	0	205
New Employment-Induced Population[4]	0	0	512
Natomas Eastside			
Direct Impact			
New Residential Population[1]	2,467	1,705	2,640
Potential Growth-Inducing Impact[2]			
New Employment-Induced Households[3]	913	1,645	3,023
New Employment-Induced Population[4]	2,282	4,112	7,557
Gateway Centre			
Direct Impact			
New Residential Population[1]	3,227	1,500	0
Potential Growth-Inducing Impact[2]			
New Employment-Induced Households[3]	0	951	2,313
New Employment-Induced Population[4]	0	2,378	5,783
Cumulative Impacts			
Direct Impacts			
New Residential Population[1]	8,466	4,660	2,640
Potential Growth-Induced Impact[2]			
New Employment-Induced Households[3]	913	3,037	6,616
New Employment-Induced Population[4]	2,282	7,592	16,539

FOOTNOTES:

[1]Based on 2.5 new residents per dwelling unit (see Tabel 2-8).
[2]The direct and growth-inducing population impacts are not additive since there could be a potential overlap between these groups.
[3]Based on 1.4 jobs (total new direct and secondary jobs) per household (see Table 2-9).
[4]Based on 2.5 new residents per household.

level of commercial and office development provided by this alternative, it would have the potential for 16,539 secondary residents, of which 3,800 are projected to live in the South Natomas area. This is over seven times as many employment-induced residents as that projected in the no-project alternative.

Comparison. Both office alternatives would result in fewer residential units than the no-project alternative and therefore fewer direct residents. The 3.4 million square feet office alternative would generate 43 percent fewer direct residents than the 1.5 million square feet office alternative. Both office alternatives also would have a larger number of employment-induced residents compared to the no-project alternative, resulting from the creation of new direct and secondary commercial-related jobs. The 3.4 million square feet office alternative would have 118 percent more employment-induced residents than the 1.5 million square feet office alternative.

Housing Impacts

No-Project Alternative. Table 2-8 compares the housing impacts of each of the three alternatives. The no-project alternative calls for 22,719 dwelling units in the South Natomas planning area, of which 3,387 are projected to be located on the project site. Of these 3,387 dwelling units, 14 percent would be low density units (7 units per acre or less), 19 percent would be medium density units (12 units per acre), and 67 percent would be high density units (17 units per acre or more).

1.5 Million Square Feet Office Alternative. This alternative would result in 1,864 dwelling units on the project sites, or 45 percent fewer than the no-project alternative. This represents a displacement of 1,523 dwelling units. Although the number of medium density units would actually increase by 687 units, this alternative would displace 133 low density units and 2,077 high density units.

As shown in Table 2-7, this alternative also could have the growth-inducing effect of an estimated 3,037 new households. Of these, an estimated 698 households would locate in the South Natomas area. The displacement of 1,523 dwelling units, together with the demand for an additional 698 units, could potentially lead to an increase in South Natomas housing prices.

3.4 Million Square Feet Office Alternative. This alternative would result in 1,056 dwelling units on the project sites, all of which would be located within the Natomas Eastside development. All of these units would be high density units. This represents a displacement of 2,331 dwelling units, or a 69 percent reduction in units as compared to the no-project alternative.

Table 2-8. Individual Project and Cumulative Housing Impacts
(Number of Dwelling Units[1])

	Alternatives		
	No-Project	1.5 Million Square Feet Office	3.4 Million Square Feet Office
Creekside Office Park			
Low Density	-	-	-
Medium Density	-	384	-
High Density	911	-	-
TOTAL	911	384	0
BD Properties Site			
Low Density	-	-	-
Medium Density	-	-	-
High Density	198	198	-
TOTAL	198	198	0
Natomas Eastside			
Low Density	455	322	-
Medium Density	-	360	-
High Density	532	-	1,056
TOTAL	987	682	1,056
Gateway Centre			
Low Density	-	-	-
Medium Density	657	600	-
High Density	634	-	-
TOTAL	1,291	600	0
Cumulative Impacts - Project Sites			
Low Density	455	322	-
Medium Density	657	1,344	-
High Density	2,275	198	1,056
TOTAL	3,387	1,864	1,056

FOOTNOTE:

[1]Low Density = 7 units per acre or less
Medium Density = 12 units per acre
High Density = 17 units per acre or more

This alternative would add an estimated 6,616 new households attributable to new direct and secondary employees, of which 1,522 households would locate within South Natomas. The displacement of 2,331 dwelling units, together with the demand for an additional 1,522 units, could potentially lead to an increase in South Natomas housing prices.

Comparison. Both office alternatives would displace residential housing units that otherwise would be constructed in the South Natomas area. The 3.4 million square feet office alternative would have 43 percent fewer dwelling units than the 1.5 million square feet office alternative. Both alternatives also would add new households to the South Natomas area, thereby increasing housing demand and prices in South Natomas.

Employment Impacts

No-Project Alternative. The employment impacts of each of the alternatives are compared in Table 2-9. The no-project alternative would involve the construction of 272,000 square feet of office space and 154,000 square feet of commercial/shopping center space, entirely on the Natomas Eastside site. Based on an average 4.0 employees per 1,000 square feet of office floor space and 6.5 employees per 2,089 square feet of commercial/shopping center floor space, 3,090 permanent jobs would be created by this alternative. Approximately 731 of these jobs can be expected to be "new" jobs. The remainder of these jobs represent project-generated jobs, shifting from other jobs which would have occurred elsewhere in the labor market without the project.

A number of indirect employment effects would also result from this alternative due to jobs created from additional spending by newly employed wage earners and from the development of secondary business activity. Based on a secondary job multiplier of 0.75 secondary jobs for every direct job, 548 new secondary jobs would be created for a total of 1,279 total new direct and secondary jobs.

1.5 Million Square Feet Office Alternative. This alternative would result in the creation of 6,943 permanent office and commercial-related jobs, of which 2,430 would be new jobs. Together with the expected number of new secondary jobs, 4,253 total new direct and secondary jobs would be created. This represents an increase of 232 percent over the no-project alternative.

Table 2-9. Individual Project and Cumulative Employment Impacts (Number of New and Secondary Jobs)

	No-Project	Alternatives: 1.5 Million Square Feet Office	Alternatives: 3.4 Million Square Feet Office
Creekside Office Park			
Office Jobs Generated[1]	0	1,008	2,456
Total "New" Direct Jobs[3]	0	353	860
Total New Direct and Secondary Jobs[4]	0	618	1,505
BD Properties			
Office Jobs Generated[1]	0	0	470
Total "New" Direct Jobs[3]	0	0	164
Total New Direct and Secondary Jobs[4]	0	0	287
Natomas Eastside			
Office Jobs Generated[1]	1,088	2,850	6,060
Commercial/Shopping Center Jobs Generated[2]	1,001	910	850
Total "New" Direct Jobs[3]	731	1,316	2,418
Total New Direct and Secondary Jobs[4]	1,279	2,303	4,232
Gateway Centre			
Office Jobs Generated[1]	0	2,175	4,800
Commercial/Shopping Center Jobs Generated[2]	0	0	488
Total "New" Direct Jobs[3]	0	761	1,850
Total New Direct and Secondary Jobs[4]	0	1,332	3,239
Cumulative Impacts			
Office Jobs Generated[1]	1,088	6,033	13,786
Commercial/Shopping Center Jobs Generated[2]	1,001	910	1,338
Total "New" Direct Jobs[3]	731	2,430	5,292
Total New Direct and Secondary Jobs[4]	1,279	4,253	9,263

FOOTNOTES:

[1]Based on average 4.0 employees/1,000 square feet of office floor space, as specified in Office of Planning and Research Economic Practices Manual (1978).

[2]Based on average 6.5 employees/1,000 square feet of commercial/shopping center floor space as used in South Natomas Business Park EIR.

[3]New jobs represent that portion of total jobs added to the labor market area; the remainder represent project-generated jobs shifting from other jobs that would have occurred elsewhere in the labor market without the project. Based on mid-range estimate of 35 percent of total jobs = new jobs.

[4]Based on secondary job multiplier of .75 of a secondary job for every direct job.

3.4 Million Square Feet Office Alternative. This alternative would result in the creation of 15,124 permanent office- and commercial-related jobs, of which 5,292 would be new jobs. With the addition of 3,971 new secondary jobs, a total of 9,263 total new direct and secondary jobs would be created. This represents an increase of 624 percent over the no-project alternative.

Comparison. Both office alternatives would result in the creation of new direct and secondary jobs caused by the construction of additional office and commercial space. The 3.4 million square feet office alternative would result in 117 percent more jobs than the 1.5 million square feet office alternative. Both alternatives would provide the opportunity to diversify the South Natomas area's employment base. On a regional scale, unemployment in the Sacramento SMSA could be reduced under either alternative.

Public Facilities and Services Impacts

Table 2-10 is a summary comparison of the public facilities and services impacts of each of the three alternatives. Impacts on each service are summarized below.

Police.

No-Project Alternative. The main function of the police department in residential areas of the no-project alternative would be responses to crime, parking and circulation problems and emergency calls. The present police department force is understaffed to meet the additional demands of this alternative (Barclay pers. comm.).

1.5 Million Square Feet Office Alternative. The main function of the police department in office-commercial areas is to patrol the area and respond to occasional crime incidents. In the residential areas of this alternative police would respond to crime, parking and circulation problems and emergency calls. The present police department is understaffed to meet the increase in demand of this alternative (Barclay pers. comm.).

3.4 Million Square Feet Office Alternative. The main function of the police department in this alternative is to answer occasional crime incidents and to patrol the area. The present police force is understaffed to meet the additional demands of this alternative (Barclay pers. comm.).

Comparison. The present Sacramento Police Department is not capable of meeting any of the additional demands generated by the three alternatives.

Fire Protection.

No-Project Alternative. The no-project alternative would require a fire flow of approximately 1,500 gallons per minute (gpm) for single family (low density) residential units and 4,500 gpm for multifamily (medium and high density) apartment units. There is currently a problem supplying this flow level. However, when the new 24-inch transmission water main crossing the American River is completed this year, the water flow level will be adequate for this alternative. Connecting water mains from the 24-inch transmission water main to the project sites will have to be installed by the developer. Access for fire protection vehicles could be improved for all projects off West El Camino.

1.5 Million Square Feet Office Alternative. The fire flow rates for office developments range from 4,500-8,000 gpm (Powell pers. comm.). This flow rate will depend upon building square footage, construction materials and whether or not an indoor sprinkler system is installed. This level of service cannot be provided by the present system. After

Table 2-10. Cumulative Public Facilities and Services Impacts

Public Facilities and Services	No-Project Alternative	1.5 Million Square Feet Office Alternative	3.4 Million Square Feet Office Alternative
Police	Increase in service demand; present police force is understaffed to meet demand.	Increase in service demand; present police force is understaffed to meet demand.	Increase in service demand; present police force is understaffed to meet demand.
Fire	Increase in service demand; water flows will be sufficient once 24-inch transmission water main across American River is completed; developer(s) will have to provide connecting mains to the project sites; emergency vehicle access is potentially inadequate.	Increase in service demand; water flows will be sufficient once 24-inch transmission water main across American River is completed; developer(s) will have to provide connecting mains to the project sites; emergency vehicle access is potentially inadequate.	Increase in service demand; water flows will be sufficient once 24-inch transmission water main across American River is completed; developer(s) will have to provide connecting mains to the project sites; emergency vehicle access is potentially inadequate.
Water	Water demand will increase by 1,090 acre-feet per year; demand can be met once 24-inch transmission water main across the American River is completed; developer(s) will have to provide connecting mains to the project sites.	Water demand will increase by 891.9 acre-feet per year; demand can be met once 24-inch transmission water main across the American River is completed; developer(s) will have to provide connecting mains to the project sites.	Water demand will increase by 574.8 acre-feet per year; demand can be met once 24-inch transmission water main across the American River is completed; developer(s) will have to provide connecting mains to the project sites.
Sewer	2.6 million gallons per day (mgd) of wastewater produced; (peak flows) present system can accommodate this increase.	1.7 mgd of wastewater produced; (peak flows) present system can accommodate this increase.	1.4 mgd of wastewater produced; (peak flows) present system can accommodate this increase.
Solid Waste Management	Increase in solid waste can be accommodated by City.	Increase in solid waste can be accommodated by City.	Increase in solid waste can be accommodated by City.
Recreation and Open Space	42.5-acre increase in demand for parks; demand is partially met by Bannon Slough Parkway and greenbelt along Natomas Main Drainage Canal; recreational attractiveness reduced by east-west bisecting arterials; I-5 Beautification Corridor remains.	23-acre increase in demand for parks; demand is partially met by Bannon Slough Parkway and greenbelt along Natomas Main Drainage Canal; the recreational attractiveness of these areas is reduced by office uses and east-west bisecting arterials; I-5 Beautification Corridor remains.	13-acre increase in demand for parks; demand is met by Bannon Slough Parkway and greenbelt along Natomas Main Drainage Canal; these areas are adversely affected by land use, noise and traffic patterns; I-5 Beautification Corridor remains.
Schools	Increase in enrollment, K-8th grades by 595 students and 373 students in grades 9-12th; present K-8th grade system cannot accommodate increase until additional facilities are provided; high school system can.	Increase in enrollment, K-8th grades by 340 students and 205 students in grades 9-12th; present K-8th grade system cannot accommodate increase until additional facilities are provided; high school system can.	Increase in enrollment K-8th grades by 158 students and 116 students in grades 9-12th. Present K-8th grade system cannot accommodate increase until additional facilities are provided; high school system can.

Table 2-10. Cont'd.

Public Facilities and Services	No-Project Alternative	1.5 Million Square Feet Office Alternative	3.4 Million Square Feet Office Alternative
Transit	Increase in ridership demand; ridership served by Route 14 and possibly Route 86-87 if it is not discontinued in June 1982.	Increase in ridership demand; ridership served by Route 14 and possibly Route 86-87 if it is not discontinued in June 1982; Additional office uses would create a land use pattern less amenable to efficient transit service.	Increase in ridership demand; ridership served by Route 14 and possibly Route 86-87 if it is not discontinued in June 1982; additional office uses would create a land use pattern less amenable to efficient transit service.
Drainage	Peak runoff flow of 84.36 cubic feet per second (cfs); present system can accommodate this rate.	Peak runoff flow of 96.5 cfs; present system cannot accommodate this rate.	Peak runoff flow of 130.96 cfs; present system cannot accommodate this rate.

the 24-inch transmission water main crossing the American River is completed, these flow rates can be adequately met. Connecting water mains from the 24-inch transmission water main to the project sites will have to be installed by the developer. This alternative has the same emergency vehicle access problems as the no-project alternative.

3.4 Million Square Feet Office Alternative. The fire flow rates for office developments range from 4,500-8,000 gpm (Powell pers. comm.). The flow rate will depend upon building square footage, construction materials and whether or not an indoor sprinkler system is installed. This level of service cannot be provided with the present system. Office fire flow requirements of this alternative can be met once the 24-inch transmission water main crossing the American River is completed. Connecting water mains from the 24-inch transmission water main to the project sites will have to be installed by the developer. The alternative has the same emergency vehicle access problems as the no-project alternative.

Comparison. Fire flow requirements are considerably greater for the office alternatives than for the no-project alternative. Because the new 24-inch transmission water main crossing the American River will be capable of providing adequate water supply for all three projects, the impacts of the office alternatives can be considered minor. Connecting water mains from the project sites to the 24-inch transmission water main will have to be installed for all three alternatives. Adequate emergency vehicle access for all three alternatives is a problem.

Water.

No-Project Alternative. The no-project alternative would have an estimated total water demand of 1,090 acre-feet per year. The residential areas of the alternative would need 1,006 acre-feet per year, assuming a unit water demand of 3.8 acre-feet per acre per year for low density units and 4.1 acre-feet per acre for medium and high density units; the commercial/office areas would need 57 acre-feet per year, using a standard of 1.5 acre-feet per acre per year (Davis pers. comm.). Miscellaneous water demands from the school and fire station amount to 28 acre-feet per year. There will be no problem for the City's facilities to meet this additional demand once the 24-inch transmission water main across the American River is completed in late spring 1982 (Davis pers. comm.). Connecting water mains from the 24-inch transmission water main to the project site will have to be installed by the developer. Any residential or commercial projects would have to install internal 6- to 12-inch water mains, financed by the developers.

1.5 Million Square Feet Office Alternative. This alternative would demand a total of 891.9 acre-feet of water per year. For the residential areas, the amount of water needed is 670.9 acre-feet per year, 162 acre-feet per year for commercial areas and 59 acre-feet per year for a school, park and fire station. This extra demand will be met by the City's new 24-inch transmission water main crossing the American River (Davis pers. comm.). Connecting water mains from the 24-inch transmission water main to the project sites will have to be installed by the developer. Any on-site water mains will be financed by the developers as in the no-project alternative.

3.4 Million Square Feet Office Alternative. This alternative would require the lowest total amount of water, 575 acre-feet per year. The commercial/office uses would demand 372 acre-feet per year and the residential uses 196 acre-feet per year. This additional demand will be met by the City's new 24-inch transmission water main crossing the American River (Davis pers. comm.). Connecting water mains from the 24-inch transmission water main to the project sites will have to be installed by the developer. Any on-site water mains will be financed by the developers.

Comparison. Water demands of the no-project alternative are 1.2 times greater than the 1.5 million square feet office alternative and 1.9 times greater than the 3.4 million square feet office alternative. The 24-inch transmission water main crossing the American River will be able to adequately supply all three alternatives, and any beneficial impacts of the office alternatives would therefore not be significant. All three alternatives would require connecting mains between the project sites and the 24-inch transmission water main and on-site 6 to 12-inch water mains, to be financed by the developers.

Sewers.

No-Project Alternative. The total amount of wastewater (peak flows) produced by the no-project alternative would be approximately 2,627,888 gallons per day (gpd) based on the following standards: 400 gpd per single family (low density) residential unit, 300 gpd per multifamily (medium and high density) residential unit, 80 gpd per 1,000 square feet office space, and 1,600 gpd per acre for commercial uses. Existing sewer facilities are capable of accommodating this flow (Weisenburger pers. comm.).

1.5 Million Square Feet Office Alternative. The 1.5 million square feet project would generate 1,711,292 gpd of wastewater (peak flows). The existing facilities are capable of accommodating this flow (Weisenburger pers. comm.). The developers would be responsible for constructing necessary local collector sewers.

3.4 Million Square Feet Office Alternative. This alternative would produce the lowest amount of wastewater, 1,414,776 gpd (peak flows). All existing facilities can handle this flow (Weisenburger pers. comm.). The developers would be responsible for constructing necessary local collector sewers.

Comparison. Peak wastewater flows for the no-project alternative are 1.5 times greater than the 1.5 million square feet office alternative and 1.9 times greater than the 3.4 million square feet office alternative. The no-project alternative and both office alternatives can be accommodated by the existing facilities.

Solid Waste Management.

No-Project Alternative. The no-project alternative would rely on the City of Sacramento Garbage Department to collect residential wastes, yard debris and to sweep streets. According to the City Garbage Department, there would be no problem providing these services (Smilanich pers. comm.).

1.5 Million Square Feet Office Alternative. The proposed project could use either the City of Sacramento Garbage Department or a private firm to collect the garbage. There are no problems in supplying service for this alternative (Smilanich pers. comm.).

3.4 Million Square Feet Office Alternative. The waste produced by this project alternative also could be collected by either a private company or the City of Sacramento Garbage Department. There are no problems for servicing the alternative (Smilanich pers. comm.).

Comparison. There would be no problems in providing adequate garbage collection services for any of the three alternatives. The present landfill site is capable of handling the City's wastes until early 1983, and waste would have to be accommodated by future disposal facilities after this date.

Recreation and Open Space.

No-Project Alternative. The no-project residential alternative would generate a requirement of 42.5 acres of parks, using the City's standard of 5 acres/1,000 people. This demand could be partially accommodated by the proposed Bannon Slough Parkway and the 50-foot greenbelt along both sides of the Natomas Drainage Canal.

The 40-foot Bannon Slough Parkway and bicycle trail along the Creekside site would be retained under this alternative. The scale of the residential area would be compatible with the linear parkway. The parkway's recreational attractivenes would be lessened by the bisecting east-west arterials in the multifamily residential zones.

The SNCP establishes a 50-foot open space parkway along both sides of the Natomas Main Drainage Canal. This greenbelt would be part of the no-project alternative's open space.

The "I-5 Beautification Corridor", a landscaped strip varying in width from 35 feet to 135 feet along both sides of I-5, would act as a buffer zone between the freeway and residential development in this alternative.

1.5 Million Square Feet Office Alternative. This alternative would reduce the amount of acres needed for parks to 23. This is because commercial/office uses do not directly generate a demand for parks, although office workers do create some demand for recreation and open space during lunchtime (e.g., joggers and brown-baggers). The demand for parks under this alternative will be partially met by the 10-acre park north of West El Camino along the Natomas Main Drainage Canal, the proposed Bannon Slough Parkway and the 50-foot greenbelt along both sides of the Natomas Main Drainage Canal.

The 40-foot Bannon Slough Parkway would be retained under this alternative; however, the recreational attractiveness of the parkway would be diminished by the scale of the neighboring office uses and by the east-west collector road, bisecting the parkway.

The greenbelt along the Natomas Main Drainage Canal and the I-5 "Beautification Corridor" also would remain under this alternative.

A 10-acre park is planned under this alternative. The park would be located north of West El Camino near the Natomas Main Drainage Canal. This park would adjoin commercial/office uses, and provide open space and recreational facilities for office workers. The high density residential area in Natomas Eastside also would use this park.

3.4 Million Square Feet Office Alternative. Because of the high concentration of commercial/office uses in this alternative only 13 acres of parks are needed. This demand could be accommodated by the Bannon Slough Parkway and the 50-foot greenbelt along Natomas Main Drainage Canal.

Both the Bannon Slough Parkway and the greenbelt along Natomas Main Drainage Canal would remain under this alternative. These parkways would be adversely affected by the intense land use, noise and traffic patterns generated by high density commercial/office uses.

The I-5 "Beautification Corridor" retained by this alternative would help reduce the visual intensity of office buildings.

Comparison. The no-project alternative requires 1.8 times more park acreage than the 1.5 million square feet alternative and 3.3 times more park acreage than the 3.4 million square feet alternative.

The 40-foot Bannon Slough Parkway and the 50-foot greenbelt along the Natomas Main Drainage Canal would remain under all three alternatives. The 3.4 million square feet alternative and to a lesser extent the 1.5 million square feet alternatives, would adversely affect the Slough and the greenbelt due to land use, noise and traffic patterns.

The 1.5 million square feet alternative will contain a 10-acre park, north of West El Camino, which would not be provided by the 3.4 million square feet alternative.

The I-5 "Beautification Corridor" would remain in all the alternatives.

Schools.

No-Project Alternative. The no-project alternative would generate 455 single family (low density) dwelling units and 2,932 multifamily (medium and high density) dwelling units. The standards used for computing the number of students attending grades kindergarten to 8th (K-8) per household are .34 for single family and .15 for multifamily. The standard used for determining the number of high school students per household is .11. The no-project alternative would add a total of 595 students to grades K-8th and 373 students to grades 9th-12th. According to the Natomas Union District staff (Dr. Cross pers. comm.) the existing K-8th facilities are not capable of handling this enrollment increase. Therefore, additional facilities would be needed to handle this increase. The Grant Joint Union High School District could accommodate this enrollment increase (Delfendahl pers. comm.).

1.5 Million Square Feet Office Alternative. This alternative would create 322 single family dwelling units and 1,542 multifamily dwelling units. The additional number of students attending grades K-8th would be 340 and 205 students for grades 9th-12th. The existing Natomas Union District facilities are not capable of handling this alternative's enrollment increase (Dr. Cross pers. comm.). Therefore, additional facilities would be needed to handle this increase. The Grant Joint Union High School District could accommodate this enrollment increase (Delfendahl pers. comm.).

3.4 Million Square Feet Office Alternative. The total number of multifamily dwelling units produced under this alternative is 1,056. This number of households would generate

158 students for grades K-8th and 116 students for grades 9th-12th. The existing Natomas Union District facilities are not capable of handling this alternative's enrollment increase (Dr. Cross pers. comm.). Therefore, additional facilities would be needed to handle this increase. The Grant Joint Union High School District could accommodate this enrollment increase (Delfendahl pers. comm.).

Comparison. The no-project alternative would generate 1.8 times as many students as the 1.5 million square feet alternative and 3.5 times as many students as the 3.4 million square feet alternative. The Natomas Union District facilities, serving grades K-8th, are not capable of handling any of the three alternative's enrollment increases. The Grant Joint Union High School District facilities, serving grades 9th-12th, can accommodate all three alternatives' enrollment increases.

Transit.

No-Project Alternative. The no-project alternative would generate increased ridership. The South Natomas area is presently serviced by Routes 14 and 86-87. Route 86-87 may be discontinued in June 1982 because of lack of ridership and funding. No additional services to replace this Route are being planned presently (Chandler pers. comm.). The ridership generated by this alternative would be served by Route 14 which runs east and west of I-5 along West El Camino.

1.5 Million Square Feet Office Alternative. Increased transit demand would also be generated by this alternative. This additional demand will be served by Route 14 and possibly Route 86-87, if it is not discontinued in June 1982.

3.4 Million Square Feet Office Alternative. This alternative would also create increased transit demand. This additional demand will be served by Route 14 and possibly Route 86-87, if it is not discontinued in June 1982.

Comparison. All of the alternatives would generate increased transit demand. The additional demand would be served by Route 14 and Route 86-87 if it is not discontinued in June 1982. Additional funding sources would have to be established before expanded service to the South Natomas area would be developed.

The regional transit operators have expressed concern that conversion of South Natomas residentially-designated lands to office uses would create a land use pattern less amenable to efficient transit service. This effect would be greater with the 3.4 million square feet office alternative than with the 1.5 million square feet office alternative due to its more intense level of office development.

Drainage.

No-Project Alternative. Based on Reclamation District 1000 design criteria of 0.2 cubic feet per second (cfs) per acre for single family (low density) residential uses and .3 cfs for multifamily (medium and high density) residential uses, the no-project alternative would generate a peak runoff flow from residential land uses of 66.5 cfs. The amount of runoff from commercial and office land uses would be 17.84 cfs, based on a .47 cfs standard. The total peak runoff flow would be 84.36 cfs, which could be handled by the present storm drainage system (Betts pers. comm.).

1.5 Million Square Feet Office Alternative. The total amount of storm runoff produced by this alternative is 96.5 cfs. The amount generated by the high density residential uses is almost equal to the amount produced by the office/commercial uses. The present system does not have the capacity to accommodate these flows (Betts pers. comm.).

3.4 Million Square Feet Office Alternative. The 3.4 million square feet alternative would generate peak flows of 130.96 cfs. The present system does not have the capacity to accommodate these flows (Betts pers. comm.).

Comparison. Compared to the no-project alternative, the 1.5 million square feet alternative would increase peak flows by 14.4 percent, and the 3.4 million square feet alternative would increase peak flows by 55.2 percent. The no-project alternative can be accommodated by the present storm drainage system, whereas the office alternative would require additional drainage improvements.

Fiscal Impacts

Introduction. The differences in fiscal impacts from implementation of the office alternatives as compared with implementation of the no-project alternative are evaluated in this section. The method and assumptions used are similar to those described in Appendix I of the Creekside Draft EIR; both one-time and annual costs and revenues of the alternatives are evaluated and the differences compared. Key assumptions in this approach include: only direct impacts are considered; estimates of costs and revenues are based on current conditions and are represented in 1981 dollars; and only local public costs and revenues are considered. Because of special funding conditions for districts (i.e., school, drainage, and transit), the differences in fiscal impacts on these entities are evaluated independent of municipal services.

No-Project Alternative. Implementation of the no-project alternative, consisting of primarily residential development, would have the following key effects on municipal and district fiscal conditions:

- Require acquisition and development of 42.5 acres of new parkland at a City cost of $1,147,500.
- Incur cost to the City of $170,000 to operate and maintain 42.5 acres of new parkland.
- Increase student enrollment in Natomas Union School District by 595 students resulting in the need for 37 temporary classrooms at a cost to the District of $74,000.
- Increase one-time revenues to the City by an estimated $1,773,361.
- Increase annual revenues to the City by an estimated $957,428 at project build-out.

1.5 Million Square Feet Office Alternative. Implementation of the 1.5 million square feet office alternative would have the following key effects on municipal and district fiscal conditions:

- Require acquisition and development of 13 acres of new parkland (in addition to the 10 acres proposed for dedication) at a City cost of $351,000.
- Incur annual cost to the City of $92,000 to operate and maintain 23 acres of new parkland.
- Increase student enrollment in Natomas Union School District by 340 students resulting in the need for approximately 20 temporary classrooms at a cost to the District of $40,000.

- Increase one-time revenues to the City by an estimated $2,349,215.

- Increase annual revenues to the City by an estimated $1,144,962 at project build-out.

3.4 Million Square Feet Office Alternative. Implementation of the 3.4 million square feet alternative would have the following key effects on municipal and district fiscal conditions:

- Require acquisition and development of 13 acres of new parkland at a City cost of $351,000.

- Incur annual cost to the City of $52,000 to operate and maintain 13 acres of new parkland.

- Increase student enrollment in Natomas Union School District by 158 students resulting in the need for approximately nine temporary classrooms at a cost to the District of $18,000.

- Increase one-time revenues to the City by an estimated $3,866,097.

- Increase annual revenues to the City by an estimated $1,482,392 at project build-out.

Comparison. The difference in estimated fiscal effect on the City from implementation of the office alternatives as compared with the no-project alternative is shown in Table 2-11. As presented, municipal costs, both one-time capital costs and annual operating costs, are projected to be lower as a result of implementation of either the 1.5 million square feet office alternative or the 3.4 million square feet office alternative. Also, implementation of either of the office alternatives would result in additional one-time and annual revenues. The full benefit of the projected annual revenues would only be realized at build-out of either of the office alternatives.

Table 2-11. Estimated Difference in Municipal Costs and Revenues from Implementation of Office Alternatives as Compared to the No-Project Alternative

	1.5 Million Square Feet Office Alternative ($)	3.4 Million Square Feet Office Alternative ($)
Capital (one-time)		
Savings in Capital Costs	+ 796,500	+ 796,500
Revenues	+ 575,854	+ 2,092,736
Net Effect on the City	+ 1,372,354	+ 2,889,236
Operating (Ongoing)		
Savings in Operating Costs	+ 78,000	+ 118,000
Revenues	+ 187,534	+ 524,964
Net Effect on the City	+ 265,534	+ 642,964

Traffic and Circulation Impacts

Introduction.

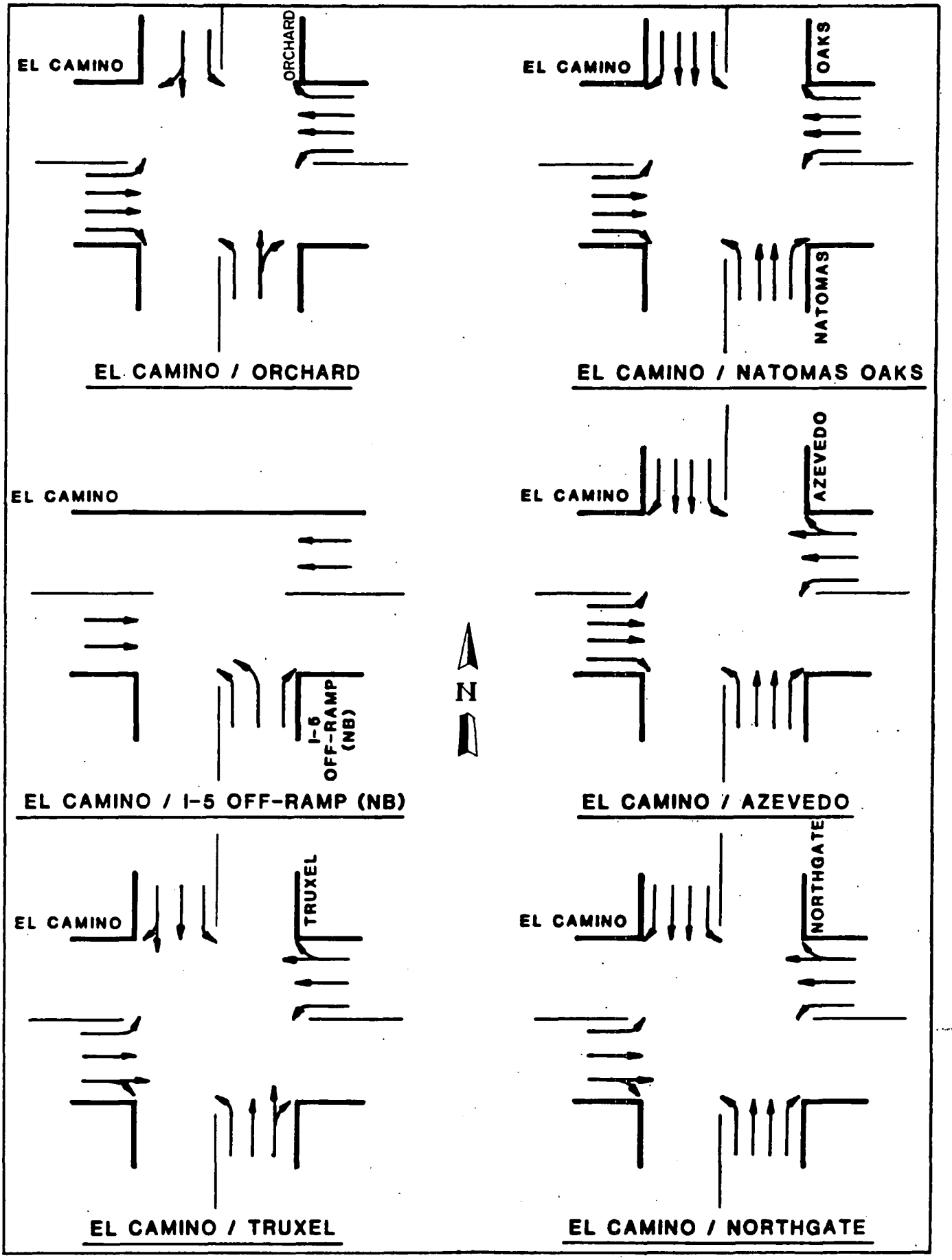
Methods. Future travel patterns in the South Natomas Community Plan (SNCP) area were analyzed for the no project, 3.4 million square feet office, and 1.5 million square feet office alternatives using two computer programs developed by CH2M Hill. These programs, named ASSIGN and CMA, were designed specifically for South Natomas development studies. ASSIGN is a program that facilitates the analysis of existing and/or projected trip generation, distribution and assignment characteristics for any surface street network of up to 150 zones and 1,500 roadway links. The assignment is accomplished through a modified application of a minimum time path algorithm. Output includes directional volumes on each link, turning movement patterns at any specified intersection, and an origin-destination analysis of the traffic using any specified link.

CMA is capable of determining the level of service and degree of saturation for any signalized intersection in accordance with the critical movement analysis (CMA) technique. The program is sensitive to lane configuration, signal phasing, percentage of trucks in the traffic stream, number of buses in the traffic stream, pedestrian activity, signal cycle length, peak-hour factor, and turning movement patterns. The program will also check left-turn movements to ensure that they can be adequately accommodated by the proposed signal phasing.

Base Case Assumptions. In order to establish consistency among the traffic analyses for the alternatives, a set of base case traffic and circulation assumptions was defined by CH2M Hill and the City Traffic Engineering Department. Many of the assumptions differ from those used in the South Natomas Business Park Final EIR and the Creekside Draft EIR. Therefore, the results of this analysis cannot be directly compared with the results of these previous analyses.

The cumulative traffic analysis encompasses the entire South Natomas planning area. All alternatives, including the no-project alternative, were analyzed using the following assumptions:

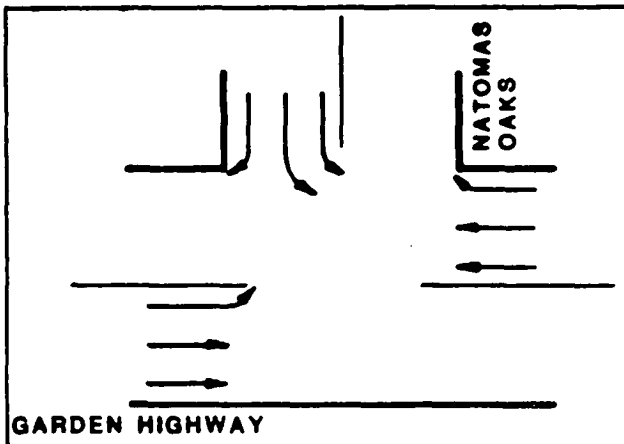
- Roadway System. The assumed roadway system for South Natomas includes not only the existing roadways but also all roadway improvements included in the SNCP. A full diamond interchange at I-880 and Truxel and completion of Azevedo from San Juan to Truxel were two major additions to the existing network. The assumed lane configurations of critical intersections in the study area are drawn out in Figure 2-5.



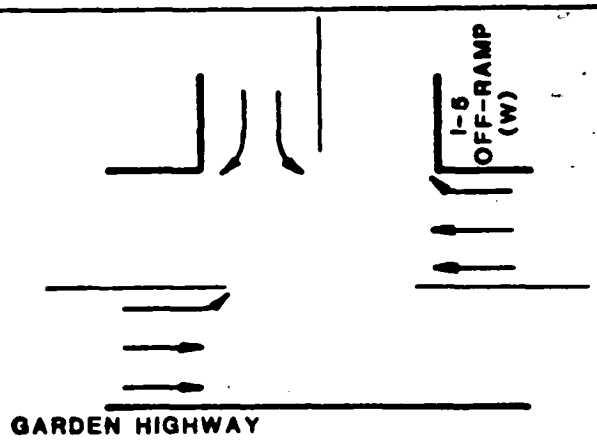
SOURCE: CH2M HILL

M15762.AO

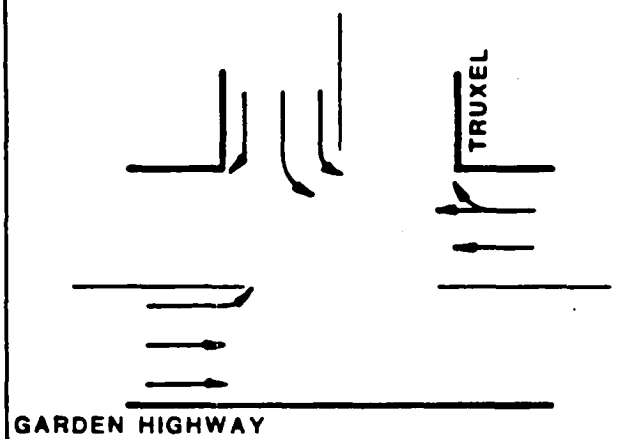
FIGURE 2-5. LANE CONFIGURATIONS OF CRITICAL INTERSECTIONS



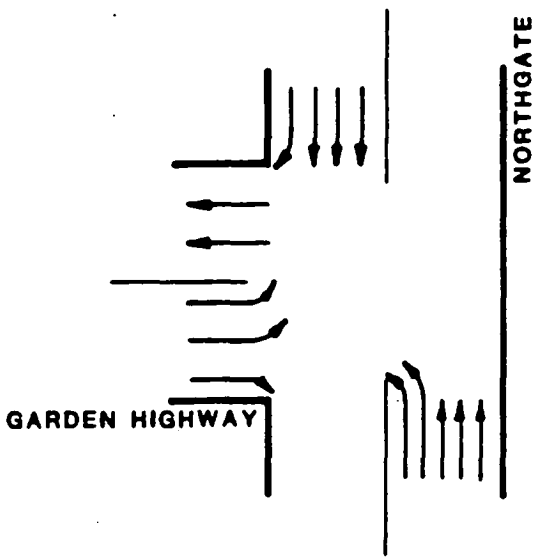
GARDEN HIGHWAY / NATOMAS OAKS



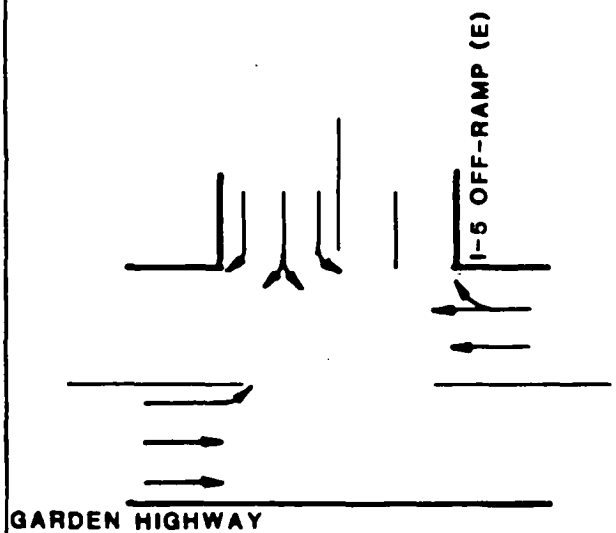
GARDEN HIGHWAY / I-5 OFF-RAMP (W)



GARDEN HIGHWAY / TRUXEL



GARDEN HIGHWAY / NORTHGATE



GARDEN HIGHWAY / I-5 OFF-RAMP (E)

M15762.A0

SOURCE: CH2M HILL

FIGURE 2-5. CONTINUED

- o Zone and Node/System. The South Natomas area was divided into 36 zones. Zone boundaries do not cross major streets, and no zone contains more than one generic land use type (residential, office or commercial). In addition, eight more zones were used to accommodate trips whose origin and destination were external to the South Natomas area. The generated trips from each zone are assigned from one or more roadway links. The link intersections are identified as nodes, and for this study 112 nodes were used.

- o Trip Generation Rates. Table 2-12 lists the trip generation rates assumed for land use types in the study area. The rates are for peak hour traffic volumes generated from and attracted to each zone. The rates shown have been adjusted downward to reflect an assumed 6 percent peak hour transit usage.

- o Transit Use. As noted above, a 6-percent transit use during peak hours, and a 2-percent transit use over a 24-hour average period, were used in the trip generation calculations.

- o Trip Distribution Patterns. The distribution patterns of zonal trips vary depending on land use type (residential, office or commercial) and location in the study area. These patterns, shown in Table 2-13, are based on Sacramento Area Council of Governments (SACOG) data for South Natomas trips projected for the year 2000. (The SACOG data did not consider future development of North Natomas or East Yolo County. Development in these areas could substantially change the distribution patterns assumed here.)

- o Trip Assignments. For each investigated alternative, the distributed trips were assigned the link/node network based on the location of specific land uses within the South Natomas area and the assumed distribution of trips to both internal and external areas. In all cases, it was assumed that drivers would select that route between their origin and destination which minimizes total travel time.

- o Trip Lengths. The average length of internal and external home-to-work trips (in all directions) for South Natomas is as follows:

  - Internal = 2.0 miles
  - North/Northeast = 10.9 miles
  - East = 6.0 miles
  - South/Southwest = 9.2 miles
  - West = 15.0 miles

Table 2-12
TRIP GENERATION RATES

Land Use Type	Unit	Trip Generation Rates[1] A.M. Peak Hour Inbound	A.M. Peak Hour Outbound	P.M. Peak Hour Inbound	P.M. Peak Hour Outbound
Single Family (0-5/acre)	Dwelling Unit	.282	.564	.658	.376
Half-plex (5-7/acre)	Dwelling Unit	.188	.47	.564	.282
Duplex (7-12/acre)	Dwelling Unit	.188	.47	.564	.282
Multifamily (12-22/acre)	Dwelling Unit	.094	.376	.376	.188
Townhouse (22+/acre)	Dwelling Unit	.094	.282	.282	.094
High School	Students	.188	.066	.0658	.122
Elementary School	Students	.094	.047	.0094	.0188
Fast Food Restaurant	1000 Gross Sq. Ft.	2.44	1.32	9.31	3.76
Gas Station	Station	10.34	9.4	11.3	12.2
24-Hour Market	1000 Gross Sq. Ft.	28.2	28.2	14.1	14.1
General Office	1000 Gross Sq. Ft.	1.786	.376	.282	1.32
Drive-In Restaurant	1000 Gross Sq. Ft.	46.7	37.8	16.0	13.7
Shop. Cntr. (100-200K)[2]	1000 Gross Sq. Ft.	.855	.282	2.82	2.82
Shop. Cntr. (200-300K)	1000 Gross Sq. Ft.	.705	.235	2.35	2.35
Shop. Cntr. (300-400K)	1000 Gross Sq. Ft.	.573	.188	1.88	1.88
Shop. Cntr. (50-100K)	1000 Gross Sq. Ft.	1.50	1.23	3.63	4.08
Shop. Cntr. (0-50K)	1000 Gross Sq. Ft.	1.81	1.48	6.77	6.77
New Car Dealership	Site	31.0	18.3	36.7	38.1
Manufacturing	Acre	5.64	1.22	1.41	6.49

[1]The trip generation rates have been adjusted to reflect an assumed 6-percent transit usage during peak hours.

[2]Shopping Center (100,000 to 200,000 gross square feet).

Source: CH2M HILL

Table 2-13
ASSUMED TRIP DISTRIBUTION

Trip Distribution by Direction	Trip Distribution by Land Use				
			Residential		
	Office	Commercial	Area 1[a]	Area 2[b]	Area 3[c]
Internal	9%	21%	4%	4%	4%
North					
- Northgate	3%	1%	1%	1%	1%
- I-5	0%	2%	1%	1%	1%
East					
- I-880	31%	10%	8%	8%	8%
- San Juan Rd	3%	4%	3%	3%	3%
- El Camino	19%	16%	10%	10%	10%
South					
- Northgate	5%	11%	56%	30%	10%
- I-5	29%	34%	16%	42%	62%
West					
- I-880	1%	1%	1%	1%	1%

[a] Area 1 is defined as that area west of Northgate Boulevard encompassing Zones 11, 15, 16, 22, 23, 24, and 25.

[b] Area 2 is defined as that area east of Truxel encompassing Zones 2, 3, 4, 5; 6, 10, 14, 20, and 21.

[c] Area 3 is defined as all the remaining Community Plan area west of Truxel.

Source: CH2M HILL

It should be noted that the base case assumptions do not include South Natomas development applications recently received by the City Planning Department, such as the River Holding Company marina proposal; pre-applications such as Village Marina; and development proposals for which no formal application has been made, such as Sacramento Community Hospital, and other potential business parks.

No-Project Alternative.

Trip Generation and Vehicle Miles Traveled. Impacts of the no-project alternative are based on the most recent version of the South Natomas Community Plan land uses (updated by Planning Department staff in February 1982). Full buildout of the plan would generate 219,180 average daily trips. Of these, approximately 9,240 would be internal trips. The average vehicle-miles traveled per day would be 1,895,800. A.M. and p.m. peak-hour roadway volumes for the no-project alternative are shown in Figures 2-6 and 2-7.

Intersection Capacities and Levels of Service. A total of 11 intersections was analyzed for capacity constraints under the no-project alternative. The Levels of Service (LOS) and the degree of saturation used from a.m. and p.m. peak-hour volumes at each intersection are shown in Table 2-14 (for definitions of LOS see Appendix A). This analysis shows that the build-out of the no project will cause unacceptable LOS of D and E at six intersections during the p.m. peak and at two intersections during the a.m. peak. The serious problems occur along Garden Highway at both south- and northbound I-5 ramps, at Garden and Truxel, and El Camino and Northgate.

1.5 Million Square Feet Office Alternative.

Trip Generation and Vehicle Miles Traveled. The build-out of the 1.5 million square feet alternative would generate 242,780 average daily trips, or 11 percent more trips than the no-project. The average vehicle miles traveled per day would be 2,039,400, an increase of 7.5 percent over the no-project alternative. A.M. and p.m. peak-hour roadway volumes are shown in Figures 2-8 and 2-9.

Zonal Split of P.M. Peak-Hour Trips. Table 2-15 shows a breakdown of total p.m. peak-hour trips passing through each of several key intersections according to their origin and destination. The division of peak-hour intersection trips is based on a select link analysis which identifies origin and destination zones for every vehicle passing through that intersection. For the 1.5 million square feet alternative, this breakdown identifies what effect Gateway Centre, Natomas Eastside, Creekside, BD Properties, and the other Community Plan zones will have on these key intersections. Summarized below are the results of this analysis.

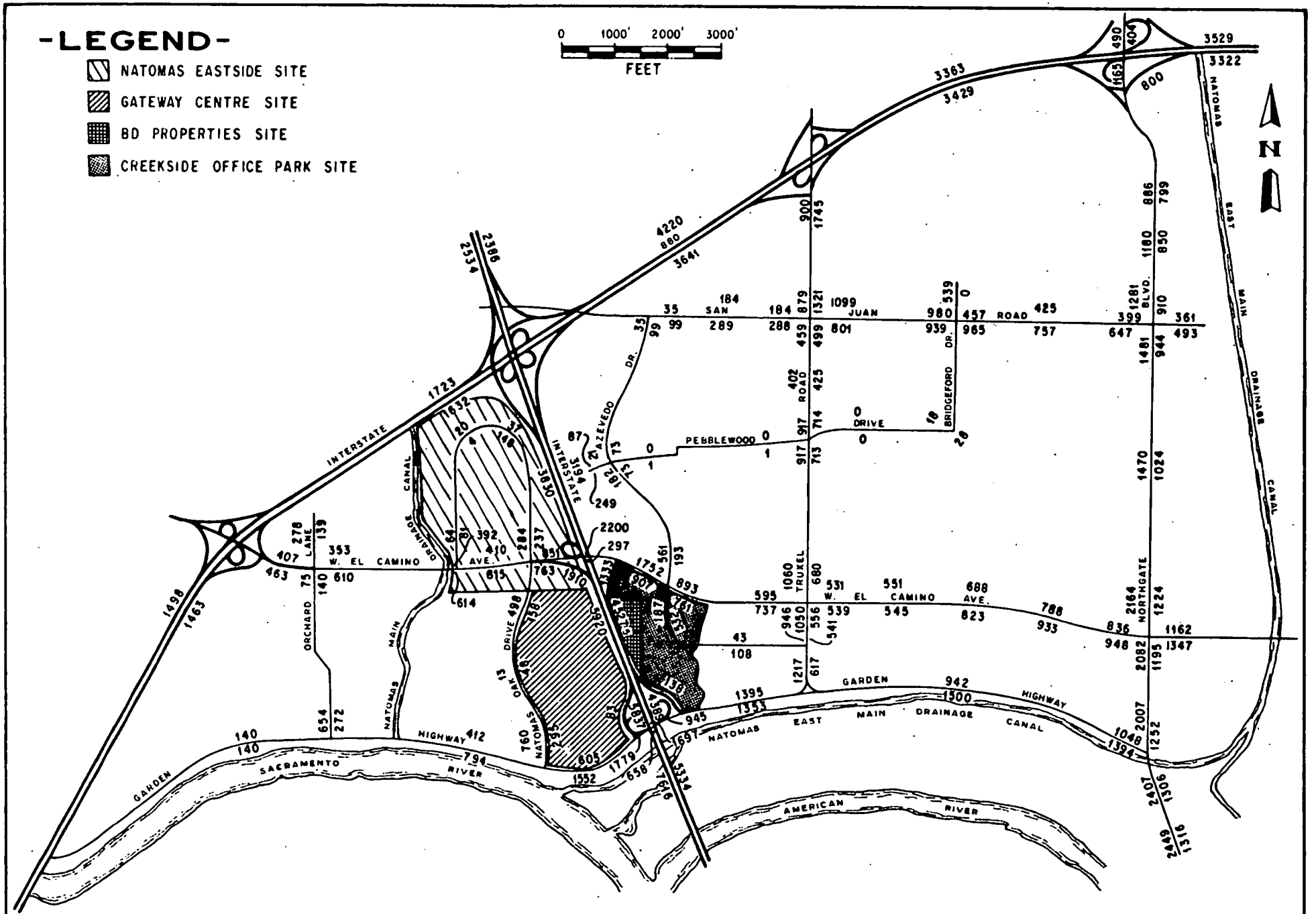


FIGURE 2-6. COMMUNITY PLAN: A.M. PEAK HOUR

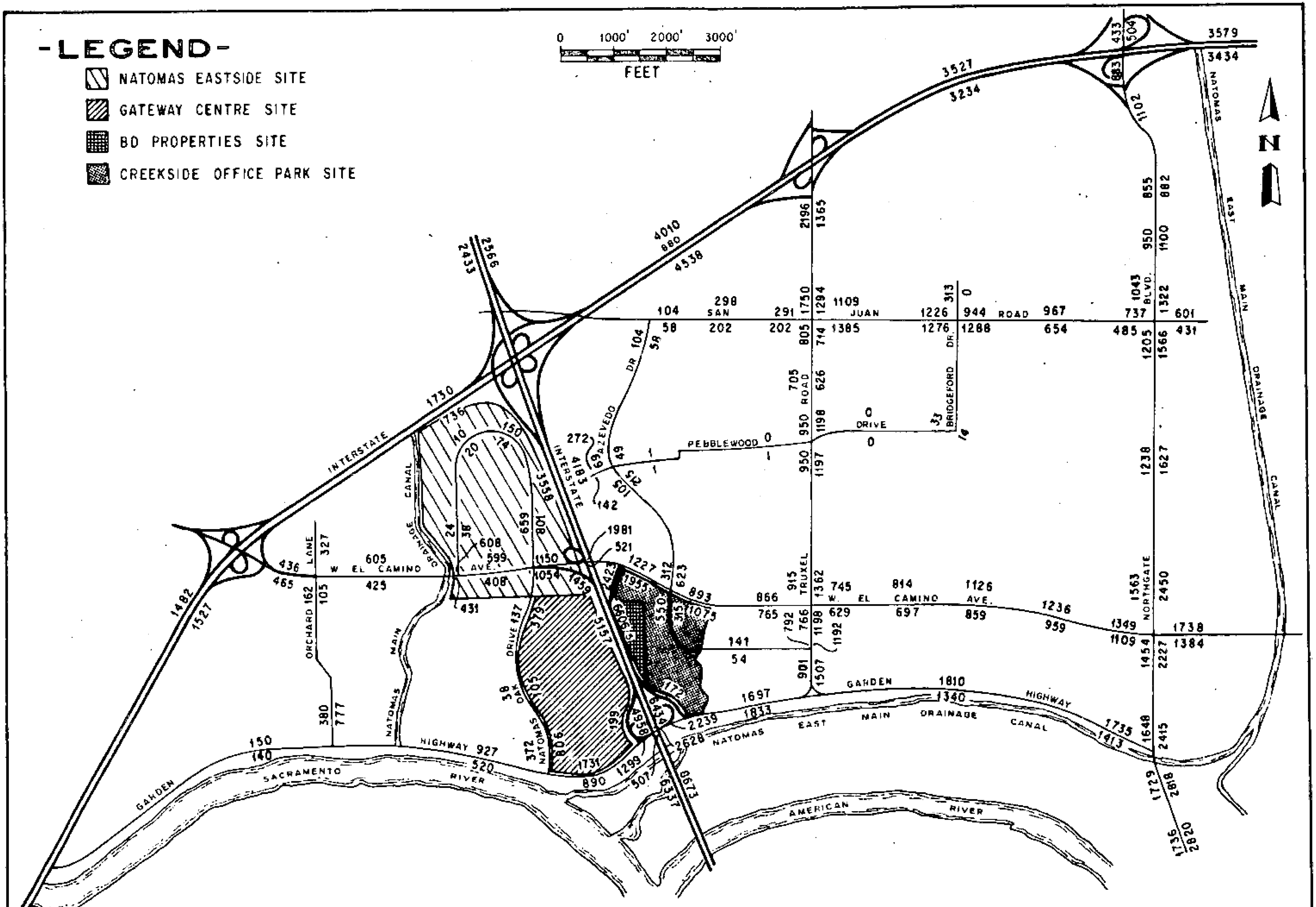


FIGURE 2-7. COMMUNITY PLAN: P.M. PEAK HOUR

Table 2-14
LEVELS OF SERVICE FOR THE NO-PROJECT
3.4 MSF OFFICE, AND 1.5 MSF OFFICE ALTERNATIVES

Node #	Intersections	Peak Hour Levels Of Service (and Degree pf Saturation)					
		No-Project		1.5 MSF Office		3.4 MSF Office	
		A.M. (%)	P.M. (%)	A.M. (%)	P.M. (%)	A.M. (%)	P.M. (%)
78	El Camino and Orchard	A(24)	A(19)	A(36)	A(29)	A(54)	A(40)
81	El Camino and Natomas Oaks	A(52)	B(58)	B(64)	C(77)	A(54)	E(132)
84	El Camino and I-5 North	C(78)	C(70)	E(96)	C(78)	E(118)	C(77)
85	El Camino and Azevedo	C(76)	D(79)	D(82)	E(90)	E(91)	E(97)
87	El Camino and Truxel	B(65)	D(80)	D(81)	E(93)	E(108)	E(115)
92	El Camino and Northgate	E(112)	E(155)	E(136)	E(157)	E(170)	E(157)
100	Garden Hwy and Natomas Oaks	A(51)	A(42)	A(54)	C(67)	A(55)	E(95)
101	Garden Hwy and I-5 South	E(96)	E(100)	E(117)	E(119)	E(138)	E(132)
112	Garden Hwy/I-5 North	C(70)	E(96)	D(86)	E(116)	E(102)	E(138)
102	Garden Hwy and Truxel	C(74)	E(134)	E(91)	E(134)	E(112)	E(138)
104	Garden Hwy and Northgate	C(71)	C(77)	C(71)	D(88)	D(79)	E(97)

Note: Peak hour levels of services underscored (____) denotes an unacceptable LOS. The City of Sacramento in its review of new roadway designs requires an acceptable LOS of "C" with a degree of saturation not exceeding 78 percent.

Source: CH2M HILL

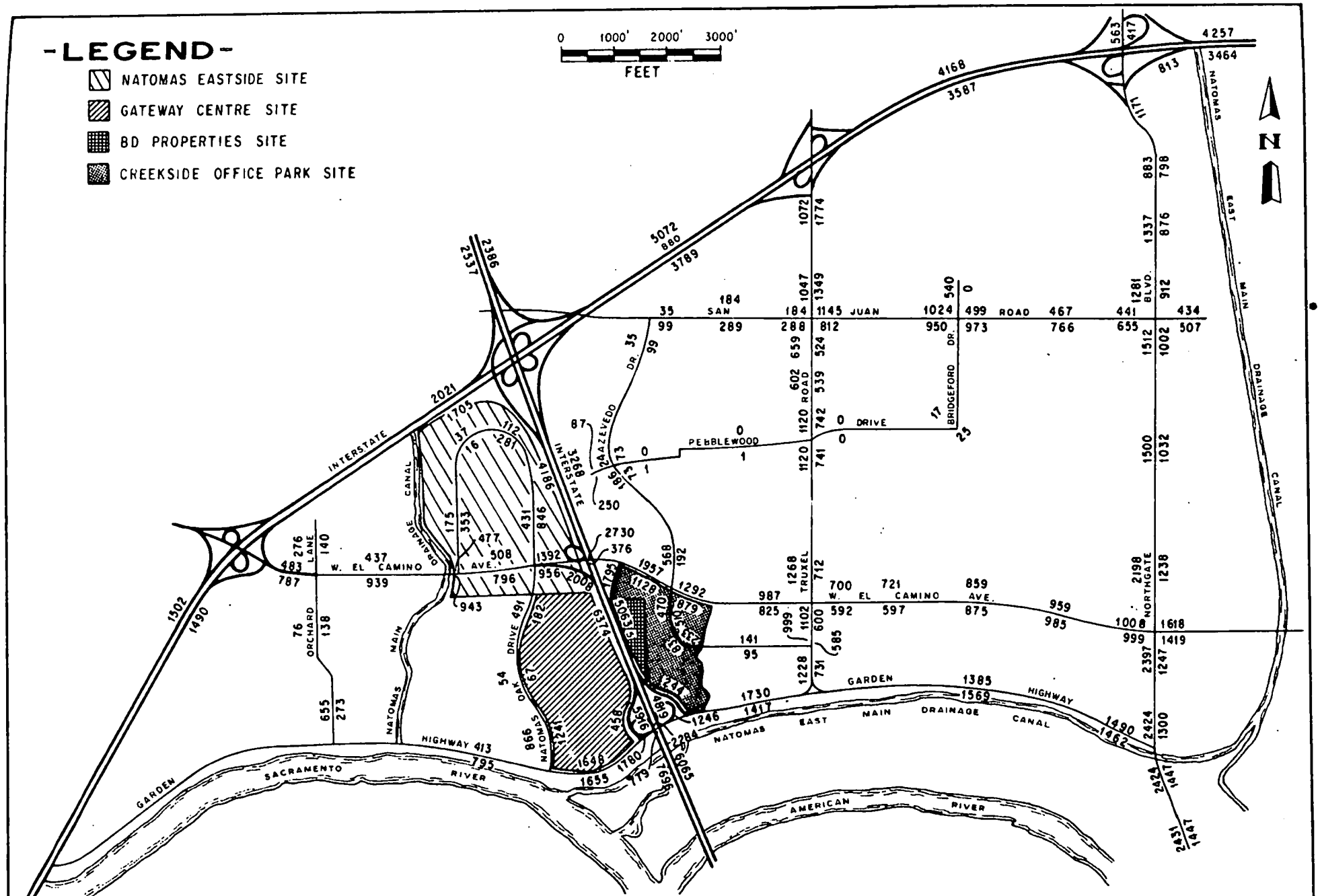


FIGURE 2-8. 1.5 MILLION SQUARE FEET ALTERNATIVE: A. M. PEAK HOUR

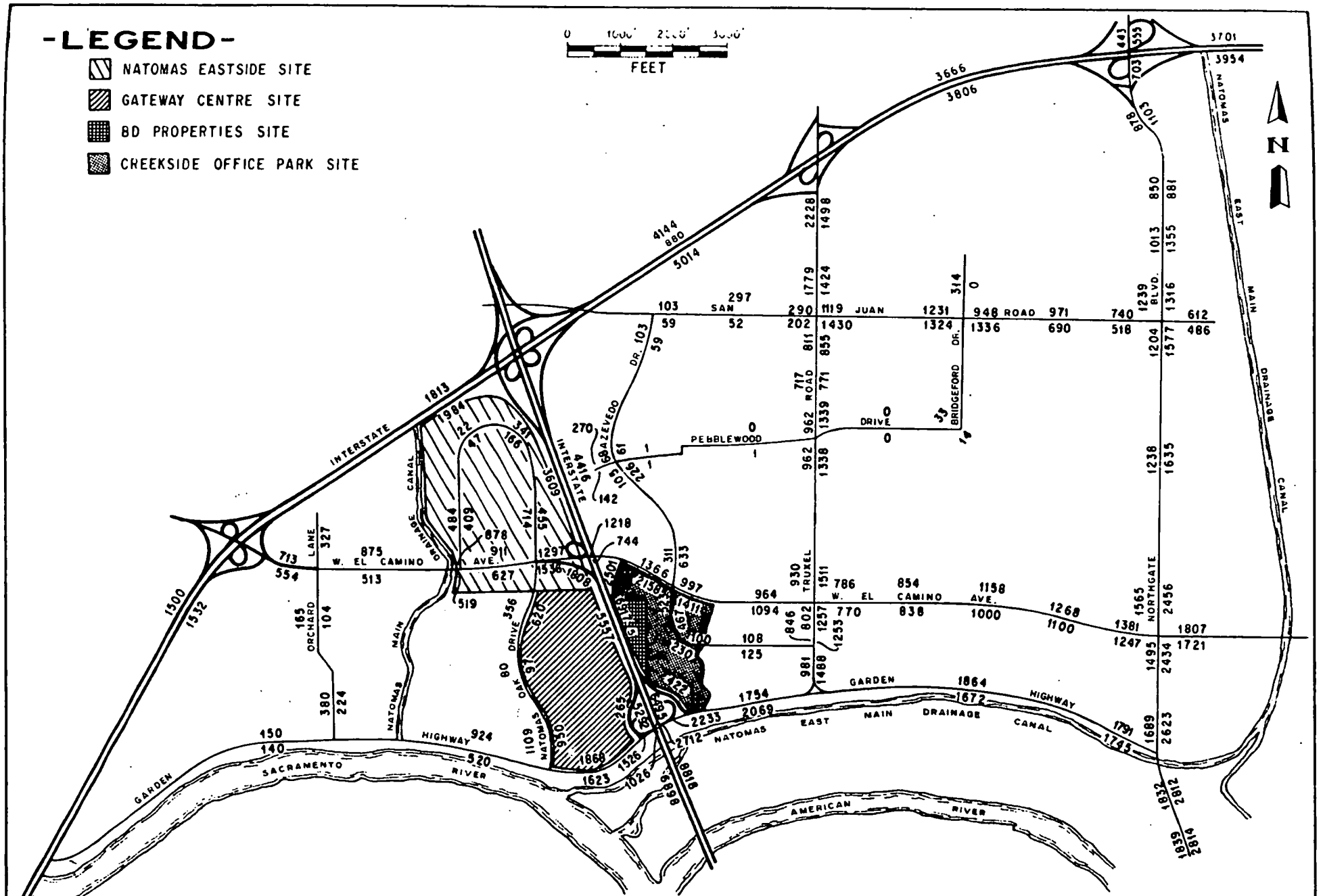


FIGURE 2-9. 1.5 MILLION SQUARE FEET ALTERNATIVE: P. M. PEAK HOUR

Table 2-15
ZONAL SPLIT OF PEAK-HOUR TRIPS BY PROJECT FOR THE
1.5 MSF OFFICE ALTERNATIVE

Node #	Intersection	P.M. Peak-Hour Vehicle Trips[a] (and Percent of Total)										Total Peak-Hour Trips
		Gateway Center Zones		Natomas Eastside Zones		Creekside Zones		BD Properties Zones		Other Community Plan Zones		
81	El Camino/Natomas Oaks	41	(1)	2585	(79)	14	(0)	1	(0)	627	(19)	3258
84	El Camino/I-5 NB	26	(0)	1457	(32)	334	(7)	49	(1)	2750	(60)	4611
85	El Camino/Azevedo	26	(1)	783	(20)	506	(13)	60	(1)	2563	(65)	3933
87	El Camino/Truxel	10	(0)	716	(18)	206	(5)	11	(0)	3124	(77)	4067
92	El Camino/Northgate	197	(3)	538	(8)	113	(2)	8	(0)	6197	(88)	7053
100	Garden Hwy/Natomas Oaks	819	(23)	101	(3)	0	(0)	0	(0)	2577	(74)	3497
101	Garden Hwy/I-5 SB	815	(18)	192	(4)	2	(0)	1	(0)	3590	(78)	4600
102	Garden Hwy/Truxel	247	(5)	285	(6)	172	(4)	17	(0)	4193	(85)	4914
104	Garden Hwy/Northgate	244	(4)	285	(5)	169	(3)	16	(0)	5532	(89)	6246
112	Garden Hwy/I-5 NB	551	(11)	285	(6)	3	(0)	1	(0)	4173	(83)	5013

[a]Total number of P.M. peak-hour vehicle trips through the intersection in all directions.

Note: The sum of the rows does not necessarily equal the total, but is always greater than or equal to the total, because some trips begin in one project and end in another.

Source: CH2M HILL

- o Gateway Centre will contribute 23 percent of the p.m. peak-hour trips passing through the intersection of Garden Highway and Natomas Oaks Drive (Node 100). Again, most Gateway traffic is assumed to use Garden Highway.

- o Natomas Eastside will be dominating El Camino and Natomas Oaks Drive (Node 81) contributing 79 percent of all p.m. peak-hour trips through that intersection. This project also will have a significant impact on most other key El Camino intersections.

- o Creekside's impact on El Camino and Azevedo will be 13 percent of all p.m. peak-hour trips.

- o BD Properties contribution to p.m. peak-hour trips is insignificant. At the main access point of El Camino and Azevedo this project will generate only 1 percent of all peak-hour trips.

- o Other Community Plan Zones will generate a range of 19-89 percent of all p.m. peak-hour trips at intersections.

Intersection Capacities and Levels of Service. Eight intersections during the p.m. peak and seven during the a.m. peak would have an unacceptable LOS "D" or "E" with this alternative. Table 2-14 shows the LOS and degree of saturation for all the alternatives.

3.4 Million Square Feet Office Alternative.

Trip Generation and Vehicle Miles Traveled. The build-out of the 3.4 million square feet office alternative would generate 263,000 average daily trips, or 20 percent more trips than the no-project alternative. The average vehicle-miles traveled per day by this office alternative would be 2,170,800, which is an increase of 14.5 percent over the no-project alternative. A.M. and p.m. peak-hour roadway volumes are shown in Figures 2-10 and 2-11.

Zonal Split of P.M. Peak-Hour Trips. Table 2-16 shows a breakdown of total p.m. peak-hour trips passing through several key intersections according to their origin and destination. For the 3.4 million square feet office alternative, this division of peak-hour trips shows what effect Gateway Centre, Natomas Eastside, Creekside, BD Properties, and the other Community Plan zones will have on these key intersections. Summarized below are the results of this analysis:

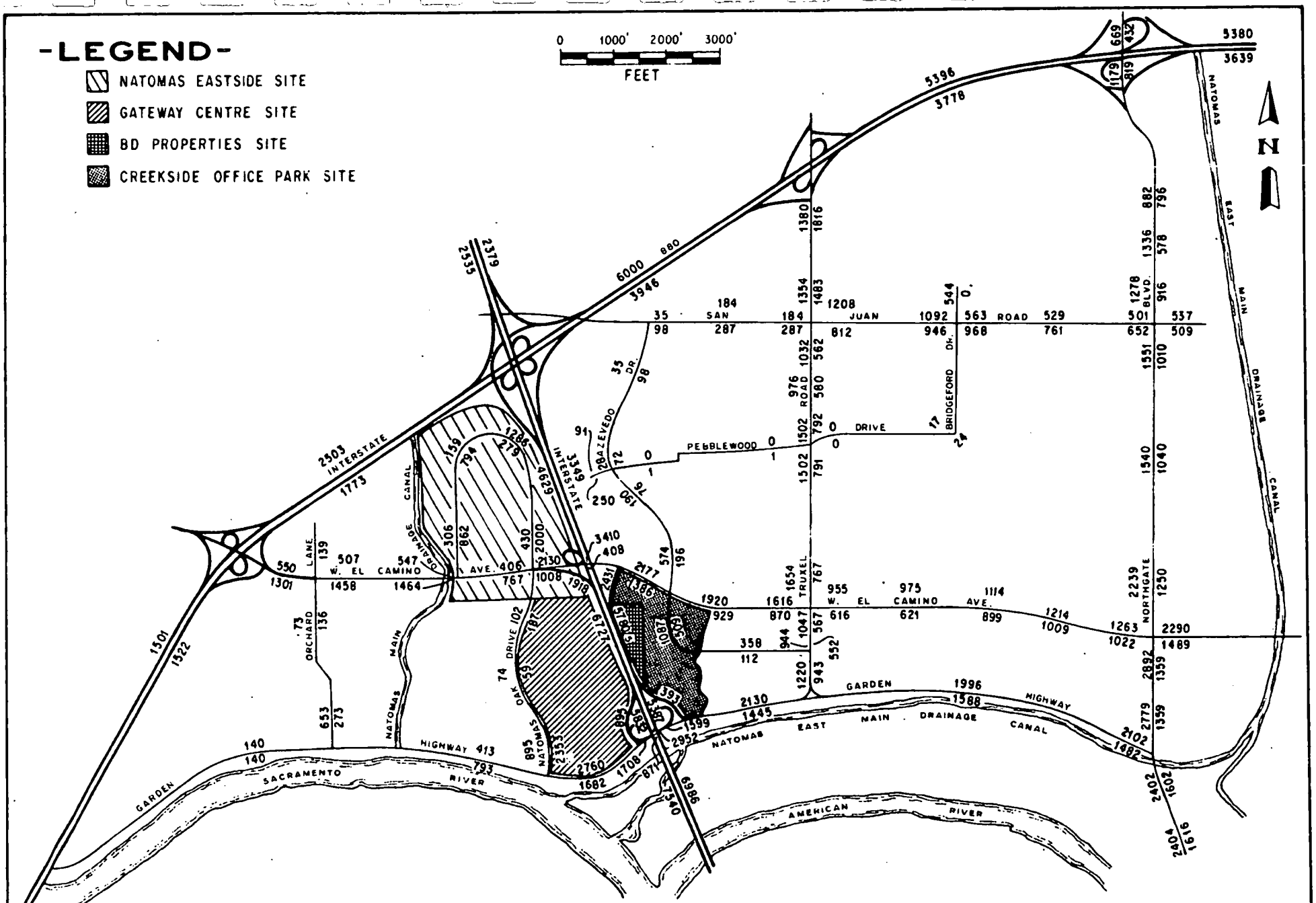


FIGURE 2-10. 3.4 MILLION SQUARE FEET ALTERNATIVE: A.M. PEAK HOUR

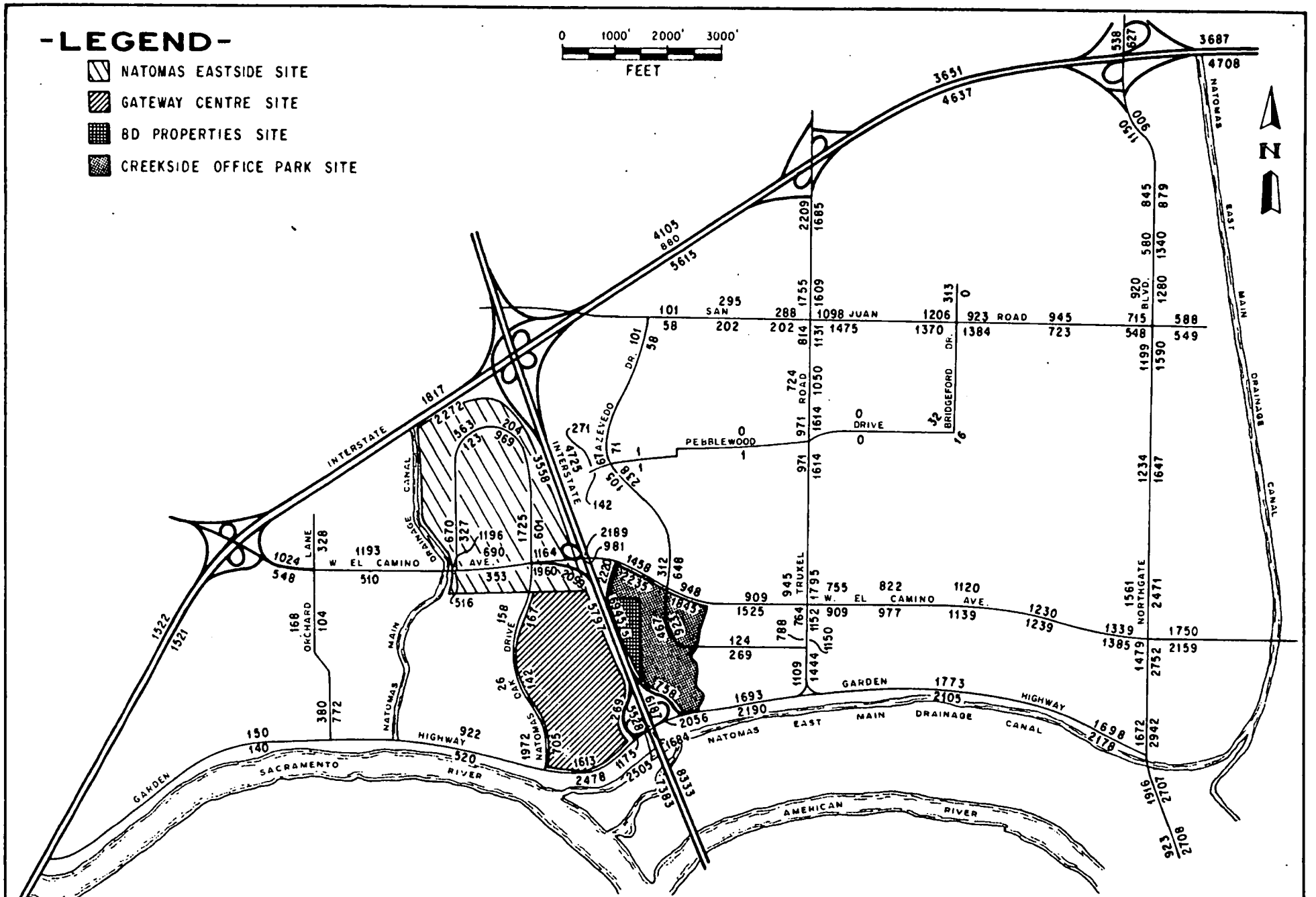


FIGURE 2-11. 3.4 MILLION SQUARE FEET ALTERNATIVE: P.M. PEAK HOUR

Table 2-16
ZONAL SPLIT OF PEAK-HOUR TRIPS BY PROJECT FOR THE
3.4 MSF OFFICE ALTERNATIVE

Node #	Intersection	P.M. Peak-Hour Vehicle Trips[a] (and Percent of Total)										Total Peak-Hour Trips
		Gateway Center Zones		Natomas Eastside Zones		Creekside Zones		BD Properties Zones		Other Community Plan Zones		
81	El Camino/Natomas Oaks	129	(4)	2668	(78)	25	(1)	3	(0)	612	(18)	3409
84	El Camino/I-5 NB	85	(2)	1503	(32)	311	(7)	59	(1)	2711	(58)	4659
85	El Camino Azevedo	85	(2)	948	(21)	727	(16)	139	(3)	2529	(57)	4418
87	El Camino/Truxel	31	(1)	873	(20)	397	(9)	77	(2)	2999	(69)	4377
92	El Camino/Northgate	491	(7)	650	(9)	192	(3)	37	(0)	6078	(82)	7448
100	Garden Hwy/Natomas Oaks	2017	(49)	21	(1)	0	(0)	0	(0)	2067	(50)	4105
101	Garden Hwy/I-5 SB	2005	(38)	167	(3)	0	(0)	0	(0)	3080	(59)	5252
102	Garden Hwy/Truxel	660	(13)	253	(5)	244	(5)	47	(1)	4038	(77)	5242
104	Garden Hwy/Northgate	647	(10)	253	(4)	244	(4)	47	(1)	5365	(82)	6556
112	Garden Hwy/I-5 NB	1396	(26)	253	(5)	0	(0)	0	(0)	3784	(70)	5433

[a]Total number of P.M. peak-hour vehicle trips through the intersection from all directions.

Note: The sum of the rows does not necessarily equal the total, but is always greater than or equal to the total, because some trips begin in one project zone and end in another.

Source: CH2M HILL

- o Gateway Centre will have a dominant effect all along Garden Highway. At the intersection of Garden Highway and Natomas Oaks Drive (Node 100) the project will contribute nearly 50 percent of all p.m. peak-hour trips. This is based on the assumption that most Gateway traffic would use Garden Highway.

- o Natomas Eastside will have the dominant effect along West El Camino, contributing 78 percent of the p.m. peak-hour trips through West El Camino and Natomas Oaks (Node 81). This is based on the assumption that nearly all Natomas traffic would use West El Camino.

- o Creekside will obviously contribute to traffic impacts at West El Camino and Azevedo (Node 85) since this will be the development's main access point. Creekside's contribution of 16 percent p.m. peak-hour trips at this location would be significant.

- o BD Properties contributes very little to the overall peak hour problem because of the small size of the development. At West El Camino and Azevedo, it will contribute 3 percent of all p.m. peak-hour trips.

- o Other Community Plan zones not associated with the above four office development proposals will generate a range of 18-82 percent of the total p.m. peak-hour trips at all key intersections in the study area.

Intersection Capacities and Levels of Service. Of the 11 intersections analyzed in the study area, nine intersections during the p.m. peak and seven during the a.m. peak would have a LOS "E" under the 3.4 million square feet office alternative. Table 2-14 gives the LOS and degree of saturation at each key intersection for this alternative.

Air Quality Impacts

Introduction. An air quality analysis was conducted on both a micro- and regional scale for the no-project alternative and the two office alternatives. The microscale analysis involved the use of CALINE 3, a computerized air quality model. The regional-scale analysis consisted of estimating the daily gross emissions for all pollutants that would occur from vehicle trips generated in the South Natomas planning area. The regional analysis assumed complete buildout of the planning area by the year 2000.

Micro-Scale Analysis. CALINE 3 is a line source dispersion model developed by Caltrans to estimate carbon monoxide (CO) pollutant levels adjacent to highways and arterial streets (Caltrans 1979). Worst-case meteorological and peak-hour traffic conditions were assumed for the CALINE 3 model. A wind speed of one meter per second and very stable atmospheric conditions (Class F) were used. Generally, maximum CO levels occur at the roadway edge when the prevailing wind direction is parallel to the roadway. Because of the high traffic levels on El Camino Avenue and corresponding low speeds during the peak hour, it is believed that maximum CO levels would occur in this area when the wind is parallel to El Camino Avenue; thus, a westerly wind (270°) was considered appropriate for this analysis. Composite emission factors for the year 2000 corresponding to the appropriate vehicle speed were derived from the Caltrans EMFAC 6C (July 1981) model.

CALINE 3 gives CO levels based on peak 1-hour traffic volumes. Added to the predicted CO levels is a 3.0 parts per million (ppm) background level, which represents typical ambient air quality conditions. The peak 8-hour CO levels were derived from the calculated 1-hour levels by using a factor of 0.7 as recommended by the California Air Resources Board (Agid 1981). Modeling receptors were located adjacent to key intersections

Regional-Scale Analysis. Estimates of daily gross regional emissions are based on composite emission factors for the year 2000, the number of vehicle trips generated by development, and the average distance traveled by employees and residents in work-to-home trips. Composite emission factors were again derived from EMFAC 6C assuming an average vehicle speed of 35 mph. The calculations of average daily trips (ADT) and vehicle-miles traveled (VMT) are found in the Transportation Impacts section.

No-Project Alternative. The results of the micro-scale analysis are presented in Table 2-17, which compares peak 8-hour CO concentrations at 19 receptors for each of the three alternatives. The maximum peak 8-hour CO level predicted under the no-project alternative is 9.6 ppm and occurs at Receptor 9 located near the intersection of El Camino Avenue and Northgate. This concentration would exceed the 8-hour Federal CO standard of 9 ppm.

The results of the regional-scale analysis are presented in Table 2-18, which compares the total daily gross emissions generated by the three alternatives in the year 2000. The no-project alternative would result in 41.63 tons per day of CO, 3.42 tons per day of nitrogen oxides (NO_X), 3.88 tons per day of total hydrocarbons (THC), 0.50 tons per day of sulfur dioxide (SO_2), and 0.67 tons per day of total suspended particulates (TSP).

1.5 Million Square Feet Office Alternative. Implementation of the 1.5 million square feet office alternative would increase CO levels above those predicted for the no-project alternative; it is probable that the Federal CO standard would be exceeded at Receptors 8 and 9 with the maximum of 10.2 ppm occurring at Receptor 9, the El Camino Avenue/Northgate Boulevard intersection.

The regional-scale analysis shows that the 1.5 million square feet office alternative would result in 44.79 tons per day of CO, 3.68 tons per day of NO_X, 4.18 tons per day of THC, 0.54 tons per day of SO_2, and 0.72 tons per day of TSP. This alternative's daily gross emissions are 8 percent higher than the no-project alternative.

3.4 Million Square Feet Office Alternative. Implementation of the 3.4 million square feet office alternative would generally increase CO levels adjacent to the roadways throughout the South Natomas area above those projected for the no-project alternative. CALINE 3 predicts that at least four locations (Receptors 8, 9, 12 and 14) would probably exceed the 8-hour standard. The maximum predicted CO level with this development scheme is 12.4 ppm which occurs at Receptor 12, the intersection of Garden Highway and Northgate.

The regional-scale analysis shows that this alternative would result in 47.67 tons per day of CO, 3.92 tons per day of NO_X, 4.45 tons per day of THC, 0.57 tons per day of SO_2, and 0.77 tons per day of TSP. This alternative's daily gross emissions are 15 percent higher than the no-project alternative.

Table 2-17
CARBON MONOXIDE CONCENTRATIONS FOR NO-PROJECT, 3.4 MSF OFFICE, AND 1.5 MSF OFFICE ALTERNATIVES

Receptor	Location	Peak 8-hour CO Concentration (ppm) at Edge of Roadway Year 2000		
		No Project	3.4 MSF	1.5 MSF
1	I-5 at Garden Hwy	4.2	4.6	4.4
2	I-5 at El Camino Ave	3.9	4.8	4.2
3	I-5 at I-880	3.7	4.0	3.9
4	I-880 at El Camino Ave	2.9	3.5	3.2
5	I-880 at Northgate	5.7	6.2	5.8
6	I-880 at Garden Hwy	2.1	2.1	2.1
7	El Camino Ave at Natomas Oaks	3.4	6.9	4.8
8	El Camino Ave at Truxel	7.6	10.6*	9.8*
9	El Camino Ave at Northgate	9.6*	10.8*	10.2*
10	Garden Hwy at Natomas Oaks	3.5	7.1	4.6
11	Garden Hwy at Truxel	3.9	4.5	4.0
12	Garden Hwy at Northgate	7.8	12.4*	8.8
13	Truxel at San Juan	4.1	4.5	4.1
14	Northgate at San Juan	8.7	9.2*	8.9
15	Azevedo at El Camino Ave	2.9	3.4	3.2
16	San Juan Rd at Azevedo	3.2	4.3	3.8
17	Azevedo at Pebblewood	3.2	4.3	3.9
18	S. End of Pebblewood	2.6	2.8	2.7
19	Truxel at I-5	4.1	4.3	4.2

*Indicates probable violation of the 9 ppm 8-hour Federal CO standard.

Source: CH2M HILL

Table 2-18
DAILY GROSS EMISSIONS FOR NO-PROJECT,
3.4 MSF OFFICE, AND 1.5 MSF OFFICE ALTERNATIVES

Pollutant	Emission Factor[a] (gm/mile)	Daily Gross Emissions In the Year 2000[b] (tons/day)		
		No-Project	3.4 MSF	1.5 MSF
Carbon Monoxide (CO)	19.94	41.63	47.67	44.79
Nitrogen Oxides (NO_x)	1.64	3.42	3.92	3.68
Total Hydrocarbons (THC)	1.86	3.88	4.45	4.18
Sulfur Dioxide (SO_2)	0.24	0.50	0.57	0.54
Particulates (TSP)	0.32	0.67	0.77	0.72

SOURCE: CH2M HILL

[a]Emission factors for year 2000 from EMFAC 6C using California vehicle mix, 50 percent cold starts, 10 percent hot starts, 35°F. ambient temperature, and 35 mph average speed.

[b]Sample calculation VMT x emission factor = total emissions divided by 9.08×10^5 gms/ton.

Source: CH2M HILL

Comparison. Both office alternatives would increase CO levels above those predicted for the no-project alternative. The 3.4 million square feet office alternative would have higher CO levels than the 1.5 million square feet office alternative at all receptors with the exception of Receptor 6, which has the same CO concentration under both office alternatives.

Both office alternatives also would have higher daily gross emissions than the no-project alternative. An important issue related to the daily gross emissions generated by the three alternatives is their consistency with the 1981 Sacramento Air Quality Plan (AQP).

The Sacramento Draft AQP was released for review in October 1981. This document represents the policy plan for achieving clean air in Sacramento and Yolo Counties and portions of Placer and Solano Counties. The AQP describes air quality problems affecting the area; identifies issues, alternatives, and proposals for reducing pollution; and sets policies and responsibilities for carrying out the plan. The focus of the draft AQP is the reduction in CO and ozone levels by 1987 to eliminate violations of the federal ambient air quality standards (Sacramento Area Council of Governments 1981).

The Sacramento Area Council of Governments (SACOG) has stated that full development and corresponding air emissions generated by the South Natomas area as set forth in the South Natomas Community Plan were included in the projected growth forecast for the Sacramento Air Quality Plan (Stonehouse pers. comm.). Because the no-project alternative is based upon the South Natomas Community Plan, it is consistent with the AQP.

However, office alternatives will generate approximately 15 percent and 8 percent, respectively, more emissions than the no-project alternative. Unless the office alternatives can reduce the total emissions to a level equal to that from the no-project alternative, they would not be consistent with the AQP.

Noise Impacts

Introduction. Noise levels along the affected roadways in the South Natomas Community area were calculated using a modified version of the Federal Highway Administration's Highway Traffic Noise Prediction Model (FHWA 1978). The standard FHWA model predicts hourly equivalent sound levels, Leq(h). Since the City's noise standards are in day-night noise levels (L_{dn}), the model was modified so that, given the day-night split of automobiles and trucks, the model is capable of predicting the resultant L_{dn}. The L_{dn} (Day-Night Noise Equivalent Sound Level) is a noise measurement based on cumulative exposure to noise over a 24-hour period. L_{dn} is expressed in decibels (dB) and includes a 10 dB weighting penalty for nighttime noise. Input to the model included average daily traffic (ADT) volumes, speed, and road geometrics as described in the Traffic and Circulation Impacts section of this report. A vehicle mix of 3 percent heavy duty and 2 percent medium duty trucks and a day-night traffic split of 90 percent/10 percent was used.

Noise impacts were determined by comparing the calculated L_{dn} values to the City of Sacramento's noise standards for adjacent land uses. The City has adopted standards in the General Plan Noise Element (1975) identifying acceptable noise levels for various land uses. The noise standard is 60 L_{dn} for residential uses and schools, and 65 L_{dn} for office, commercial, and open space parks. However, the City also has "special" noise standards for developments near freeways. These freeway noise standards are: 67 L_{dn} for residential uses and 72 L_{dn} for business, professional office, and commercial uses. For this analysis, it is assumed that the freeway noise standards would apply to all development within 1,000 feet of a freeway.

No-Project Alternative. Noise level contours were calculated for buildout of the no-project alternative in the South Natomas Business Parks (SNBP) Draft EIR and the Creekside Draft EIR. As discussed in the SNBP EIR, noise levels would exceed the City's noise standards for residential uses along I-5 and I-880, and major arterials such as Garden Highway and West El Camino. Figure 2-12 presents the noise contours which would be generated by the 1.5 million square feet office alternative.

1.5 Million Square Feet Office Alternative. Table 2-19 shows the calculated L_{dn} levels of the 1.5 million square feet office alternative along the major roadway segments in the study area. Also listed are the land uses adjacent to each roadway segment. From this comparison of noise levels and adjacent land uses it was determined where and to what extent the City's noise standards would be exceeded. The results show that at many locations where residential land uses abut an arterial or freeway, calculated noise level exceeds the noise standards. At no location are office or commercial noise standards exceeded.

Table 2-19
NOISE IMPACTS OF 3.4 MSF OFFICE AND 1.5 MSF OFFICE ALTERNATIVES

Roadway Segment	1.5 MSF ALTERNATIVE		3.4 MSF ALTERNATIVE	
	Adjacent Land Use	Calculated Noise Level[1] (Ldn)	Adjacent Land Use	Calculated Noise Level[1] (Ldn)
Garden Highway				
Canal to Natomas Oaks Drive	Res.	64*	Res.	64*
Natomas Oaks Drive to I-5	Res.	69**	Comm.	69
I-5 to Creekside East Boundary	Res.	70**	Office	70
Creekside to Truxel	Res.	69*	Res.	69*
West El Camino				
Canal to Natomas Oaks Drive				
- Southside	Shop. Cntr.	62	Res.	62*
- Northside	Park/Shop. Cntr.	62	Comm.	62
Natomas Oaks to I-5				
- Southside	Office	67	Res.	67
- Northside	Office	67	Comm.	67
I-5 to Azevedo				
- Southside	Office	66	Comm.	66
- Northside	Res.	66	Res.	66
Azevedo to Truxel	Res.	65*	Res.	65*
I-880				
Canal to I-5	Res.	69**	Office	69
I-5 to Truxel	Res.	73**	Res.	73**
I-5				
Garden Hwy. to El Camino	Res.	75**	Office	75
El Camion to I-880				
- Westside	Res.	72**	Office	72
- Eastside	Res.	72**	Res.	72**
Natomas Oaks Drive				
Garden Hwy to El Camino				
- Westside	Res.	63*	Res.	64*
- Eastside	Res/Office	63/63	Office	64
North of El Camino	Office	60	Office	63
Azevedo				
South of El Camino	Res.	59	Office	61
North of El Camino	Res.	59	Res.	61

[1] Along all arterials and collector streets, the calculated noise level is for a point 75 feet from the street centerline; along freeways the calculated point is 150 feet from the freeway centerline.

* Indicates a violation of the City's noise standard (60 Ldn) for residential land uses (that are not within 1,000 feet of a freeway).

** Indicates a violation of the City's noise standard (67 Ldn) for residential uses near a freeway.

Source: CH2M HILL

3.4 Million Square Feet Office Alternative. Table 2-19 also shows a similar comparison of calculated noise levels and adjacent land uses for the 3.4 million square feet alternative. The results show that where residential land uses abut a roadway the calculated noise level exceeds the City's noise standard. There are no locations where office or commercial noise standards would be exceeded. This alternative would result in noise contours virtually identical to those generated by the 1.5 million square feet office alternative.

Comparison of Alternatives. Except for land uses adjacent to Natomas Oaks Drive and Azevedo Drive, noise levels from the 3.4 million square feet office alternative do not differ from the 1.5 million square feet office alternative. The reason for this is that traffic noise levels do not noticeably change until there has been a roadway volume change of approximately 10,000 vehicles per day. At very few locations do the traffic volumes from these projects change by more than 10,000 ADT.

Although the noise levels are essentially the same for the two office alternatives, the land uses for each alternative are different. The 1.5 million square feet alternative provides more residential development, which has a lower noise exposure standard than do office or commercial uses. Consequently, as shown in Table 2-19, there are more locations where residential noise standards are exceeded in the 1.5 million square feet office alternative than in the 3.4 million square feet office alternative.

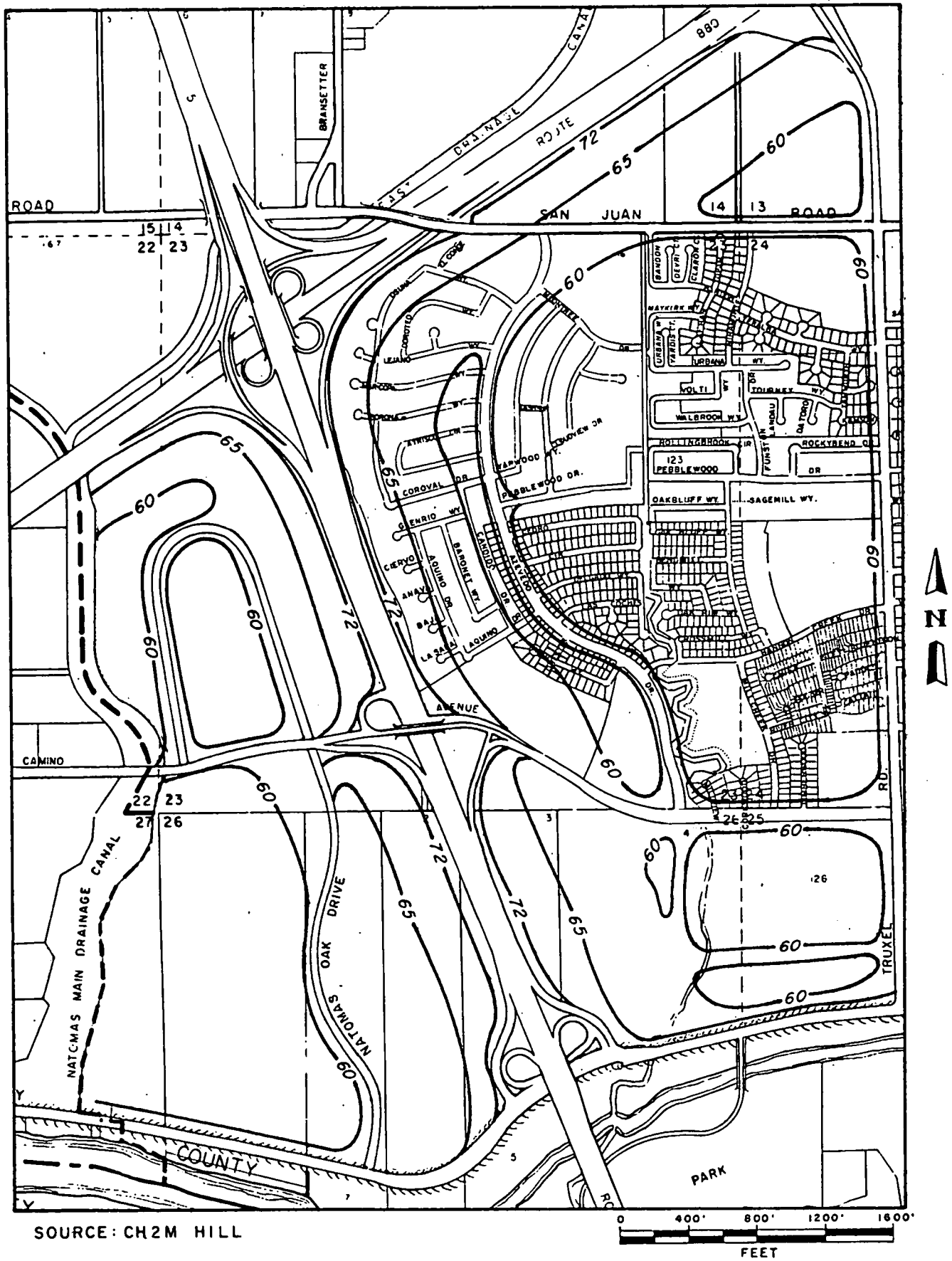


FIGURE 2-12. NOISE LEVELS: 1.5 MSF OFFICE ALTERNATIVE

Energy Impacts

No-Project Alternative. As shown in Table 2-20, the no-project alternative would require 1.37-1.86 million annual therms for building-related uses, including lighting, heating, cooling, ventilation, and appliances and 7.01 million annual therms for transportation-related uses, based on 85.13 million vehicle miles being generated annually. The total annual energy consumption value for this alternative, therefore, is 8.38-8.87 million therms.

1.5 Million Square Feet Office Alternative. This alternative would require 1.59-2.96 million annual therms for building-related uses and 9.20 million annual therms for transportation-related uses, based on 111.63 million vehicle miles annually. The total annual energy consumption value for this alternative, therefore, is 10.79-12.16 million therms, which is 29 percent (assuming all office/commercial buildings are energy efficient) to 37 percent (assuming all office/commercial buildings are worst-case energy users) higher than the no-project alternative.

3.4 Million Square Feet Office Alternative. This alternative would require 2.53-5.56 million annual therms for building-related uses and 12.94 million annual therms for transportation-related uses, based on 157.03 million vehicle miles annually. The total annual energy consumption for this alternative, therefore, is 15.47-18.50 million therms, which is 85 percent (assuming all office/commercial buildings are energy efficient) to 108 percent (assuming all office/commercial buildings are worst-case energy users) higher than the no-project alternative.

Comparison. Both office alternatives would result in more energy usage than the no-project alternative. The 3.4 million square feet office alternative would require 43 percent (assuming all office/commercial buildings are energy efficient) to 52 percent (assuming all office/commercial buildings are worst-cast energy users) more energy than the 1.5 million square feet office alternative.

Table 2-20. Cumulative Energy Impacts of Project Sites
(millions of therms[1] per year)

	No-Project	Alternatives: 1.5 Million Square Feet Office Alternative	Alternatives: 3.4 Million Square Feet Office Alternative
Vehicle-Related Fuel Consumption[2]	7.01[5]	9.20[6]	12.94[7]
Building-Related Fuel Consumption			
Office/Commercial[3]	0.35-0.84	0.99-2.36	2.19-5.22
Residential[4]	1.02	0.60	0.34
Total	1.37-1.86	1.59-2.96	2.53-5.56
Total Project-Related Energy Consumption	8.38-8.87	10.79-12.16	15.47-18.50

FOOTNOTES:

[1]One therm is equivalent to 100,000 British Thermal Units (BTUs) of heat, 10 kilowatt hours of electricity, or 0.74 gallons of gasoline.
[2]Based on 16.4 miles per gallon of fuel and an energy conversion factor of 0.74 gallon = 1 therm.
[3]Based on 0.6 therms (energy efficient building) to 1.43 therms (worst-case building) per square feet of gross floor area per year.
[4]Based on 325 therms/dwelling unit per year.
[5]Based on 256,422 miles per day and 332 days per year to account for weekday/weekend travel split.
[6]Based on 358,933 miles per day and 311 days per year to account for weekday/weekend travel split.
[7]Based on 528,727 miles per day and 297 days per year to account for weekday/weekend travel split.

Aesthetic Impacts

No-Project Alternative. With buildout of the South Natomas Community Plan, the rural image of South Natomas will be replaced by that of intensive suburban residential development. Development of the currently vacant project parcels with predominantly residential uses, as designated in the South Natomas Community Plan, would add to the homogeneous residential-scale landscape of the project vicinity.

The Natomas Eastside site would also include a community shopping center and a business and professional office center. The City Zoning Ordinance (Section 3[d][7]) would require a 6-foot-high masonry or brick wall separating the residential uses of the Natomas Oaks PUD (of which Gateway Centre is a part) from the Natomas Eastside offices uses of the development.

The most prominent open space features of the no-project alternative are:

- o A 50-foot-wide parkway corridor along both sides of the Natomas Main Drainage Canal. This parkway abuts the entire length of the proposed Natomas Eastside development,

- o A 17-acre I-5 beautification corridor along both sides of the freeway. A continuous undulating noise wall is specified in the South Natomas Community Plan to define the outer boundary of the corridor. The width of the corridor would vary from 135-85 feet outward from the traffic lanes on I-5. Along interchanges, the corridor would be 25 feet beyond the existing right-of-way. This wall would block freeway views of the residential developments along the freeway, and

- o A 40-foot Bannon Slough Parkway on the eastern edge of the Creekside Office Park site.

Although these open space areas are maintained under the no-project alternative, the project site's overall visual attractiveness will be reduced by elimination of the site's current open space appearance.

1.5 Million Square Feet Office Alternative. This alternative would alter the predominantly residential texture of the project sites by interspersing high-bulk office buildings with residential uses. The on-site visual impacts of this change in land use are an incongruous transition in building scales between residential and office uses, and potential visual conflicts, loss of privacy, and outdoor lighting conflicts for residents located adjacent to office uses. Residential uses which would be most severely impacted

are those located in Gateway Centre and Natomas Eastside adjacent to proposed office developments (Figure 2-3). A city-required 6-foot wall would protect the residential uses on the BD Properties site from the office uses on the Creekside Office Park development.

Because this alternative would maintain the Natomas Main Drainage Canal, I-5, and Bannon Slough Parkways, as proposed under the no-project alternative, residential uses abutting these parkways would be protected from significant visual impacts. This alternative also includes a 10-acre park, thereby enhancing the visual attractiveness and open space features of the project sites.

On a local scale, that portion of the Natomas Oaks PUD residential development which is located west of Natomas Oaks Drive, would be subject to potential visual incompatibility with the adjacent office and commercial uses proposed under this alternative. This would be partially offset by the city requirement of a wall between the Natomas Oaks PUD residential uses and Natomas Eastside commercial uses. Although the scenic viewshed along I-5 would change under this alternative, the I-5 corridor buffer area and wall would probably block any freeway views beyond the wall.

3.4 Million Square Feet Office Alternative. This alternative would result in a distinct separation between residential uses located on either sides of the project sites with a high-contrast central office area. Residential uses on the Natomas Eastside development, which are located south of West El Camino Avenue, would be protected from significant visual impacts by the roadway to the north and by the city-required wall to the south which would align the Gateway Centre site. However the residential uses located on the west side of Natomas Eastside would be subject to potential visual and outdoor lighting conflicts with the adjacent commercial and office developments.

This alternative would also maintain the Natomas Main Drainage Canal, I-5, and Bannon Slough Parkways, as proposed under the no-project alternative. The open space character of these parkways will provide pleasant surroundings for employees of the proposed office parks. This alternative, however, does not include any additional park sites.

On a local scale, residential uses located west of Natomas Oaks Drive and east of the Creekside Office Park would be subject to potentially incompatible viewsheds. Although the scenic viewshed along I-5 would change under this alternative, the I-5 corridor buffer area and noise wall would probably block any freeway views beyond the wall.

Comparison. Both office alternatives would change the current open space nature of the project sites. Compared to the no-project alternative, both alternatives would change the planned predominantly residential character of the project vicinity. The 3.4 million square feet office alternative would result in more drastic changes by physically dividing the project site's vicinity into distinct office and residential areas.

Both office alternatives would result in a number of potential visual conflicts for residents on the project sites and on adjacent lands. Although both alternatives maintain the three parkways contained in the no-project alternative, the 1.5 million square feet office alternative also includes a 10-acre park which is excluded from the 3.4 million square feet office alternative.

Hydrology and Water Quality Impacts

No-Project Alternative. The no-project alternative would increase peak runoff flow and nonpoint source pollutant loadings from the project sites because of the introduction of impervious surfaces. As shown in Table 2-21, this alternative would generate peak runoff flows of 84.4 cubic feet per second (cfs), and 46,650 pounds per year of nonpoint source suspended solids.

Although the project sites currently overlie an area of groundwater overdraft due to agricultural pumping, this subsurface condition would cease under the no-project alternative as agricultural uses are replaced with urban development. Also, groundwater seepage adjacent to Garden Highway presents certain hazards to development in this area; these hazards are capable of mitigation through proper building design and construction.

1.5 Million Square Feet Office Alternative. This alternative would result in a peak runoff increase of 12.1 cfs or 14 percent over the no-project alternative. The increase in total suspended solid pollutant loadings for this alternative is 3,350 pounds per year, or 7 percent over the no-project alternative. Groundwater seepage conditions would pose potential problems similar to those encountered by the no-project alternative.

3.4 Million Square Feet Office Alternative. This alternative would result in a peak runoff increase of 46.6 cfs, or 55 percent over the no-project alternative. This alternative also would result in an increase of 16,070 pounds per year of total suspended solid pollutants, 34 percent over the no-project alternative. Groundwater seepage conditions would pose potential problems similar to those encountered by the no-project alternative.

Table 2-21. Peak Runoff Flows and Runoff Pollutant Loadings

		Alternatives	
	No-Project Alternative	1.5 Million Square Feet Office Alternative	3.4 Million Square Feet Office Alternative
Peak Runoff Flows (cfs)[1]	84.4	96.5	131.0
Total Suspended Solid Pollutant Loading (lbs/year)[2]	46,650	50,000	62,720

FOOTNOTES:

[1]Based on Reclamation District 1,000 design criteria of 0.47 cfs per acre for office and commercial, 0.3 cfs per acre for multifamily residential uses, and 0.2 cfs per acre for single family residential uses.
[2]Based on emission rate of 220 pounds per acre per year for commercial uses, 170 pounds per acre per year for multifamily (medium and high density) residential uses, and 120 pounds per acre per year for single family (low density) residential uses. (Based on unpublished data from Sacramento County Regional Sanitation District.)

Comparison. Both of the alternatives would increase peak runoff flows and nonpoint source pollutant loadings relative to the no-project alternative. The impact of the increased runoff on Reclamation District 1,000 facilities is discussed in the Public Facilities and Services Impacts section.

The 3.4 million square feet office alternative would have peak runoff flows 36 percent higher than the 1.5 million square feet office alternative; total suspended solid pollutant loadings would be 25 percent higher than the 1.5 million square feet office alternative.

Geology and Soils Impacts

No-Project Alternative. Construction of the no-project alternative could result in a number of potential soil-related impacts, all of which are judged to be minor following mitigation. These impacts are related to the potential for soil erosion, differential movement of building foundations and pavements due to changes in moisture content of expansive soils, subsidence, and liquefaction (please refer to Section P of the Creekside Office Park Draft EIR and Section I of the South Natomas Business Parks Final EIR for further explanation of these impacts).

1.5 Million Square Feet Office Alternative. The geology- and soil-related impacts are generally the same under this alternative as under the no-project alternative. To the extent that larger and heavier multi-story buildings will be built, this alternative could be more sensitive to expansive soils than the no-project alternative.

3.4 Million Square Feet Office Alternative. The geology- and soil-related impacts are generally the same under this alternative as under the no-project alternative. To the extent that larger and heavier multi-story buildings will be built, this alternative could be more sensitive to the movement of expansive soils than the no-project alternative.

Comparison. Geological and soils constraints are similar for all three alternatives.

Biological Impacts

No-Project Alternative. The no-project alternative would result in the following major biological impacts on the project sites:

- Loss of agricultural fields and associated foraging habitat for some species which also use riparian woodland and fence row habitats for nesting and cover.
- Potential loss of fence row habitat along I-5 right-of-way and replacement of associated wildlife species with those adaptable to urban landscaping.
- Potential removal of mature oak and laurel trees at south end of Gateway Centre and loss of associated habitat.
- Loss of riparian habitat along Natomas Main Drainage Canal and 66 percent loss of habitat in Bannon Slough area; significant reduction in associated wildlife species; disruption of habitat in retained Bannon Slough areas due to proposed collector road and parkway activities.
- Potential threat to retained oak trees by construction and irrigation activities.

1.5 Million Square Feet Office Alternative. This alternative would have impacts on biological resources similar to the no-project alternative. This alternative would have less potential for damage to the retained riparian habitat area by domestic pets and resident-related recreational activities than the no-project alternative.

3.4 Million Square Feet Office Alternative. This alternative would have impacts on biological resources similar to the no-project alternative. This alternative would have less potential for damage to the retained riparian habitat area by domestic pets and resident-related recreational activities than the no-project alternative.

Comparison. All three alternatives would have similar major adverse biological impacts through elimination or major modification of fence row habitats, removal or potential destruction of mature trees, loss of a significant portion of riparian habitat. The impacts of domestic pets and resident-related recreation on retained woodland habitat would be greater with residential development than the office park development.

Cultural Resources Impacts

No-Project Alternative. The no-project alternative is not likely to adversely affect cultural resources, given the low sensitivity of the project site.

1.5 Million Square Feet Office Alternative. This alternative also would be unlikely to adversely affect cultural resources.

3.4 Million Square Feet Office Alternative. This alternative also would be unlikely to adversely affect cultural resources.

Comparison. All three alternatives are not expected to adversely affect cultural resources on the project sites.

References for Cumulative Impact Analysis

Documents

California Department of Transportation. 1979. Caline 3 - 4 Versatile dispersion model for predicting air pollutant levels near highways and arterial streets. FHWA/Caltrans-79/23.

Sacramento City Planning Department. 1975. Noise element of the Sacramento City General Plan.

Federal Highway Administration. 1978. FHWA highway traffic noise prediction model. FHWA-RD-77-108.

Sacramento Area Council of Governments. 1981. Draft air quality plan.

Personal Communications

Agid, Gary. September 24, 1981. Branch Chief, California Air Resources Board. Letter to Clif Carstens, City of Sacramento.

Barclay, Jim. February 22, 1982. Officer, Sacramento City Police Department. Telephone conversation.

Betts, Thomas. February 22, 1982. District Engineer, Reclamation District 1000. Telephone conversation.

Chandler, Linda. February 23, 1982. Assistant Planner, Sacramento Regional Transit District. Telephone conversation.

Cross, Myron, Dr. February 22, 1982. Natomas Union School District. Telephone conversation.

Davis, Steve. February 19, 1982. Associate Engineer, Sacramento City Division of Water and Sewers. Telephone conversation.

Delfendahl, Marvin. February 22, 24, 26, 1982. Director of Instruction, Grant Joint Union High School District. Telephone conversations.

Linggi, Erling. February 18, 1982. Assistant Director. Sacramento City Department of Community Services. Telephone conversation.

Moier, Gene. February 22, 1982. Planning Manager, Sacramento Regional Transit District. Telephone conversation.

Powell, Harry. February 19, 1982. Deputy Chief, Sacramento City Fire Department. Telephone conversation.

Smilanish, Paul. February 22, 1982. Assistant Superintendent, Sacramento City Garbage Department. Telephone conversation.

Stonehouse, Gary. June 6, 1981. Sacramento Area Council of Governments. Telephone conversation.

Weisenburger, Kim. February 19, 1982. Assistant Civil Engineer, Sacramento County Department of Public Works--Water Quality Division. Telephone conversation.

Chapter 3

RESPONSES TO COMMENTS ON DRAFT EIR

These responses to comments are by topic order similar to Draft EIR format.

Introduction

Comment: The Draft EIR does not address the cumulative impacts of the Creekside Office Park, Natomas Eastside, and the Gateway Centre Office Parks. The EIR for these latter two projects described impacts and mitigation measures on a scale that will create havoc for the South Natomas community. The Creekside Office Park EIR should include the cumulative impacts of the three projects in the areas of transportation, population, housing, public facilities and services, air quality, noise and energy. (President, South Natomas Community Association).

Comment: The Clearinghouse emphasizes the impact that this project could have on converting agricultural land to an office complex use and the precedent it would set for allowing more office park developments east of I-5. The decision makers should consider the cumulative impacts that could occur as a result of this development, together with the Natomas Eastside (106 acres) and Gateway Centre (75 acres) proposals, which have recently undergone state review. (State Clearinghouse, Office of Planning and Research).

Response: The cumulative impacts of developing the Creekside Office Park together with the Natomas Eastside and Gateway Centre proposals are analyzed in this Final EIR.

Land Use

Comment: As owners of the property adjacent to the west boundary of the proposed Creekside project, we have reviewed the Draft EIR for the Creekside Office Park and have the following comments.

The Draft EIR assumes the zoning of our property will remain as high density residential, and proposes a number of mitigation measures based on that assumption. As we believe that the highest and best use of our property is business professional, it can be expected that we would request re-zoning to that classification should the Creekside Office Park project be approved. We ask that this be considered in assessing the environmental impacts and mitigation measures as they relate to this project.

Planning for the area between Bannon Slough and I-5, south of West El Camino Avenue should be compatible. This can be achieved if zoning for our property is assumed to be equivalent to the final zoning for the Creekside project, or if some transition zone to combine the use of these two properties is provided. (BD Properties).

Response: The environmental impacts of rezoning the adjacent parcel of land owned by BD Properties are discussed in this Final EIR.

Comment: On Exhibit D-4, page D-8 of the Draft EIR, why is Creekside Office Park proposal indicated as consistent with the 1974 General Plan policy to support projects directed at retaining and improving the role of the CBD as the major retail trade and financial center for the region? (City of Sacramento Planning Commission).

Response: The proposed Creekside office park will consist of office space. The types of businesses most likely to locate in these offices are data processing; administrative, clerical, and research processing; and professional and business services. The proposed project, therefore, will not compete directly with the marketability of strictly retail or financial center land uses in the CBD.

Housing

Comment: This proposed office park use is not consistent with the South Natomas Community Plan, which designates the site for residential use. The project would require General Plan, Community Plan, and Schematic Plan amendments, as well as a rezoning of the site. Decision-makers should weigh the fact that the proposed project would decrease future residential housing availability by 911 units, and would create a demand for approximately 850-1,510 additional households to the Sacramento and South Natomas areas. The EIR addresses the possibility that higher density housing would need to be provided on the remaining residentially designated parcels. Impacts of such a proposal should be specifically addressed. (State Clearinghouse, Office of Planning and Research).

Response: The impacts of increasing allowable densities on the remaining South Natomas residentially-designated parcels are identified on page D10 of the Draft EIR. The major potential impacts are reduced marketability of higher density residential development, exceedance of sewerage capacity, less open space, and increased traffic, noise, and public facilities requirements. The proposed project would also increase the demand for housing in South Natomas by the new direct and secondary employees generated by the project. This increased housing demand could potentially increase South Natomas housing prices and lessen the affordability of South Natomas housing for low to moderate income families.

Public Facilities and Services: Recreation and Open Space

Comment: Construction of the proposed roadway across the Bannon Slough is of particular concern. The integrity of the natural area and its potential recreational and wildlife value would be significantly impacted. Furthermore, the South Natomas Community Plan of 1978 states that as design features, only parallel streets and cul-de-sac streets perpendicular to the Bannon Slough Parkway should be allowed (Parks and Recreation Committee, South Natomas Community Association).

Comment: Secondary access to the site would be provided by a proposed east-west collector connecting to Truxel Road. This street would cut directly through a residential neighborhood and would bisect the Bannon Slough Parkway. This is contrary to the South Natomas Community Plan (member, South Natomas Community Association).

Response: The Draft EIR (page H7) proposes elimination of the proposed east-west collector as a mitigation measure to protect the riparian woodland habitat situated on the site. It should be noted that the proposed collector road is also included in the no-project alternative, since it is a feature of the Sacramento City Council-approved Creekside Planned Unit Development. The discussion on page H7 of the Draft EIR notes that elimination of the proposed roadway is probably not feasible due to access requirements between the proposed Creekside site and adjacent parcels.

Transportation

Comment: Northgate Boulevard is presently a 4-lane arterial. (pg. J1 - [City of Sacramento Traffic Engineering Division]).

Response: This comment has been addressed in the Draft EIR errata to page J1.

Comment: Azevedo Drive between West El Camino Avenue and San Juan Road is also on the bicycle master plan. (pg. J4 [City of Sacramento Traffic Engineering Division]).

Response: This comment has been addressed in the Draft EIR errata to page J4.

Comment: In Appendix II of the Draft EIR, the traffic volume impacts, two-way ADT volumes, and the figures quoted on intersection capacities do not seem to balance. (Member, South Natomas Community Association).

Response: The 2-way ADT volumes presented in Exhibit II-2 (page II-4) of the Draft EIR represent projected roadway volume (as opposed to intersection volume) impacts of the proposed project. The intersection capacities assumed for the critical traffic movement analysis were applied to the intersection volumes presented in Exhibits II-3 through II-8.

Comment: The proposal to widen the West El Camino Avenue and I-5 overcrossing would have to be included in the State Transportation Improvement Program (STIP). Due to limited state funding, inclusion in the STIP would necessitate a stipulation that non-state funds be used. A project justification would also be required. (Pg. J16 [Caltrans]).

Response: This comment has been addressed in the Draft EIR errata to page J16.

Comment: Regarding site access and circulation, internal circulation will be serviced by individual driveways, not by a cul-de-sac stub. (pg. J11 [City of Sacramento Traffic Engineering Division]).

Response: This comment has been addressed in the Draft EIR errata to page J11.

Comment: Page J12 of the Draft EIR indicates that the business park would create a demand for over 2,000 parking spaces and that the applicant is proposing 1,535 spaces pursuant to the zoning ordinance. The Draft EIR indicates that the potential exists for a shortage of parking spaces. (South Natomas Community Association).

Response: On page J17 of the Draft EIR, the mitigation measure related to parking notes that once the final design of the proposed project is completed, a more precise determination of parking requirements can be made.

Comment: Regarding roadway and intersection capacity, to be compatible with the traffic studies done for the South Natomas Business Park EIR, 1,500 vehicles per lane, per hour, should be used. This will lower anticipated levels of service but will allow for better interaction between the various studies. (pg. J6 [City of Sacramento Traffic Engineers]).

Comment: The Draft EIR did not mention impacts to be expected on the ramps at the West El Camino/I-5 interchange. The southbound on-ramp from eastbound El Camino Avenue would be approaching the upper limit for a 1-lane ramp. Based on a design capacity of 1,500 vehicles/hour/lane, the northbound off-ramp to El Camino Avenue would require 2 and possibly 3 lanes at the El Camino Intersection.

If current rates of development continue, the Garden Highway/I-5 ramp intersections would require signalization, as well as the West El Camino Avenue ramps. Funding these improvements could require financial participation from the City of Sacramento. (pg. J1 [Caltrans]).

Response: These comments are addressed in the cumulative impact analysis of this Final EIR.

Comment: CBCA recommends that approval of the project be conditioned on implementing all the bicycle commuting plans and proposed mitigation measures contained in the Draft EIR plus specific requirements to provide adequate, secure bicycle parking facilities and showers and clothes lockers for commuters in the project boundaries. (Capital Bicycle Commuters Association).

Comment: Regarding the possible bicycle path through the site, (pg. J12), unless assurance can be given that an adjacent property owner will provide such a trail in the immediate future, we recommend that it be made a condition of approval of the Creekside Office Park. (Caltrans).

Response: Comments acknowledged. These measures will be considered during the decision-making process.

Comment: Responsible agencies for mitigation measures listed in Section J (transportation) of the Draft EIR should be fully identified. In addition, funding sources and schedules for implementation of all mitigation measures should be included in the Draft EIR. (County of Sacramento Air Pollution Control District).

Response: Responsible agencies and potential funding sources are addressed in the Draft EIR errata to page J16. Schedules for implementing these measures will be determined once implementation commitments are obtained by the responsible agencies.

Comment: We recommend park-and-ride lots as a possible mitigation measure, in addition to the measures addressed in the Draft EIR. Mr. Les Ornelas, Coordinator of Caltrans' District 3, Ridesharing Program, (916) 323-0839, can give you information on the Ridesharing Program. (State Air Resources Board).

Response: This comment has been addressed in the Draft EIR errata to page J16.

Air Quality

Comment: (County of Sacramento Air Pollution Control District). The Draft EIR projects that upon completion of the proposed project regional air quality will be adversely impacted. Increases of specific air pollutants and quantities over the no-project alternative are projected as follows:

POLLUTANT	EMISSIONS TONS PER YEAR	
	1978	2000
Carbon Monoxide	64 T/Y	133 T/Y
Reactive Organics	4.7 T/Y	9.4 T/Y
Nitrogen Oxides	7.7 T/Y	16 T/Y

The region's forthcoming 1982 State Implementation Plan Revision (Air Quality Plan) is being developed by the Sacramento Area Council of Governments (SACOG) and incorporates the no-project alternative in estimating emissions estimates from all sources through the planning period.

The Draft 1982 Air Quality Plan projects that attainment of the National Air Quality Standards (NAAQS) for ozone and carbon monoxide will not be achieved in the Sacramento area by the end of 1987. The projections of nonattainment include assumed emission reductions from control strategies on stationary sources, transportation, and land uses that are currently in place and those being considered for implementation.

The emission increases noted in the above are not included in the Draft Air Quality Plan. Therefore, these emission increases will require full mitigation or the Air Quality Plan will require revision to incorporate more stringent and/or added control strategies. (County of Sacramento Air Pollution Control District).

Comment: The Draft EIR does not address the project's consistency with the Air Quality Management Plan. The California Environmental Quality Act, Section 15142(b) states: "The EIR shall discuss any inconsistencies between the proposed project...and the applicable Air Quality Management Plan..." (State Air Resources Board).

Response: The increases in selected emissions of the proposed project over the no-project alternative on an annual basis are closer to the following quantities, based on approximately 349 days per year for the no-project alternative (for residential land uses, each weekend day generates approximately 85 percent as much travel as each weekday), and 286 days per year for the proposed project (for office uses, each weekend day generates approximately 25 percent as much travel as each weekday.

	tons/year	
	1987	2000
Carbon Monoxide	25.6	52.8
Reactive Organics	1.9	3.8
Nitrogen Oxides	3.0	6.4

The comment is correct in noting that the emission increases resulting from the proposed project are not included in the Draft Air Quality Plan. If the proposed project is approved, it will be incorporated into the current City of

Sacramento General Plan revision which then will be included in a subsequent SIP revision.

With regard to the consistency determination, the following should be noted. The Draft EIR assumes that consistency is a factor of air quality levels, and that projects that do not cause violations of air quality standards are consistent with the intent of the Air Quality Plan.

Energy

Comment: (SMUD). It appears that the project's energy use exceeds SMUD's planned substation capacity requiring the probable installation of new facilities. This added load could have a chain effect on our bulk 69 kV substation in the area.

Response: This comment has been addressed in the Draft EIR errata to pages M1 and M4.

Comment: (SMUD). Energy conservation, passive solar, and peak load reduction design standards could minimize the extent of the impact to SMUD with respect to energy consumption and demand and the future cost of generation and distribution. SMUD would welcome the review opportunity to encourage conservation, solar and load management measures. The specific details of the project on energy design criteria are preferred over general ones.

Response: This comment has been addressed in the Draft EIR errata to page M4.

Comment: The annual energy consumption figures on Exhibit M-1 seem excessive. A worst-case office building is about 143,000 BTUs (1.43 therms) per square foot per year. An energy-efficient office building could be around 60,000 BTUs (0.60 therms) per square foot per year. Existing Title 24 energy conservation building standards would put a typical home at 50,000 BTUs per square foot per year. For a 1,300 square feet typical dwelling, this is about 650 therms per year per unit, nowhere close to 1,400 therms. Under the new revised T-24 standards, which go into effect next year, 30,000 BTUs per square foot per year is the maximum allowed; therefore, the same 1,300-square-foot home will use less than 325 therms per year per unit. Under the circumstances, it is far more likely that homes will be built under the new standards; therefore, there is a considerable amount of unaccountable energy usage to arrive at 1,400 therms per unit in the exhibit.

It is strongly urged that the details and assumptions be revised, as the energy comparison creates many questions and perhaps a false impression of the project, no project issue. Based on 325 therms per home and using the figures above, the exhibit could read: (SMUD)

Alternative	Land Use	Quantity Factor	Annual Therms	Annual Consumption
Project	Office	614,000 sq. ft.	0.6-1.43 therms per sq. ft.	368,400-878,020
No project	Residential	911 units	325 therms per unit	296,075

Response: This comment has been addressed in the Draft EIR errata to pages C4, C6, C7, C8, M1, and M2.

Noise

Comment: From the vantage point of noise exposures at the site from traffic on I-5, Garden Highway and West El Camino, development of an office complex is preferable to residential development. Residential development would probably require significant expenditures of time and money to provide habitable living environments indoors and out of doors, particularly for residences nearest to I-5. (State Department of Health Services).

Response: This comment has been addressed in the Draft EIR errata to page L5.

Comment: On page L1 the statement, " . . . composite noise level from two identical sources will be 3 dB higher . . ." is incorrect. The composite noise level from two identical (emphasis added) sources will be 6 dB higher than either alone. (State Department of Health Services).

Response: Based on the publication, Transportation Noise and Its Control (U. S. Department of Transportation June 1972) and other noise manuals, adding two sounds of equal decibel rating produces a composite noise with a sound level 3 decibels greater than either sound alone. This can be derived by calculating and adding the energy rating equivalents of 2 decibel ratings. The logarithm of this sum is then found and multiplied by 10 to give the decibel rating of the combined sounds.

Comment: On page L5 in the paragraph entitled Construction of Noise Barriers, a noise along the western boundary of the project site may or may not be more effective. Typically, barriers adjacent to the noise source are most effective, but at the distances involved at this site, the relative effectiveness depends upon the height of the barrier and the topography. Perhaps some discussion of the rationale for the statement is warranted. (State Department of Health Services).

Response: This comment has been addressed in the Draft EIR errata to page L5.

Biology

Comment: Of primary concern to the South Natomas Community Association is the preservation and protection of the lower Bannon Slough. The South Natomas Community plan calls for the preservation of the entire Bannon Slough between San Juan Road and Garden Highway for community recreational purposes. There already has been substantial intrusion into the upper Bannon Slough including houses, landscaping, fences, and roads in excess of South Natomas Community plan guidelines. The Creekside Office Park, as currently designed, provides for substantial destruction of the lower Bannon Slough. This includes the construction of office buildings within the perimeter of the slough, the removal of several landmark trees, and the destruction of one of the last remaining, self-propagating, oak groves in the Sacramento Valley. The Draft EIR does not adequately address the preservation and protection of this valuable community resource. (President, South Natomas Community Association).

Response: Section Q of the Draft EIR, which discusses the biological impacts of the proposed project, describes the habitat loss and associated impacts on wildlife and natural vegetation that would occur with development of the Creekside Office Park. The mitigation measures presented on page Q7 of the Draft EIR propose that development be avoided or minimized within the riparian woodland habitat of the Bannon Slough, that the collector road be relocated where riparian habitat is narrow, that construction activities and irrigation be avoided with the driplines of retained oak trees, and that the natural vegetation be maintained within the proposed 40-foot parkway.

Comment: The Draft EIR for Creekside Office Park inaccurately describes the Bannon Slough as a "40-foot parkway" (from the centerline of Bannon Slough). The SNCP states: "parkway corridor dimensions landward from the first Bannon Slough water edge should be a minimum of 20 feet to the parallel street curb, and should be a minimum of 40 feet to the residential lot line (page 62 SNCP)". These minimum dimensions apply to both sides of the Bannon Slough. Therefore, the open space parkway of the Bannon Slough should have a minimum width of 80 feet when adjacent to private property. (Parks and Relocation Committee, South Natomas Community Association).

Response: Because Bannon Slough is dry most of the year, the City of Sacramento has defined the parkway corridor dimensions as extending 40 feet from the property line on either side. Because the Draft EIR only addresses the one side of Bannon Slough (western side) which is adjacent to the Creekside property, the parkway is designated as 40 feet wide. The comment is correct in noting that the minimum 40-foot dimension applies to both sides of the slough.

Comment: The Draft EIR adequately describes potential impacts to wildlife habitats under Section Q, Biology. Of the three habitat types identified (agricultural, levee row, and riparian woodland), our chief concern is the protection and preservation of the 5 acres of riparian woodland along Bannon Slough.

The department recommends the project include all of the mitigation measures on pages Q7 and Q8. Especially important is the measure that proposed "redrawing the boundaries of the proposed 40-foot Bannon Slough Parkway to conform more closely to the existing boundaries of the woodland habitat". (State Department of Fish and Game).

Comment: The Draft EIR for Creekside Office Park shows parking areas, office buildings, landscaping and streets intruding into the Bannon Slough Parkway. All development activities within the natural vegetative area, including the dripline of the mature oak trees, should be prohibited. In order to maintain and protect the existing natural features of the Bannon Slough the existing natural boundaries of the slough should be used to designate the additional 20-foot and 40-foot (minimum) parkway boundaries. (Parks and Recreation Committee, South Natomas Community Association).

Response: The Draft EIR (p. Q7) proposes that development be avoided or minimized within the riparian woodland habitat by redrawing the boundaries of the proposed 40-foot Bannon Slough Parkway to conform more closely to the natural boundaries of the riparian woodland habitat. The discussion on page Q7 also notes that the financial feasibility of expanding the parkway is uncertain due to financial and other planning-related considerations.

Chapter 4

ERRATA FOR DRAFT EIR

Page J1, para. 1, line 6, add the following:

... I-80 is 6 lanes wide. El Camino Avenue and Garden Highway are currently 2 lanes wide. Northgate Boulevard is presently a 4-lane arterial.

Page J4, para. 3, line 9, add the following:

... El Camino Avenue, Azevedo Drive, and Natomas Oaks...

Page J11, para. 2, line 8, delete the following:

... driveways and a cul-de-sac stub.

Page J16, para. 2, line 10, add the following:

... are uncertain. Due to limited state funding, financial participation by the City of Sacramento or other non-state funding source may be required.

Page J16, para. 3, line 6, delete the following:

... El Camino. Other potential problems with road widening noted by City traffic engineering staff (Bloodgood pers. comm.) include potential structural problems with the West El Camino Bridge overcrossing at I-5 (if the widening is extended as far as the bridge), and the possibility that the West El Camino off-ramp from I-5 may need to be shortened.

Page J16, para. 4, line 5, add the following:

... schedules, carpooling programs, and park-and-ride lots. These measures would need to be implemented by project tenants, and the City would find them difficult to enforce. Establishment of park-and-ride lots should be coordinated with Caltran's Ridesharing Program office.

Page J16, para. 5, line 5, add the following:

... only. Any road improvements would be the responsibility of the City of Sacramento. Roadway and driveway design on the project site is the responsibility of the project developer.

Page L5, para. 3, line 9, add the following:

... by the proposed project. Residential development may require the implementation of more costly mitigation measures to ensure a habitable living environment, particularly for residents nearest to I-5.

Page L5, para. 4, line 4, add the following:

... aesthetics. on flat terrain, noise...

Page M1, para. 2, line 3, rewrite the following:

... to be 368,400 therms for an energy conserving office building and 878,000 therms for a worst-case office building (see...

Page M1, para. 2, line 7, add the following:

... appliances. These energy requirements will exceed SMUD's planned substation capacity and may require the installation of new facilities. This added load could also have a chain effect on SMUD's bulk 69 kV substation.

Page M1, para. 4, line 2, rewrite the following:

... estimated 296,100 therms...

Page M1, para. 6, line 2, rewrite the following:

... estimated 2,515,200 to 3,024,800 therms of energy per year. This is 41-70 percent higher, respectively, than the no-project alternative which would use an estimated 1,782,700 therms annually. The additional energy requirements will probably require the installation of new facilities...

Page M2, substitute with the following in the last 2 columns:

	Annual Therms[1]	Annual Consumption
Project	0.6[2]-1.43[3] therms/ sq. ft.	368,400[2]- 878,000[3]
No-Project	325 therms[4]/unit	296,100

1. Source: SMUD

2. Energy conserving office building

3. Worst-case office building

4. Assuming all units have uniform energy consumption characteristics. Based on revisions to Title 24 of the California Administrative Code which go into effect this year.

Page M4, add the following:

> Coordinate with SMUD in establishing new electrical service facilities and in implementing energy conservation measures. The project developers should consult SMUD in determining the extent of the need for additional substation capacity and in exploring the possibility of implementing energy conservation, passive solar, and peak load reduction design standards.

Page C4, Energy Impact Category, Column 2, rewrite the following:

Impact of Proposed Project as Compared to No-Project Alternative. Annual Energy Use: increase of 72,300 (24 percent) to 581,900 (196 percent increase) therms per year. Net Impact: increase of 732,500 (41 percent) to 1,242,100 (70 percent) therms per year.

Page C4, Energy Impact Category, column 3, add the following Mitigation Measures:

> Coordinate with SMUD in establishing new electrical service facilities and in implementing energy conservation measures.

Page C6, para. 4, add the following:

> ... traffic.

Energy. The proposed project would increase annual energy usage by 732,500 to 1,242,100 therms from lighting, heating, cooling, ventilation, and transportation-related energy requirements associated with the office park. This is 41 to 70 percent higher, respectively, than the no-project alternative. This increase in energy demand may result in the need for additional electricity generating facilities.

Page C7, para. 1, add the following:

... Parkway.

Energy. The proposed project will result in a 41 to 70 percent increase in energy consumption, resulting in the probable need for additional electricity generating facilities.

Page C7, para. 6, line 1, delete the following:

Energy. The proposed project would increase long-term energy use generated by the site by 8.5 percent.

Page C8, para. 2, line 10, delete the following:

o energy impacts...

Appendix A

LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

Level of service (LOS) is a concept developed to quantify the degree of comfort afforded to drivers as they travel through an intersection or roadway segment. As originally defined within the 1965 Highway Capacity Manual, six grades are used to denote LOS: these six grades are shown in Table A-1.

The City of Sacramento uses "C" LOS as the minimum acceptable LOS for travel in the study area.

Portions of the 1965 Highway Capacity Manual were updated by the Transportation Research Board in 1980. In this update, the LOS provided at a signalized intersection is related to a parameter called "Critical Volume" (see Table A-2). Critical volume is defined as that volume (or combination of volumes) at an intersection which requires the greatest utilization of capacity (i.e., needs the greatest amount of green time) for that approach. It is expressed in terms of passenger cars or mixed vehicles per hour per lane.

All LOS analyses described in this report were performed in general accordance with the procedures set forth in Transportation Research Board's Circular 212.

Table A-1
LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

Level of Service	Maximum Degree of Saturation	Traffic Flow Characteristics
A	55%	Average overall travel speed of 30 mph or more. Free-flowing with no congestion. No signal cycle failures.
B	66%	Average overall travel speeds of 25-30 mph. Very few signal cycle failures and little or no congestion.
C	77%	Average overall travel speeds of 20-25 mph. Occasional signal cycle failures and moderate amount of congestion.
D	88%	Average overall travel speed of 15-20 mph. Frequent signal cycle failures and associated congestion.
E	100%	Average overall travel speed of 15-20 mph. Unstable flow which includes almost continuous signal cycle failures and backups on approaches to the intersections. This represents the theoretical capacity of the facility.
F		Forced flow, with average overall travel speed of below 15 mph. This level of service reflects a condition that is caused by traffic flow congestion and signal failures at area external to this intersection.

Table A-2
RELATIONSHIP OF LEVEL OF SERVICE TO CRITICAL VOLUMES
(INTERSECTIONS)

Level of Service	Degree of Saturation	Sum of Critical Volumes on all Intersections (vehicles per hour)		
		Two Phase Signal	Three Phase Signal	Four of More Phase Signal
A	55%	1,000	950	900
B	66%	1,200	1,000	1,080
C	77%	1,400	1,340	1,270
D	88%	1,600	1,530	1,460
E	100%	1,800	1,720	1,650

Source: CH2M HILL.

Appendix B

COMMENTS RECEIVED ON DRAFT EIR

COUNTY OF SACRAMENTO
AIR POLLUTION CONTROL DISTRICT

JOSEPH C. FOUST, M.D.
AIR POLLUTION CONTROL OFFICER
3701 Branch Center Road
Sacramento, California 95827
(916) 366-2107

November 9, 1981

Marty Van Duyn, Director
Planning Department
City of Sacramento
927 10th Street
Sacramento, California 95814

Subject: COMMENTS: DRAFT DEIR, CREEKSIDE BUSINESS PARK

Dear Marty:

District staff has reviewed the air quality impact analysis section of the subject DEIR and our comments with respect to the sufficiency of this analysis are discussed below.

Air Quality Plan

The DEIR projects that upon completion of the proposed project regional air quality will be adversely impacted. Increases of specific air pollutants and quantities over the no project alternative are projected as follows:

	EMISSIONS TONS PER YEAR	
POLLUTANT	1987	2000
Carbon Monoxide	64 T/Y	133 T/Y
Reactive Organics	4.7 T/Y	9.4 T/Y
Nitrogen Oxides	7.7 T/Y	16 T/Y

The regions forthcoming 1982 State Implementation Plan Revision (Air Quality Plan) is being developed by the Sacramento Area Council of Governments (SACOG) and incorporates the no project alternative in estimating emissions estimates from all sources through the planning period.

The Draft 1982 Air Quality Plan projects that attainment of the National Air Quality Standards (NAAQS) for ozone and carbon monoxide will not be achieved in the Sacramento area by the end of 1987. The projections of non-attainment include assumed emission reductions from control strategies on stationary sources, transportation, and land use currently that are now in place and those being considered for implementation.

The emission increases noted in the above above are not included in the Draft Air Quality Plan. Therefore, these emission increases will require full mitigation or the Air Quality Plan will require revision to incorporate more stringent and/or added control strategies.

Mitigation Measures

Responsible agencies for mitigation measures listed in Section J (transportation) of the DEIR should be fully identified. In addition, funding sources and schedules for implementation of all mitigation measures should be included in the DEIR.

We thank you for the opportunity to comment on the subject DEIR, and if you have any questions regarding our comments, please contact Gary Glissmeyer or myself at 366-2107.

Very truly yours,

Robert C. Cofer

ROBERT C. COFER
Deputy Air Pollution Control Officer

RCC:GG:lm

cc: Air Resources Board, Regional Programs Division
Sacramento Area Council of Governments
Sacramento County Planning Dept.
Sacramento County Environmental Impact Section

Sacramento Area Council of Governments
Suite 300, 800 "H" Street
Sacramento, California 95814
(916) 441-5930

Mailing Address:
P.O. Box 808
Sacramento, California 95804

November 23, 1981

Diana Parker, Assistant Planner
City of Sacramento Planning Department
927 Tenth Street
Sacramento, CA 95814

Dear Diana:

This letter transmits comments to you regarding the Draft EIR for the Creekside Office Park.

Staff has reviewed the document and finds that it adequately discusses both the impacts of the proposed project and project mitigation measures. Overall, staff finds the Draft EIR to be well written and to provide the necessary information for an informed decision to be made regarding the project.

If you have any questions, please contact David Boyer at 441-5930.

Sincerely,

Gary L. Stonehouse

GARY L. STONEHOUSE
Director of Environmental Planni

GLS:pal

capitol bicycle commuters assn.
P. O. BOX 1541
SACRAMENTO, CA 95807

November 24, 1981

Diana Parker, Assistant Planner
City Planning Department
927 10th Street
Sacramento, CA 95814

Dear Ms. Parker:

Thank you for the opportunity to comment on the Draft EIR for the Creekside Office Park in South Natomas.

The project contains several proposals to encourage bicycle commuting such as constructing the Bannon Slough bikeway, adding bike lanes on major arterials as they are widened, and signalizing key bicycle commuting intersections. Also, the mitigation measures proposed indicate that the City intends to improve access to the American River Bikeway at Discovery Park across the Garden Highway from the project site.

The Capitol Bicycle Commuters Association appreciates the aforementioned attention to bicycle commuting and commends the project and the City for their support. CBCA recommends that approval of the project be conditioned on implementing all the bicycle commuting plans and proposed mitigation measures contained in the Draft EIR plus specific requirements to provide adequate, secure bicycle parking facilities and showers and clothes lockers for commuters in the project boundaries. We have found that employees will not commute by bicycle if either the route or trip-end bicycle parking facilities are not safe, adequate, and convenient. It would be a waste of money to construct good bicycle commuting routes without ensuring appropriate bicycle parking facilities, too. The investment in bike lanes would be even more productive if showers and clothes lockers were included in the project plans also.

Sincerely,

David Brubaker

David Brubaker, President
Capitol Bicycle Commuters Association

State of California
GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

EDMUND G. BROWN JR.
GOVERNOR

December 2, 1981

Diana Parker
City of Sacramento
927 Tenth Street, Suite 300
Sacramento, CA 95814

RE: SCH# 81110553
Creekside Office Park

Dear Ms. Parker:

The State Clearinghouse has completed review of the Creekside Office Park proposal. Comments from State agencies are summarized below. If you have any questions about these comments, please contact the appropriate agency staff. Below are Clearinghouse comments.

Air Resources Board

The Air Resources Board recommends park and ride lots as a possible mitigation measure for traffic impacts in the South Natomas area, in addition to measures addressed in the EIR.

The draft EIR does not address the project's consistency with the Air Quality Management Plan.

Caltrans

If current rates of development in the area continue, the Garden Highway/Interstate 5 ramp intersections would require signalization. Funding these improvements could require participation from the City of Sacramento.

The possibility of widening West El Camino Avenue and Interstate 5 overcrossing would have to be included in the State Transportation Improvement Plan, including a stipulation that non-State funds be used, and a project justification required.

The document does not address impacts to be expected on ramps at West El Camino/ Interstate 5 interchange.

Caltrans recommends the proposed bicycle path through the site be made a condition of approval.

Department of Health

Due to noise exposures at the project site from traffic on I-5, Garden Highway and West El Camino, development of an office complex is preferable to residential development adjacent to I-5.

Noise barriers adjacent to the noise source are most effective. Use of noise barriers should be addressed, since the barriers are proposed to be built at some distance from the source.

Fish and Game

Fish and Game's chief concern is the protection and preservation of the five acres of riparian woodland along Bannon Slough. The department recommends the project include all mitigation measures on pages Q7 and Q8.

State Clearinghouse

This proposed office park use is not consistent with the South Natomas Community Plan, which designates the site for residential use. The project would require General Plan, Community Plan, and Schematic Plan amendments, as well as a rezoning of the site (EIR, Section B). Decision-makers should weigh the fact that the proposed project would decrease future residential housing availability by 911 units, and would create a demand for approximately 850 to 1510 additional households to the Sacramento and South Natomas areas. The EIR addresses the possibility that higher density housing would need to be provided on the remaining residentially designated parcels. Impacts of such a proposal should be specifically addressed.

The Clearinghouse emphasizes the impact that this project could have on converting agricultural land to an office complex use, and the precedent it would set for allowing more office park developments east of I-5. The decision makers should consider the cumulative impacts that could occur as a result of this development, together with the Natomas Eastside (106 acres) and Gateway Center (75 acres) proposals, which have recently undergone State review.

When preparing the final EIR, you must include all comments and responses (CEQA Guidelines, Section 15146). The certified EIR must be considered in the decision-making process for the project. In addition, we urge you to respond directly to the agencies' comments by writing to them, including the State Clearinghouse number on all correspondence.

A recent Appellate Court decision in Cleary v. County of Stanislaus clarified requirements for responding to review comments. Specifically, the court indicated that comments must be addressed in detail, giving reasons why the specific comments and suggestions were not accepted and factors of overriding importance warranting an override of the suggestion. Responses to comments must not be conclusory statements but must be supported by empirical or experimental data, scientific authority or explanatory information of any kind. The court further said that the responses must be a good faith, reasoned analysis.

Section 15002(f) of the CEQA Guidelines requires that a governmental agency take certain actions if an EIR shows substantial adverse environmental impacts could result from a project. These actions include changing the project, imposing conditions on the project, adopting plans or ordinances to avoid the problem, selecting an alternative to the project, or disapproving the project. In the event that the project is approved without adequate mitigation of significant effects, the lead agency must make written findings for each significant effect (Section 15088) and it must support its actions with a written statement of overriding considerations for each unmitigated significant effect (Section 15089).

If the project requires discretionary approval from any state agency, the Notice of Determination must be filed with the Secretary for Resources, as well as with the County Clerk.

Please contact Debbie Fudge at (916) 445-0613 if you have any questions.

Sincerely,

for Terry Roberts
Stephen V. Williamson
State Clearinghouse

Debbie Fudge
Debbie Fudge
State Clearinghouse

SW/dm
attachments

cc; Ken Fellows, DWR.

State of California

Department of Health Services

Memorandum

To : Steve Williamson
State Clearinghouse
1400 Tenth Street, Room 121

Date : NOV 19 1981

Subject: Creekside Office Park, Sacramento - SCH #81110553

From : Environmental Health Division

The Office of Noise Control has reviewed the above Draft Environmental Impact Report and offers the following comments:

With respect to the acoustical analysis the authors are commended. Nonetheless, several comments appear warranted.

1. From the vantage point of noise exposures at the site from traffic on I-5, Garden and West El Camino, development of an office complex is preferable to residential development. Residential development would probably require significant expenditures of time and money to provide habitable living environments indoors and out of doors, particularly for residences nearest to I-5.

2. On page L1 the statement, "... composite noise level from two identical sources will be 3 dB higher ...." is incorrect. The composite noise level from two identical (emphasis added) sources will be 6 dB higher than either alone.

3. On page L5 in the paragraph entitled Construction of Noise Barriers. A noise along the westerr boundary of the project site may or may not be more effective. Typically barriers adjacent to the noise source are most effective, but at the distances involved at this site the relative effectiveness depends upon the height of the barrier and the topography. Perhaps some discussion of the rationale for the statement is warranted.

If you have any questions, please contact Dr. Jerome S. Lukas, Office of Noise Control, 2151 Berkeley Way, Rm 516, Berkeley, CA 94704, 415/540-2665.

Harvey F. Collins, Ph.D.
Deputy Director
Environmental Health Division

Stafe of California — Business and Transportation Agency

Memorandum

To : Ann Barkley, Chief
Division of Transportation Planning

Attention Darrell Husum

Date: November 23, 1981

File : 03-Sac-5
PM 25.9
Creekside Office Park
SCH 81110553

From : DEPARTMENT OF TRANSPORTATION
District 03

Subject:

District 03 has reviewed the draft EIR for the Creekside Office Park, to be located east of Interstate 5 between West El Camino Avenue and Garden Highway. The project would consist of 614,000 square feet of office space on 52 acres.

If current rates of development continue, the Garden Highway/ Interstate 5 ramp intersections would require signalization, as well as the West El Camino Avenue ramps, as included in the improvements listed on page J-1. Funding these improvements could require financial participation from the City of Sacramento.

On page J-16 the possibility of widening West El Camino Avenue, including the Interstate 5 overcrossing, is proposed. As stated previously in our comments on the South Natomas Business Parks DEIR, this proposal would have to be included in the State Transportation Improvement Program (STIP). Due to limited State funding, inclusion in the STIP would necessitate a stipulation that non-State funds be used. A project justification would also be required.

The draft EIR did not mention impacts to be expected on the ramps at the West El Camino/Interstate 5 Interchange. The southbound on-ramp from eastbound El Camino Avenue would be approaching the upper limit for a one-lane ramp. Based on a design capacity of 1,500 vehicles/hour/lane, the northbound off-ramp to El Camino Avenue would require two and possibly three lanes at the El Camino Avenue intersection.

Page J-12 discusses a possible bicycle path through the site. Unless assurance can be given that an adjacent property owner will provide such a trail in the immediate future, we recommend that it be made a condition of approval of the Creekside Office Park.

LEO J. TROMBATORE
District Director of Transportation

By R. D. Skidmore
R. D. Skidmore
Chief, Environmental Branch

STATE OF CALIFORNIA — EDMUND G. BROWN JR., Governor

AIR RESOURCES BOARD
1102 Q STREET
P.O. BOX 2815
SACRAMENTO, CA 95812
(916) 322-6076

DATE: November 23, 1981

TO: 1) Jim Burns, Projects Coordinator
Resources Agency

2) Diana Parker
Assistant Planner
City of Sacramento
927-10th Street, Suite 300
Sacramento, CA 95814

Project Title: Creekside Office Park SCH No. 81110553

Project Description:

Location	Sacramento (AIR BASIN)		Sacramento (COUNTY)	Sacramento (SPECIFIC LOCATION)	
Impacts	52 (ACRES)	2,130 3,780 (POPULATION)	NA (DWELLING UNITS)	2,833 (ADT)	(VMT)

Evaluation of Air Quality Analyses:

Analysis of:	Adequate	Inadequate	Comment Number
Environmental Setting	X		
Impact of Project Proposal and Alternatives	X		
Mitigation Measures for Project Proposal and Alternatives		X	1
Cumulative Impacts	X		
Consistency Demonstration with Appropriate Air Quality Plans (SIP/AQMP)		X	2
Other			

Comments:

1. We recommend park and ride lots as a possible mitigation measure, in addition to the measures addressed in the DEIR. Mr. Les Ornelas, Coordinator of Caltrans' District 3, Ridesharing Program, (916)323-0839, can give you information on the Ridesharing Program.

2. The DEIR does not address the project's consistency with the Air Quality Management Plan. The California Environmental Quality Act, Section 15142(b) states, "The EIR shall discuss any inconsistencies between the proposed project ... and the applicable Air Quality Management Plan ..."

Gary Agid, Chief
Local Projects Support Branch
Regional Programs Division

cc: G. Stonehouse, SACOG
B. Cofer, Sacramento Co. APCD
L. Ornelas, Caltrans
D. Fudge, SCH

State of California | The Resources Agency

Memorandum

To : 1. Jim Burns, Projects Coordinator
Resources Agency

2. Diana Parker, Assistant Planner
City of Sacramento
City Planning Department
927 Tenth Street, Suite 300
Sacramento, CA 95814

Date: December 27, 1981

From : Department of Fish and Game

Subject: October 1981 Draft EIR (DEIR) Report, Creekside Office Park (SCH 81110553)

The Department of Fish and Game has reviewed the Draft EIR for the proposed 52-acre Creekside Office Park, located in the South Natomas community of the City of Sacramento. The DEIR adequately describes potential impacts to wildlife habitats under Section Q - Biology. Of the three habitat types identified (agricultural, levee row, and riparian woodland), our chief concern is the protection and preservation of the five acres of riparian woodland along Bannon Slough.

The Department recommends the project include all of the mitigation measures on pages Q7 and Q8. Especially important is the measure that proposed the "redrawing the boundaries of the proposed 40-foot Bannon Slough Parkway to conform more closely to the existing boundaries of the woodland habitat."

We appreciate the opportunity to comment on this project. If further comment is desired, please contact Paul T. Jensen, Regional Manager, Region 2, 1701 Nimbus Road, Rancho Cordova, CA 95670, telephone (916) 355-7020.

E C Fullerton
Director

South Natomas Community Association

P. O. BOX 15362 • SACRAMENTO, CA 95813

December 3, 1981

Planning Commission
City Of Sacramento
915 I Street
Sacramento, Ca

Members of the Planning Commission,

The Parks and Recreation Committee of the South Natomas Community Association seeks your support for the protection and preservation of the Bannon Slough Parkway concept as described in the South Natomas Community Plan of 1978.

The Draft E.I.R. for Creekside Office Park inaccurately describes the Bannon Slough as a "40-foot Parkway"(from the centerline of Bannon Slough). The SNCP states, "Parkway Corridor dimensions landward from the First Bannon Slough water edge should be a minimum of 20 feet to the parrallel street curb, and should be a minimum of 40 feet to the residential lot line (pg. 62 SNCP)." These minimum dimensions apply to both sides of the Bannon Slough. Therefore, the open space parkway of the Bannon Slough should have a minimum width of 80' when adjacent to private property.

The Draft E.I.R. for Creekside Office Park shows parking areas, office buildings, landscaping and streets intruding into the Bannon Slough Parkway. All development activities within the natural vegetative area, including the drip line of the mature oak trees, should be prohibited. In order to maintain and protect the existing natural features of the Bannon Slough the existing natural boundaries of the Slough should be used to designate the additional 20' and 40'(minimum) parkway boundaries.

To: City Planning Commission December 3, 1981

Construction of the proposed roadway across the Bannon Slough is of particular concern. The integrity of the natural area and its potential recreational and wildlife value would be significantly impacted. Futhermore, the SNC Plan of 1978 states as design features only parrallel streets and cul-de-sac streets perpendicular to the Bannon Slough Parkway should be allowed (pg. 60 SNCP).

The protection and preservation of the Bannon Slough Parkway is a high priority of the South Natomas Community Association, not only for its natural values, but also its recreational and aesthetic values.

Thanking You,

Ray Trotheway

Ray Trotheway
Co-Chair Parks and Recreation Comm.

South Natomas Community Association

P. O. BOX 15362 • SACRAMENTO, CA 95813

December 3, 1981

Diana Parker
City Planning Department
927 - 10th Street
Sacramento, CA 95814

RE: CREEKSIDE OFFICE PARK

The South Natomas Community Association does not believe the Draft Environmental Impact Report (EIR) for the proposed Creekside Office Park adequately describes the severe impacts inherent in the project. The draft EIR's recommended mitigation measures do not adequately mitigate the impacts and damages this project will cause.

Of primary concern to the South Natomas Community Association is the preservation and protection of the Lower Bannon Slough. The South Natomas Community Plan calls for the preservation of the entire Bannon Slough between San Juan Road and Garden Highway for community recreational purposes. There already has been substantial intrusions into the Upper Bannon Slough including houses, landscaping, fences, and roads in excess of South Natomas Community Plan guidelines. The Creekside Office Park, as currently designed, provides for substantial destruction of the Lower Bannon Slough. This includes the construction of office buildings within the perimeter of the Slough, the removal of several landmark trees, and the destruction of one of the last remaining, self-propagating, oak groves in the Sacramento Valley. The Draft EIR does not adequately address the preservation and protection of this valuable community resource.

The Draft EIR also does not address the cumulative impacts of the Creekside Office Park, Natomas Eastside, and the Gateway Center Office Parks. The EIR for these latter two projects described impacts and mitigation measures on a scale that will create havoc for the South Natomas Community. The Creekside Office Park EIR should include the cumulative impacts of the three projects in the areas of transportation, population, housing, public facilities and services, air quality, noise and energy.

These cumulative impacts are necessary to ensure all impacts of these projects are known prior to beginning the decision process.

The South Natomas Community Association is confident when these impacts are carefully weighed, the decision will be to deny this project, and maintain the viability of the South Natomas Community Plan.

Don Horel, President
South Natomas Community Association

CREEKSIDE OFFICE PARK EIR

Comments

It is obvious that the proposed project, Creekside Office Park, is a hasty solution of the residential building slump.

It is interesting to note that the developer already had his Planned Unit Development for residential units approved by the Planning Commission on November 21, 1979, two years ago. At that time, Creekside was a tentatively approved 672 residence PUD. It was not until June 9 of this year, 1981, that a notice of preparation for a Creekside Office Park EIR was distributed to the public.

The multitude of inconsistencies relating to goals and objectives of the South Natomas Community Plan and the Sacramento General Plan; the lack of policy justification; the failure to meet either SNCP and Sacramento Central City Plan development criteria, all add up to an overwhelming case against the proposed project.

Because so many inconsistencies and errors in judgment are apparent, I will not attempt to outline them all here. Instead, I will concentrate on the traffic impacts and the internal as well as external circulation problems inherent in the proposed project.

On page one of Section B, it is written: "A single major access to the site would be provided from West El Camino ... a total of 1,535 parking spaces is proposed."

It is not difficult to envision 1,500 automobiles turning into this single access road at the start of every work day. But picture, at the same time, tens of thousands of commuters glutting the corners of Truxel and West El Camino, of Truxel and the Garden Highway, and the through traffic on West El Camino en route to the CBD and beyond. The proposed project is a dangerous "traffic attractor," one that would act as a magnet for hundreds of vehicles entering South Natomas as the commuters from nearby residential neighborhoods would be trying to get out.

Furthermore, on page J12 we note: "A review of other guidelines indicates a potential demand of over 2,000 (parking) spaces ... Thus the potential exists for a shortage of parking spaces ... (and) may result in vehicles illegally parked, extensive use of on-street parking ... and loss of customers by office park tenants ... " Office park parking would overflow into adjoining residential neighborhoods.

(more)

Secondary access to the site would be provided by a proposed east-west collector connecting to Truxel Road. This street would cut directly through a residential neighborhood, and would bisect the Bannon Slough Parkway; this is contrary to the SNCP.

A parcel of land known as the "Bennett Property," lies between the project site and I-5. There is no access to this residential property except through the office site. Thus, residents entering or leaving this residential site would be forced to traverse streets heavy with office park traffic.

Cumulative traffic impacts will not be assessed until the final EIR. However, it is safe to say that traffic bound for this proposed office park project would come into direct conflict with traffic generated by other office parks now in study, as well as traffic from the rapidly growing South Natomas Community.

The Draft EIR says, on page J15, that "The intersections of West El Camino with Azevedo Drive and Truxel Road would have unacceptable levels of service (E) under both the proposed project and the no-project alternative." This is no news to those of us who have lived with development over the past five or more years. We feel, however, that there is a better opportunity to alleviate "unacceptable" traffic volumes caused by neighbors than that generated by people who come from outside the community.

Our plans for public transportation and para-transit modes have better chances of success when we work with residents of the nearby community. As the Draft EIR proclaims (J16): "Trip reduction measures ... would need to be implemented by project tenants, and the City would find them difficult to enforce."

As an aside, perhaps it would be valuable for Planning staff to re-analyze Appendix II, traffic volume impacts and two-way ADT volumes, as well as figures quoted on intersections capacity. These figures do not seem to balance.

Often it is useful to review the work that has been done by governmental agencies. In this case, the City Council, with adequate reinforcement by Planning staff, the Planning Commission, and the South Natomas community, passed the South Natomas Community Plan. I would like to read a few of the nearly three dozen goal objectives of the SNCP:

(more)

* Establish residential density minimums which accomodate increased numbers of people and retard the need for urban expansion to the north.

* Design and phase utilities and streets to reduce the possibility of premature development outside the planning area.

* Prohibit the intrusion of incompatable land uses and disruptive traffic into new and existing residential areas.

* Design all business areas to reduce the potential for conflict with adjacent residential areas.

* Limit industrial development to the area presently zoned for this use; and ensure that the design reduces the potential for conflict with adjacent residential uses.

* Encourage physical development which promotes the conservation of fossil fuels and minimizes air, noise, and water pollution.

Ladies and gentlemen of the Planning Commission, these goal objectives did not come half-baked from the oven. We tended those fires together, you and I. We were certain that we had a good product.

But now let us not allow someone to come in and squash our cake before we have had a chance to sample it!

Please, let us have the proponent go back to his original PUD, and we can all work together once more in approving <u>that</u> schematic, which will be more consistent with the South Natomas Community Plan and the 1974 General Plan, and will certainly enhance the CBD.

Sincerely,

Robert V. Doyle
Member
South Natomas Community Associati

ORIN N. BENNETT
STEVEN W. DECOU

CITY PLANNING COMMISSION

DEC 3 - 1981

RECEIVED

3 December 1981

City of Sacramento
Planning Department
929 9th Street, Suite 300
Sacramento, Ca. 95814
Attn.: Diana Parker

Subject: Creekside Office Park EIR

Dear Staff:

As owners of the property adjacent to the west boundary of the proposed Creekside project, we have reviewed the draft EIR for the Creekside Office Park and have the following comments.

The draft EIR assumes the zoning for our property will remain as high-density residential, and proposes a number of mitigation measures based on that assumption. As we believe that the highest and best use of our property is business professional, it can be expected that we would request rezoning to that classification should the Creekside Office Park project be approved. We ask that this be considered in assessing the environmental impacts and mitigation measures as they relate to this project.

Planning for the area between Bannon Slough and I-5, south of West El Camino Avenue should be compatible. This can be achieved if zoning for our property is assumed to be equivalent to the final zoning for the Creekside project, or if some transition zone to combine the use of these two properties is provided.

We look forward to a response to these comments. We are available to meet with staff, if desired, at your convenience.

Sincerely,

Orin N. Bennett

ONB:MJG

8568 PHEASANT HILL COURT ORANGEVALE, CALIFORNIA 95662 (916) 988-9774

SACRAMENTO MUNICIPAL UTILITY DISTRICT ☐ 6201 S Street, Box 15830, Sacramento, California 95813 (916) 452-3211

CITY PLANNING COMMISSION

DEC 16 1981

RECEIVED

December 15, 1981

DIANNA PARKER
ASSISTANT PLANNER
CITY PLANNING DEPARTMENT
927 TENTH STREET, SUITE 300
SACRAMENTO CA 95814

SUBJECT: DEIR CREEKSIDE OFFICE PARK

Dear Ms. Parker:

SMUD's staff has received the above DEIR and offers the following comments:

1. It appears that the project's energy use exceeds SMUD's planned substation capacity requiring the probable installation of new facilities. This added load could have a chain effect on our bulk 69kV substation in the area (for further information contact Floyd Smith, extension 276).

2. Energy conservation, passive solar, and peak load reduction design standards could minimize the extent of the impact to SMUD with respect to energy consumption and demand, and the future cost of generation and distribution. SMUD would welcome the review opportunity to encourage conservation, solar, and load management measures. The specific details of the project on energy design criteria are preferred over general ones.

   The annual energy consumption figures on Exhibit M-1 seem excessive. A worst case office building is about 143,000 Btu's (1.43 therms) per sq. ft. per year. An energy-efficient office building could be around 60,000 Btu's (0.60 therms) per sq. ft. per year. Existing Title 24 energy conservation building standards would put a typical home at 50,000 Btu's per sq. ft. per year. For a 1,300 sq. ft. typical dwelling, this is about 650 therms per year per unit, nowhere close to 1,400 therms. Under the new revised T-24 standards, which go into effect next year, 30,000 Btu's per sq. ft. per year is the maximum allowed; therefore, the same 1,300 sq. ft. home will use less than 325 therms per year per unit. Under the circumstances, it is far more likely that homes will be built under the new standards; therefore, there is a considerable amount of unaccountable energy usage to arrive at 1,400 therms/unit in the exhibit.

It is strongly urged that the details and assumptions be revised, as the energy comparison creates many questions and perhaps a false impression of the project - no project issue. Based on 325 therm per home and using the figures above, the exhibit could read:

Alternative	Land Use	Quantity Factor	Annual Therms	Annual Consumption
Project	Office	614,000 sq.ft.	.6-1.43 therms per sq. ft.	368,400-878,020
No-Project	Residential	911 units	325 therms/unit	296,075

For further information contact Pete Hollick, extension 406.

Thank you for the opportunity to comment.

Cordially,

Susan Boyle-Fakhrai

Susan Boyle-Fakhrai
Environmental Coordinator
Transmission Planning Group

December 23, 1981

MEMO TO: Diana Parker, Assistant Planner

FROM: Jim Bloodgood, Assistant Civil Engineer JB

SUBJECT: Creekside D.E.I.R.

Page J-1

Existing Roadway System

Northgate Blvd. is presently a 4-lane arterial.

Planned Roadway Improvements

Right-Of-Way for Garden Highway in the vicinity of the project is 82'. Right-Of-Way for Truxel Road is 100'.

Page J-4

Bicycle Access

Azevedo Drive between W. El Camino Avenue and San Juan Road is also on the bicycle master plan.

Page J-6

Roadway Capacity

To be compatable with the traffic studies done for the south Natomas Business Parks on the west side of I-5, 1500 vehicles per lane, per hour should be used. This will lower anticipated levels of service, but will allow for better interaction between the various studies.

Intersection Capacities and Levels of Service

See above comments.

Page J-11

Site Access & Circulation

"Internal Circulation will be serviced by individual driveways." Internal circulation will not be served by a cul-de-sac stub.

Page J-16

Widen W. El Camino Avenue to 6 lanes from I-5 past Truxel Road

Eliminate comment by Bloodgood in the second paragraph.

JB/cl

DRAFT ENVIRONMENTAL IMPACT REPORT CREEKSIDE OFFICE PARK

City of Sacramento
Planning Department

Prepared By:
Jones & Stokes Associates, Inc.
Sacramento, Ca.

October 1981

CITY OF SACRAMENTO

CITY PLANNING DEPARTMENT
927 TENTH STREET
SUITE 300
SACRAMENTO, CA 95814
TELEPHONE (916) 449-5604

MARTY VAN DUYN
PLANNING DIRECTOR

October 30, 1981

MEMORANDUM

TO: Interested Parties

FROM: City of Sacramento Planning Department

SUBJECT: Draft Environmental Impact Report for Creekside Office Park

The City Planning Department is forwarding this document for review and comment to all agencies, organizations and interested persons indicated on the attached distribution list. Reviewers should focus on the sufficiency of the EIR in discussing possible impacts upon the environment, ways in which adverse effects might be minimized, and alternatives to the proposed project.

A public hearing to receive comments on the Draft EIR will be held before the City Planning Commission on Thursday, December 3, 1981, at 5:15 p.m. in the Council Chamber of City Hall, 915 I Street, Sacramento, California.

Reviewers who wish to comment on the Draft EIR are urged to submit written comments to this office prior to the public hearing. Failure to do so will not preclude your right to testify at the hearing.

Oral testimony submitted at the public hearing and written comments will be incorporated into the Final EIR.

Please contact Clif Carstens at 449-5604 or me at 449-5381 if you have any questions regarding this matter.

With regards,

Diana Parker

Diana Parker
Assistant Planner

DP:lo
attachment

DISTRIBUTION LIST FOR CREEKSIDE OFFICE PARK DRAFT EIR

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Sacramento, CA 95814

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Conservation Committee
Sacto. Valley-Sierra Group
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TABLE OF CONTENTS

LIST OF EXHIBITS

Section A

INTRODUCTION

Summary Comparison of Adopted Plans and Proposed Project

Adopted Plans

This Environmental Impact Report (EIR) has been prepared to assess environmental impacts of the 52-acre Creekside office park proposed for the South Natomas community in the City of Sacramento. The Sacramento City General Plan designates the project site for residential land use. The General Plan, adopted in 1974, is currently being updated by the City Planning Department.

The South Natomas community planning area consists of approximately 4,100 acres located about 3 miles north of the City of Sacramento's Central Business District. The area's boundaries are the Interstate 880 freeway on the west and north, the Western Pacific Railroad tracks on the east, and the American and Sacramento Rivers on the south. In March 1978, the City Council adopted the South Natomas Community Plan (SNCP) with the following goals:

- Maximize the long-term retention of open space land north of the Interstate 880 freeway for active agricultural production by establishing suitable planning parameters for urbanization in South Natomas.
- Accommodate as many people as possible consistent with quality development and adequate open space.
- Provide commercial and office districts of a size and location to adequately serve the existing and anticipated future population of the community, consistent with adequate circulation and transportation facilities.
- Provide a balanced circulation system that serves local residents and through-traffic with a minimum of congestion or conflict with residential neighborhoods, shopping areas, and other land uses.
- Make South Natomas a public transit oriented community.
- Support a high level of environmental quality within the community.

A complete list of SNCP goals and objectives is included herein as Appendix VI. A detailed description of the relationship of the proposed projects with SNCP goals and objectives is provided in this report under LAND USE (Section D). The SNCP, consistent with the General Plan, designates the project site for residential use.

In January 1980, the City Council adopted a schematic plan for a 39-acre parcel included within the project site. This schematic plan, known as the Creekside Schematic PUD, provides for 672 residential units in a variety of housing types consistent with the SNCP. The resolution approving this schematic plan is included herein as Appendix VII.

Proposed Project

The proposed project is a "suburban" office park with 614,000 square feet of office space in 1- and 2-story structures. The proposed project represents a major deviation from the land use designations of the City's 1974 General Plan, 1978 South Natomas Community Plan, 1980 Creekside Schematic PUD, and zoning ordinance. Consequently, the project applicant has submitted applications to:

- Amend the 1974 General Plan, changing the designation from residential to commercial and offices.
- Amend the South Natomas Community Plan, changing the designation from residential to business and professional offices.
- Amend the Creekside Schematic PUD from residential to offices.
- Request to initiate rezoning of 52 vacant acres from residential (R-3R-PUD, R-2A-PUD, and R-2B-PUD) to office (OB-PUD).

EIR Requirement

The proposed Creekside office park is considered to be a "project" as defined by the California Environmental Quality Act--State EIR Guidelines, Section 15037. The guidelines require preparation of an Initial Study to evaluate a project's effect on the environment (Section 15080). After reviewing the Initial Study prepared for each project (Appendix VIII) the City's Environmental Coordinator determined that

the project could have significant environmental impacts on their respective sites and surrounding area. The City's Initial Study has indicated a number of potentially significant adverse environmental impacts that would result from approval of the Creekside office park. These include the following:

- o Land Use: the office park project is inconsistent with the 1978 SNCP and 1980 Creekside PUD, which designate the project site for residential use.

- o Population, Housing, and Employment: the project would displace approximately 911 dwelling units from South Natomas, and would generate a substantial amount of new employment, which could have growth-inducing impacts.

- o Public Facilities and Services: the project could adversely affect certain public facilities and services, and increase associated public costs

- o Transportation, Air Quality, and Noise: the project would increase traffic volumes, potentially adversely affecting the planned circulation system and increasing air pollution and noise levels.

- o Hydrology and Water Quality: increased runoff volumes and pollutant loads from the project could adversely affect the planned drainage system and receiving water quality.

- o Biology: the project could adversely affect the Bannon Slough area, which supports a valuable woodland habitat.

- o Cumulative Impacts: the impacts of the project, when considered in conjunction with similarly proposed office parks and development induced by the project, could be cumulatively significant. (Note: cumulative impacts from the proposed project, together with the Natomas Eastside and Gateway Centre projects, will be evaluated in the Final EIR for the Creekside office park).

Based on the findings of potentially significant effects identified in the Initial Study and due to public concern for the potential environmental effects of the project, the Environmental Coordinator required the preparation of an Environmental Impact Report (EIR) pursuant to Section 15080(a), 15082(b) and (c), and 15084(a) of CEQA.

Report Scope and Organization

Report Scope

As provided for in state EIR guidelines, the focus of the Draft EIR is limited to specific issues and concerns identified as possibly significant in the Initial Study of the proposed project. The EIR describes the likely environmental consequences if the proposed project is approved. The EIR has been prepared pursuant to the California Environmental Quality Act of 1970 (Public Resources Code 21000, Division 13), and to related state and City EIR guidelines. The EIR is an informational document to aid in the local planning and decision-making process. The EIR assesses the potential, individual, and cumulative effects that the project may have on the environment, lists ways to minimize potential adverse effects, and evaluates alternatives to the proposed project. Although not required by CEQA, mitigation measures have been proposed for minor adverse impacts which may not be significant.

The Draft EIR approach is to compare environmental conditions that would occur if the proposed project is approved with environmental conditions that would occur if existing City policies designating the site for residential use (the no-project alternative) are followed. Although certain cumulative impacts are addressed, the Draft EIR does not address the cumulative environmental impacts that would result if two other proposed South Natomas business parks (Natomas Eastside and Gateway Centre) are approved by the City. Such cumulative impacts will be evaluated in the Final EIR for the Creekside office park, once data from the South Natomas Business Parks Draft EIR are fully available. When possible, however, this Draft EIR uses impact assessment methods similar to those used in the South Natomas Business Parks Draft EIR to provide a common basis for evaluating all three projects.

Report Organization

The following section of the Draft EIR (Section B) describes the proposed Creekside office park and the no-project alternative, consisting of residential development of the project site consistent with SNCP policies. The next section (Section C) presents a summary of impacts and mitigation measures, as well as a number of impact conclusions required by CEQA. The following 15 sections (D through R) are each devoted to a single impact topic; within each topic, relevant environmental setting data are presented; the impacts of the proposed project and the no-project alternative are evaluated and compared; and suggested mitigation measures are presented. The last section of the Draft EIR (Section S)

lists documents and persons consulted in preparing this document. A number of appendices also are appended to the Draft EIR to provide the interested reader with further documentation regarding the project and selected impact assessments.

Government Code Section 7800 Statement

This EIR has been prepared by Jones & Stokes Associates, environmental consultants, under contract to the City of Sacramento (Contract No.81015) for a cost not to exceed $31,900.

Section B

PROJECT DESCRIPTION

Location

The proposed Creekside office park is located in the South Natomas area within the northwest part of the City of Sacramento. The regional location of the project is illustrated in Exhibit B-1, and the location of the project within the South Natomas area is shown in Exhibit B-2.

The 52-acre project site is bordered by West El Camino on the north, Bannon Slough on the east, Garden Highway on the south, and a vacant parcel adjacent to I-5 on the west. The project site is currently under agricultural use and possesses several stands of native oak trees. A Pacific Gas & Electric (PG&E) easement, approximately 80 feet wide, crosses the site from east to west in the northern portion of the site.

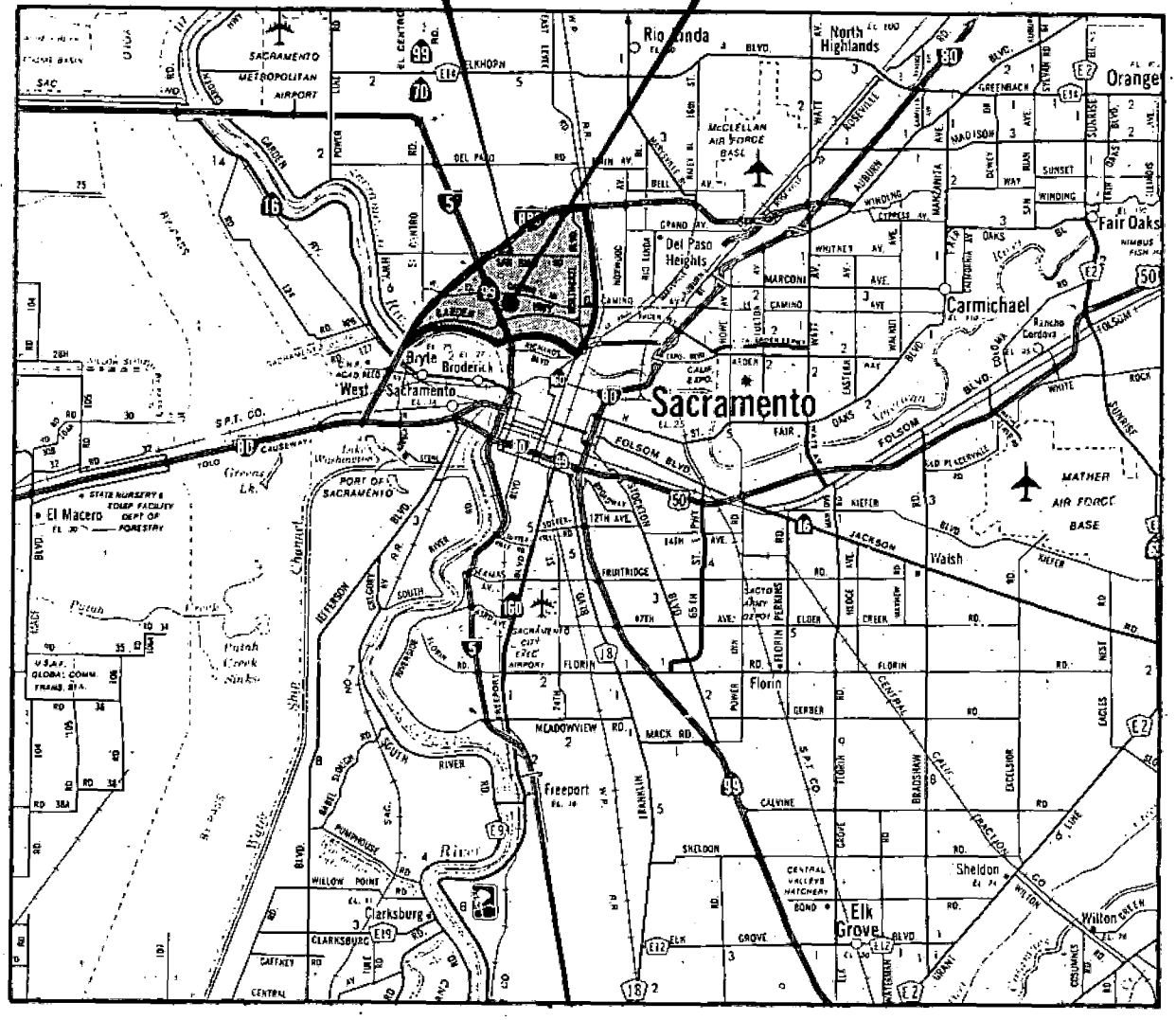
Description of Proposed Project

Project Characteristics

The proposed project is a "suburban" office park with 614,000 square feet of office space in 1- and 2-story structures. The schematic development plan for the proposed project is shown in Exhibit B-3, and selected features of the proposed project are presented in Exhibit B-4.

A single major access to the site would be provided from West El Camino. The site plan delineates four separate subareas within the site, each with its own parking. A total of 1,535 parking spaces is proposed. No structures are proposed within the PG&E easement, but portions of the easement are proposed for parking. A 40-foot parkway is proposed adjacent to Bannon Slough at the eastern edge of the site.

The South Natomas Community Plan (SNCP) designates the project site for residential use. The proposed office park is not consistent with this designation, and would require General Plan, community plan, and schematic plan amendments, and a rezoning of the site.



BASE MAP COURTESY OF AAA

EXHIBIT B-1. REGIONAL LOCATION OF PROPOSED PROJECT

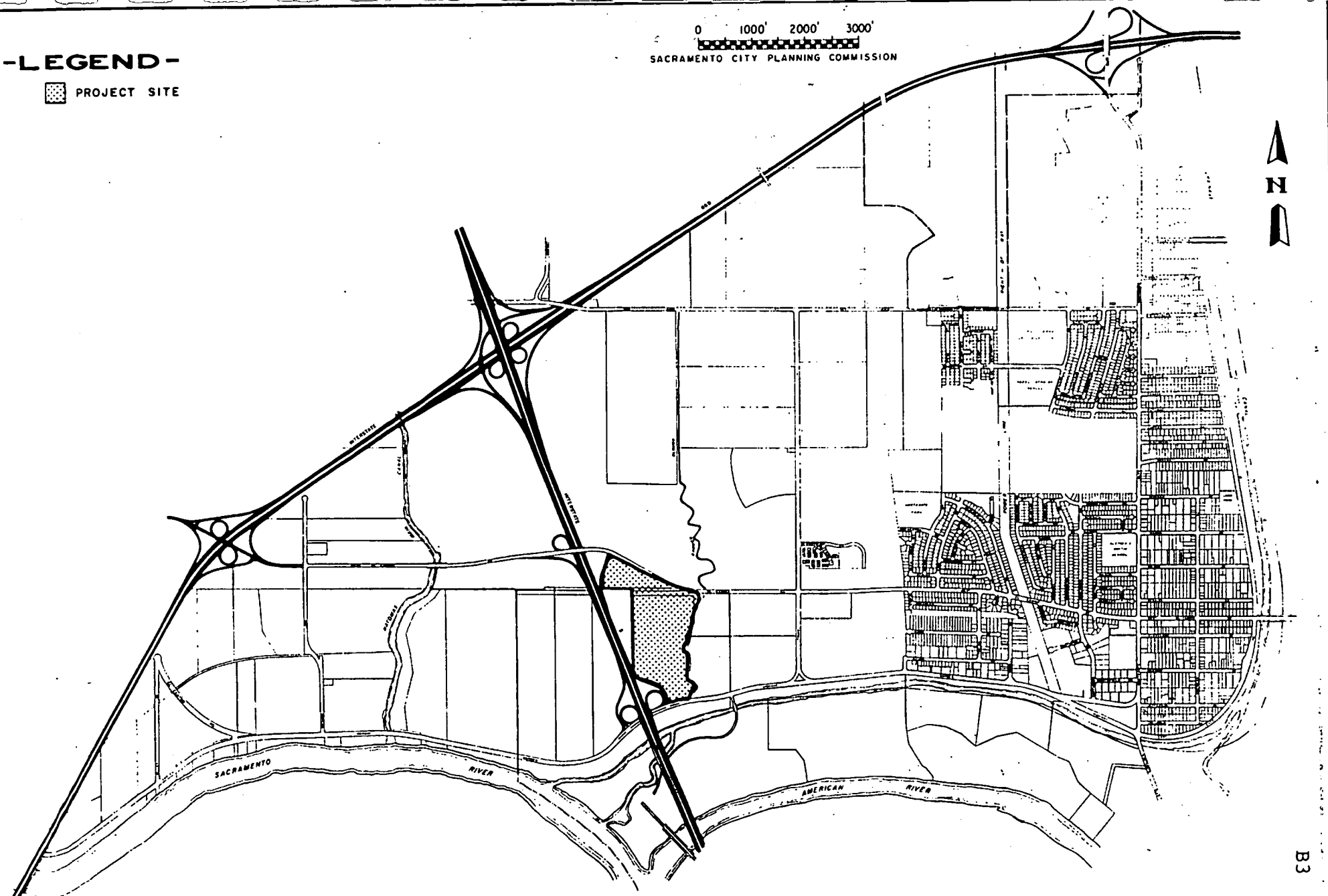


EXHIBIT B-2. LOCATION OF PROPERTY WITHIN SOUTH NATOMAS

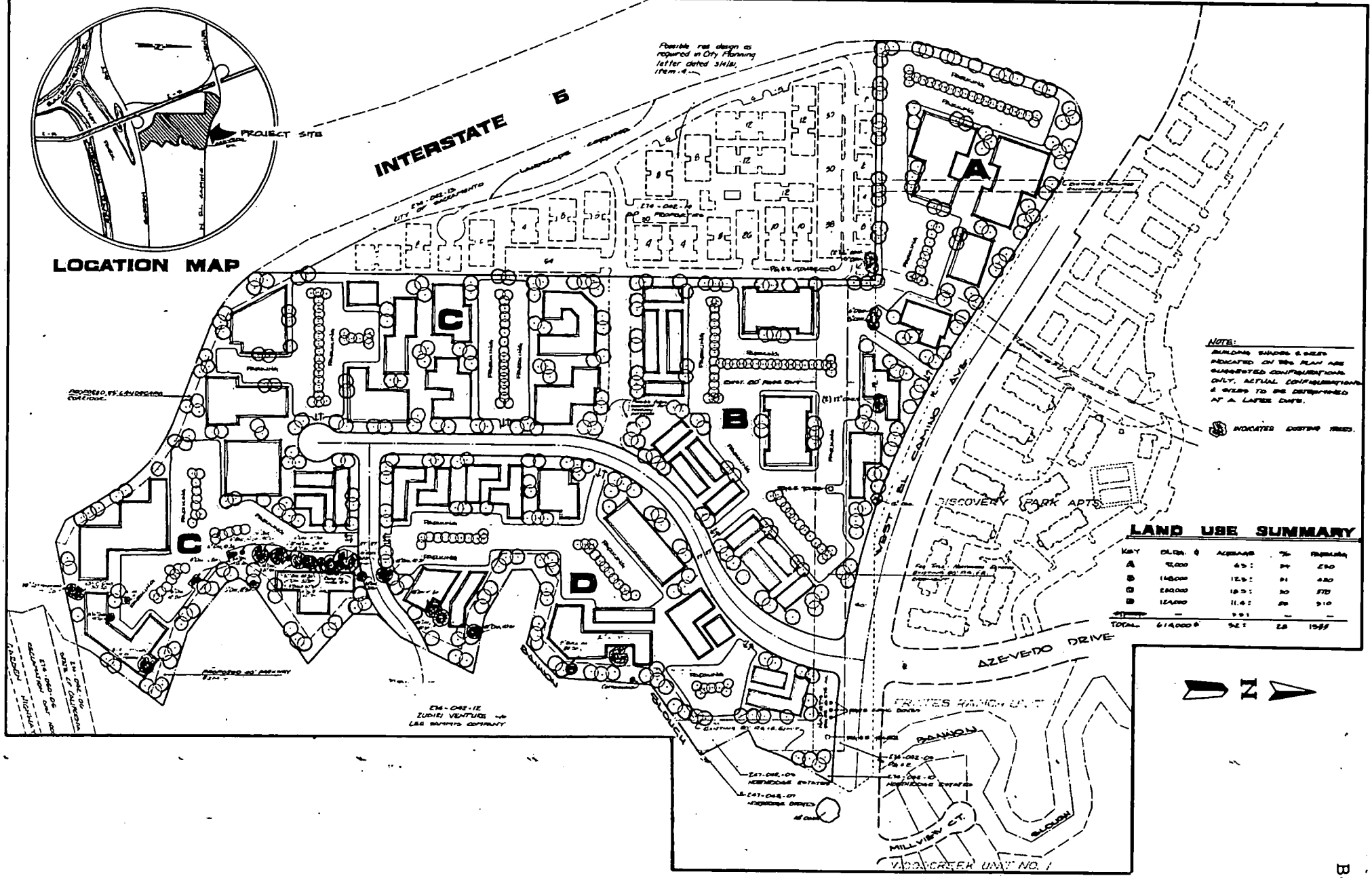


EXHIBIT B-3. CREEKSIDE OFFICE PARK SCHEMATIC DEVELOPMENT PLAN

Exhibit B-4. Comparison of Proposed Project With No-Project Alternative (Creekside)

Alternative	Acres					Office Space (sq. ft.)	Units	Parking Spaces
	Gross	Net	Bannon Slough	Streets	Landscaped Corridors			
Proposed Project	52.6	44.2	2.0	5.5	0.9	614,000		1,535
No Project								
- Creekside PUD	38.5	31.8	2.0	3.14	2.0	-	672	1,008
- Site Remainder[1]	14.1	11.4	-	1.4	0.6	-	239	359
- Total	52.6	43.2	2.0	4.54	2.6	-	911	1,367[2]

[1]Assumes average density of 17 units per gross acre.

[2]Assumes dwelling unit to parking ratio of 1:1.5.

Economic Considerations

The demand for office space in South Natomas and potential effects of regional scale office parks in South Natomas on the Sacramento Central Business District (CBD) have been analyzed in the Draft EIR for two proposed South Natomas business parks, Natomas Eastside and Gateway Centre, proposed west of I-5 (Sacramento City Planning Department 1981). For this reason, a separate economic assessment of the proposed Creekside office park was not undertaken in this EIR.

The office market findings in the South Natomas Business Parks Draft EIR are, however, also generally applicable to the Creekside office park because of the close proximity of the three projects and because all three are suburban business parks. The main findings of the economic assessment conducted for the South Natomas Business Parks Draft EIR, and the implications of these findings for the Creekside office park project, are summarized in Exhibit B-5. In general, the economic impacts of the Creekside project would be similar in nature to those of the proposed South Natomas business parks, but would be of lesser magnitude, since the Creekside project provides significantly less office space (614,000 square feet vs. 3.3 million square feet of office space provided by the proposed business parks). The 614,000 square feet represents 5.8 percent of existing Sacramento area office space and 23.6 percent of existing CBD office space.

Exhibit B-5 indicates that sufficient office space demand would exist to make the proposed project a good real estate prospect. The project could, however, adversely affect the CBD office market through decreasing the rate of CBD office development (but not the overall level); decreasing CBD office space absorption rates and prices; or causing future tenant relocation from CBD offices. (These effects could occur even though the proposed project is a suburban office development which would not directly compete with CBD office space, unless project objectives were to change.) If the Natomas Eastside and Gateway Centre projects are approved, the local and regional supply of office space would increase significantly, potentially making it more difficult for the Creekside project to attract tenants. Approval of the two projects would also result in cumulative adverse impacts on the CBD office market if the Creekside project is approved.

Exhibit B-5. Findings of Economic Assessment for South Natomas Business Parks Draft EIR and Implications for Creekside Office Park

Findings of South Natomas Business Parks Draft EIR	Implications for Creekside Office Park
A. Consideration of office demand and related site suitabilities indicate that projects at proposed location represent a good real estate prospect.	A. Similar considerations apply.
B. Project effects on regional office-commercial development might include: • A decline in rate of office development (but not the overall level) in CBD/Capitol zone. • Less pressure for similar (office-oriented) projects in North Natomas-airport area, at least within the decade. • Slightly less diversification in other competing projects, i.e., less office space, especially developments proposed to include a range of business park uses (light industrial, research and development, distribution, commercial office) at locations along Highway 50 or closer to Placer County.	B. Effects of Creekside project would be similar but of lesser magnitude because of the project's smaller size.
C. Proposed rate of project office space absorption could result in adverse impacts on regional office market, decreasing space expansion, absorption, and rental rates in CBD, in suburban office concentrations throughout the region, and in other regional projects.	C. Effects of Creekside project would be similar but of lesser magnitude because of the project's smaller size.
D. CBD office space market may be established and occupied to an acceptable degree before substantial project impacts occur; main effects of any "overbuilding" in Natomas area on CBD would occur at later date if significant relocation of tenants occurs.	D. Effects of Creekside project would be similar but of lesser magnitude because of the project's smaller size.

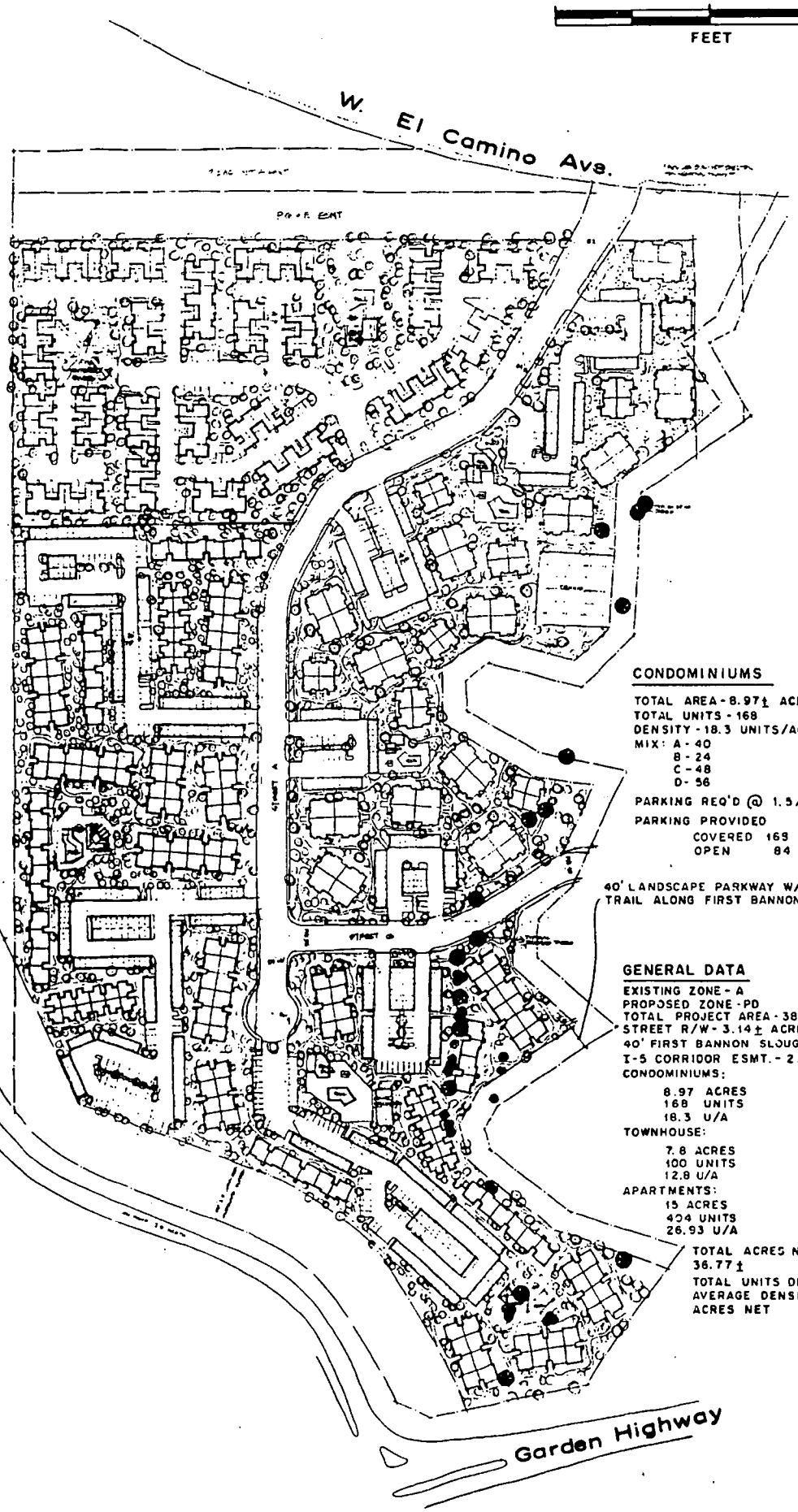
Description of No-Project Alternative

For this EIR, the no-project alternative consists of the currently-approved residential uses of the site consistent with the SNCP, at average densities (17 units per acre). It consists of the 39-acre Creekside Planned Unit Development (PUD) approved by the City Council in January 1980 on the southern three-fourths of the site, together with residential use of the northern quarter of the site consistent with the SNCP. The Creekside PUD schematic development plan is shown in Exhibit B-6, and selected features of the no-project alternative are presented in Exhibit B-4.

The Creekside PUD calls for 672 residential units, consisting of 404 apartments, 168 air-space condominiums, and 100 townhouses. Average density would be 17 units per gross acre, and 21 units per net acre. A single access would be provided from West El Camino. A 40-foot parkway, with a 10-foot bike trail, would be included along Bannon Slough. The remaining 13 acres of the site would accommodate about 239 units, assuming a density of 17 units per gross acre. In total, the no-project alternative would provide approximately 911 dwelling units. This would require 1,367 parking spaces, assuming 1.5 parking spaces per unit.

0 250' 500'
FEET

N



TOWNHOUSE

TOTAL AREA - 7.9± ACRES NET
TOTAL UNITS - 100
DENSITY - 12.8 UNITS/ACRE
PARKING REQ'D @ 1.5/UNIT = 150 STALLS
PARKING PROVIDED:
2 STALLS UNIT = 200
GUEST 74
TOTAL 274

APARTMENTS

TOTAL AREA 15± ACRES NET
TOTAL UNITS - 404
DENSITY - 26.93 UNITS/ACRE
MIX:
EFF (500 S.F.) 72
1BR-1B (690 S.F.) 256
2BR-1B (950 S.F.) 76
PARKING REQ'D @ 1.5/UNIT = 606 STALLS
PARKING PROVIDED:
COVERED - 404 STALLS
OPEN - 202

CONDOMINIUMS

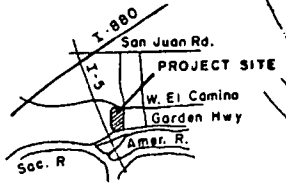
TOTAL AREA - 8.97± ACRES NET
TOTAL UNITS - 168
DENSITY - 18.3 UNITS/ACRE NET
MIX: A - 40
B - 24
C - 48
D - 56
PARKING REQ'D @ 1.5/UNIT = 252 STALLS
PARKING PROVIDED
COVERED 169
OPEN 84

40' LANDSCAPE PARKWAY W/10' BIKE TRAIL ALONG FIRST BANNON SLOUGH

GENERAL DATA

EXISTING ZONE - A
PROPOSED ZONE - PD
TOTAL PROJECT AREA - 38.91 ACRES
STREET R/W - 3.14± ACRES
40' FIRST BANNON SLOUGH - 2.0± ACRES
I-5 CORRIDOR ESMT. - 2.0± ACRES
CONDOMINIUMS:
8.97 ACRES
168 UNITS
18.3 U/A
TOWNHOUSE:
7.8 ACRES
100 UNITS
12.8 U/A
APARTMENTS:
15 ACRES
404 UNITS
26.93 U/A

TOTAL ACRES NET DEVELOPED = 36.77±
TOTAL UNITS DEVELOPED = 672
AVERAGE DENSITY = 18.8 UNIT/ACRES NET



VICINITY

EXHIBIT B-6. CREEKSIDE PUD SCHEMATIC DEVELOPMENT PLAN

Section C

SUMMARY OF FINDINGS

This section presents a summary of project impacts and mitigation measures, and a number of impact conclusions required by CEQA (CEQA Guidelines, Section 15143)

Summary of Impacts and Mitigation Measures

Exhibit C-1 presents a summary of the environmental impacts of the proposed project, as compared to the no-project alternative, and lists mitigation measures for identified adverse impacts. For detailed discussions of these impacts and mitigation measures, refer to the appropriate sections of the text following this chapter.

CEQA-Required Impact Conclusions

Changes in Growth-Inducing Effects

Land Use. The proposed project would decrease the available residential vacant land in South Natomas by 52 acres, or 5.5 percent. It would decrease the South Natomas Community Plan (SNCP) residential land allocation by 1.8 percent, and increase the SNCP office land allocation by 149 percent. Approval of the project would be likely to increase the demand for additional South Natomas office development and higher-density residential development.

Population. The proposed project would directly reduce the South Natomas population by 2,277 residents, 4 percent of the projected 1980-2020 population growth, thereby increasing population growth pressures on surrounding communities. The project would, however, result in new jobs which would add an estimated 2,130-3,780 residents to Sacramento, including 570-1,020 residents added to South Natomas.

Housing. The proposed project would directly displace 911 dwelling units, but would result in new jobs which would add an estimated 850-1,510 households to Sacramento, including 230-408 households to South Natomas, thereby increasing South Natomas housing demand and prices.

Exhibit C-1. Summary of Proposed Project Impacts and Mitigation Measures

Impact Category	Impact of Proposed Project, as Compared to No-Project Alternative	Mitigation Measures
Land Use	Regional: 52-acre (1.8%) decrease in SNCP residential allocation and 52-acre (149%) increase in SNCP office allocation. Regional: increased demand for additional South Natomas office and higher-density residential development Local: potential conflicts with residentially-designated parcels to east and west of site. Plan Consistency: inconsistent with SNCP policies discouraging regional-scale office development and with SNCP residential land use designation for site; inconsistent with Central City Community Plan policies encouraging Central City revitalization and expansion; inconsistent with Creekside Schematic PUD, designating 39 acres of site for residential use.	Increase allowable densities on remaining South Natomas residentially-designated parcels (infrastructure constraints may limit the feasibility of this measure). Require increased buffering of contiguous parcels to east and west. Require applicant to justify office demand. Implement a mixed-use office/residential project.
Population	Direct: reduction in South Natomas population by 2,277 residents 4% of the projected 1980-2020 population growth. Indirect: increased growth pressures on surrounding communities. Indirect: new jobs would add 2,130-3,780 residents to Sacramento population, including 570-1,020 residents to South Natomas population.	Increase allowable densities on remaining South Natomas residentially-designated parcels (infrastructure constraints may limit the feasibility of this measure).
Housing	Direct: displacement of 911 dwelling units, eliminating 5.5% of available South Natomas vacant residential land Indirect: new jobs would add 850-1,510 households to Sacramento, including 230-408 households to South Natomas, increasing South Natomas housing demand and prices.	Increase allowable densities on remaining South Natomas residentially-designated parcels (infrastructure constraints may limit the feasibility of this measure). Implement housing element measures to increase housing affordability.
Employment	Permanent: increase of 3,960-5,280 direct and secondary jobs, of which 1,190-2,120 would be new jobs for regional labor market. Construction: no net impact, since no-project alternative would generate equivalent construction employment.	None required.

Impact Category	Impact of Proposed Project, as Compared to No-Project Alternative	Mitigation Measures
Public Facilities and Services	Police: less demand for police protection services; potentially inadequate emergency vehicle access. Fire: increased fire flow requirements; potentially inadequate emergency vehicle access. Water: decrease of 135 acre-feet/acre/year (63%) in water demand. Sewer: decrease of 46,000 gallons per day sewage flow. Solid Waste: no net impact. Recreation and Open Space: elimination of requirement for 12.14 acres of parks; loss of $764,820 in developer park contributions; provision of 40-foot-wide Bannon Creek Parkway; project scale would reduce parkway's recreational attractiveness. Schools: decrease of 237 school children. Transit: decreased transit patronage; creation of land use pattern less amenable to efficient transit service. Drainage: increase in peak runoff flows by 1.4-5.2 cfs (6-50%).	Provide adequate lighting. Provide additional access to site. Consult with County Public Works Water Quality Division regarding collector sewer locations. Increase building setbacks from proposed 40-foot Bannon Slough Parkway. Eliminate east-west collector road from site plan. Provide designated bus turnout on the south side of West El Camino at Azevedo. Provide and maintain a bus shelter or covered waiting area for the above bus stop. Provide walkways throughout the project connecting directly to the bus stop. Payment of one-time drainage fee.
Fiscal Impacts	Municipal Services: one-time capital cost savings of $327,780; annual operation and maintenance cost saving of $73,560 Special Districts: no net fiscal effect. Revenue Generation: one-time revenue increase of $271,792; annual revenue decrease of $8,686. Net Fiscal Effect: savings of $599,572 in capital (one-time) costs; savings of $64,874 in annual operating costs.	See PUBLIC SERVICES AND FACILITIES and TRANSPORTATION mitigation measures.
Transportation	Traffic and Circulation: increase of 2,833 trips per day, 44% more than no-project alternative; no significant impacts on roadway or intersection capacities; intersections of West El Camino with Azevedo and Truxel at unacceptable level of service	Signalize the intersections of West El Camino/Azevedo, West El Camino/Truxel, and Truxel Road/east-west local collector. Widen El Camino to six lanes from I-5 past Truxel, improving levels of service for Azevedo and Truxel intersections from E to O. (Feasibility and financing of this measure is uncertain.)

Impact Category	Impact of Proposed Project, as Compared to No-Project Alternative	Mitigation Measures
Transportation (cont'd.)	(E) with or without project; potential circulation problems at West El Camino/ Azevedo and 30-foot driveway accesses to site. Parking: consistent with City requirements, but shortage may exist as measured by other guidelines. Bicycle Access: opportunity for construction of Bannon Slough bicycle path.	Implement trip reduction measures. (Difficult to enforce by City.) Design 30-foot driveway off West El Camino for right-in/right-out only. Widen 30-foot driveway off West El Camino to 35 feet. Prepare updated South Natomas transportation study and comprehensive capital improvements program. Review proposed project parking requirements. Complete planning to Bannon Slough bicycle path. Construct bicycle path through project.
Air Quality	Ozone Precursors: minor increase in hydrocarbon and nitrous oxide emmissions from traffic. Carbon Monoxide: essentially no change in carbon monoxide concentrations at selected receptors caused by increased traffic.	Implement trip reduction measures. (Difficult to enforce by City.)
Noise	Traffic Noise: essentially no change in noise levels at selected receptors caused by increased traffic.	Use of noise-reducing building designs and materials. (Construction of noise barrier.)
Energy	Annual Energy Use: decrease of 428,080 therms/year (34%). Transportation Fuel: increase of 660,256 therms/year (44%). Net Impact: increase of 232,176 therms/year (8.5%).	Implement energy conservation measures beyond Title 24 and UBC requirements. Implement trip reduction measures. (Difficult to enforce by City.)
Aesthetics	General Appearance: low-rise development visible from adjacent roadways. Wall at Western Boundary: 6-foot wall would be visually unappealing and make residential use of adjacent property less desirable. I-5 Beautification Corridor: protection of 25-foot landscaped buffer consistent with SNCP requirements. Natural Vegetation: loss of native vegetation other than mature trees, resulting in minimal impact to wildlife	Increase building setbacks from proposed 40-foot Bannon Slough Parkway. Maintain native vegetation along I-5 right-of-way and PG&E transmission line easement, and within proposed 40-foot Bannon Slough Parkway. Avoid or minimize development within the riparian woodland habitat lying outside proposed Bannon Slough Parkway.

Impact Category	Impact of Proposed Project, as Compared to No-Project Alternative	Mitigation Measures
Hydrology/Water Quality	Surface Water: increase in peak runoff flows of 1.4-5.2 cfs (6-50%); increase in nonpoint suspended solids of 2,600 lbs. per year (29%). Groundwater/Subsurface: risks from seepage conditions and high groundwater	Payment of one-time drainage fee. Implement measures to reduce nonpoint source pollutant loads. Implement engineering measures to protect against seepage and high groundwater.
Geology and Soils	Soils/Geologic Constraints: potential for soil erosion, expansive soils, subsidence, and liquefaction.	Implement standard construction practices to reduce erosion. Design structures to minimize soils and geologic hazards.
Biology	Fence Row Habitats: would be extensively modified or eliminated. Riparian Woodland Habitat: loss of 66% of Bannon Slough woodland present on-site caused by development; fragmentation of woodland habitat by east-west collector; threats to viability of retained mature trees; loss of woodland habitat other than trees within proposed 40-foot parkway.	Maintain native vegetation along I-5 and PG&E transmission line easement, and within proposed 40-foot Bannon Slough Parkway. Avoid or minimize development within the riparian woodland habitat lying outside proposed 40-foot Bannon Slough Parkway. Locate collector road crossing farther north where riparian woodland habitat is nonexistent or narrow. Avoid construction activities and irrigated landscaping within driplines of retained oak trees. Limit public access to areas of native woodland habitat.
Archeology	Archeologic Sites: site has low archeological sensitivity.	Participation of archeologists during construction.

Employment. The proposed project would create an estimated 3,960-5,280 direct and secondary jobs, of which an estimated 1,190-2,120 would be new jobs for the regional labor market. It would have no net effect on construction employment.

Public Services and Facilities. The proposed project would reduce most public services and facilities requirements. It would reduce police and fire protection needs, water demand, wastewater generation, park requirements, demands on South Natomas schools, and transit patronage. Although park demand would be reduced, the proposed project would result in a loss of $764,820 in developer contributions to South Natomas parks, and reduce the recreational attractiveness of the proposed Bannon Slough Parkway. The project would increase peak runoff flows reaching storm drains between 6 and 50 percent.

Fiscal Impacts. The project would result in a savings of $599,572 in capital (one-time) costs and $64,874 in annual operating costs.

Traffic and Circulation. Although the proposed project would increase trips generated from the site by 44 percent, no significant effects on roaday capacities or intersections are predicted from this added traffic.

Unavoidable and Irreversible Adverse Impacts Which Are Potentially Significant

Of the impacts listed in Exhibit C-1, the following impacts are considered to be potentially significant and either incapable of complete mitigation or irreversible in nature.

Land Use. The proposed project would eliminate 52 acres of residentially-designated land, thereby increasing demands for additional South Natomas office and high-density residential development. It would also create potential conflicts with residentially-designated parcels lying east and west of the project site.

Population, Housing and Employment. The project would simultaneously displace 911 dwelling units from South Natomas while adding an estimated 230-408 households and 570-1,020 residents to South Natomas which would need to be accommodated off site. This would increase South Natomas housing demand and prices, and increase growth pressures on surrounding communities.

Public Facilities and Services. The proposed project would reduce developer contributions to South Natomas parks by $764,820 and reduce the recreational attractiveness of the proposed Bannon Slough Parkway.

Aesthetics. The proposed project would require a visually-unappealing 6-foot wall at its western boundary, making residential use of the adjacent parcel less desirable. Both the proposed project and no-project alternative would reduce the visual attractiveness of the site by loss of native vegetation other than mature trees.

Biology. Although both the proposed project and the no-project alternative propose retention of existing mature trees on the site, both would result in losses and disturbance to the Bannon Slough riparian woodland habitat, reducing the existing high quality of the habitat; proposed mitigation measures can reduce, but are unlikely to completely eliminate this impact.

Short-Term Uses of the Environment versus Long-Term Productivity

Land Use. Both the proposed project and the no-project alternative would result in the loss of 52 acres of currently-productive agricultural land.

Air Quality and Noise. The project would produce minor long-term increases in community carbon monoxide and noise levels caused by increased traffic.

Energy. The proposed project would increase long-term energy use generated by the site by 8.5 percent.

Aesthetics. The proposed project would have long-term adverse impacts on site aesthetics through construction of the 6-foot wall at its western boundary and through removal of native vegetation.

Hydrology/Water Quality. The proposed project would create minor increases in peak runoff flows and nonpoint source pollutant loads.

Biology. The proposed project and the no-project alternative would both have long-term adverse impacts on the fence row habitats and Bannon Slough riparian woodland habitat. Without disturbance, the entire Bannon Slough area would eventually become a mature riparian woodland ecosystem.

Effects Found Not to Be Significant

In Initial Study. The City's Initial Study determined that a number of potential impacts of the proposed project were not significant. Refer to Appendix VIII for a listing of these impacts.

In Draft EIR. Of the proposed project's potentially significant impacts, the following impacts examined in this EIR were determined to be minor and not significant (see Exhibit C-1):

- impacts on public services and facilities other than recreation and open space
- fiscal impacts (determined to be beneficial)
- transportation impacts
- air quality impacts
- noise impacts
- energy impacts
- hydrology and water quality impacts
- geologic and soils impacts.

Section D

LAND USE

Setting

Existing and Planned Land Use and Zoning

Regional Land Use. The project site is located within the South Natomas community planning area. Historically a productive agricultural area, the South Natomas area experienced increasing development pressures in the late 1960s and 1970s, eventually leading to the preparation of the South Natomas Community Plan (SNCP) in 1978.

In the spring of 1977, 1,161 acres (26 percent) of the total South Natomas planning area of 4,540 acres were developed in urban uses. The SNCP ultimate development plan calls for primarily residential uses served by supporting commercial activities, schools, parks, and other public facilities. At ultimate development, 2,949 acres (65 percent) are proposed for residential use, 819 acres (18 percent) are proposed for open space use, 147 acres (3 percent) are proposed for schools, 131 acres (3 percent) are proposed for commercial or highway commercial use, 35 acres (1 percent) are proposed for office use, and the remaining 459 acres (10 percent) are proposed for other uses (industrial, freeways/streets, and Riverfront District).

Local Land Use. The existing land uses of the site and its immediate vicinity are shown in Exhibit D-1, an aerial photo taken in April 1981. The project site is currently in agricultural use, and no structures are present on the site. The site is currently zoned R-3R (PUD) (light density multiple family), R-2A (PUD) (garden apartments), and R-2B (PUD) (garden apartments).

As shown in Exhibit D-1, land in the site vicinity is either vacant or in residential use. Immediately to the west of the site, the Bennett parcel, covering about 5 net acres, is currently vacant, and zoned for agriculture. Immediately to the east of the site the Sammis parcel, covering about 82 acres is also currently vacant, and is zoned for residential and agricultural use. To the north of the site, across West El Camino, the Discovery Park apartments and Mill Creek single-family home subdivision have been completed. Land to the south of the site, across Garden Highway, is occupied by Discovery Park. Other parcels in the vicinity,

EXHIBIT D-1. EXISTING LAND USE IN VICINITY OF PROJECT SITE

but not contiguous to it, are also either in vacant or residential use. Most are zoned for either agricultural or residential use, with the exception of the southeast corner of West El Camino and Truxel, which is zoned for shopping center use.

The City Planning Department has a number of pending applications for South Natomas developments in the immediate vicinity of the project site. Specific projects have not been proposed for either the Bennett or Sammis properties contiguous to the site. Sammis Company applied in August 1981 for a subdivision of its 82-acre property into four parcels, and for rezoning of the property to establish consistency with the South Natomas Community Plan.

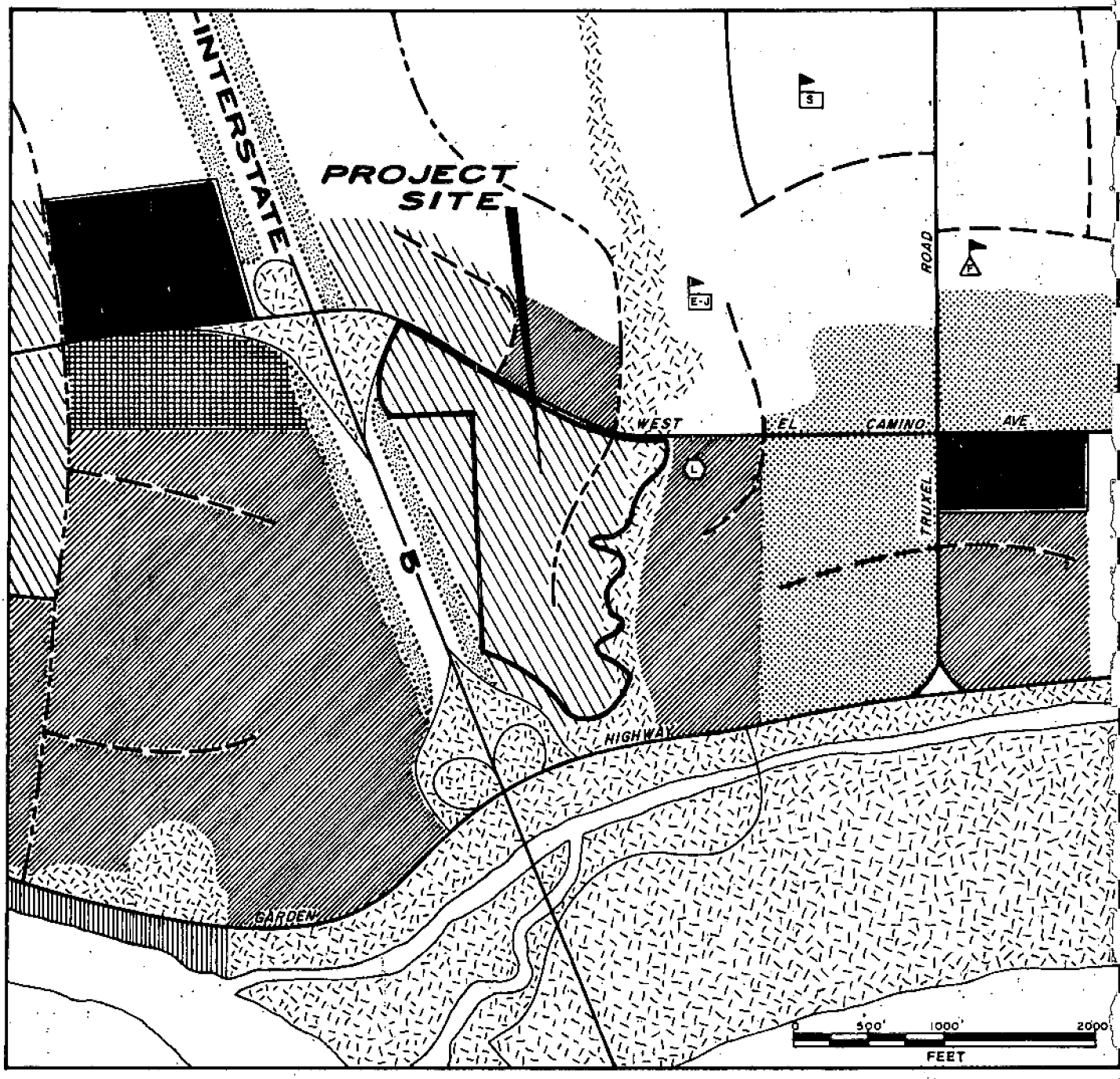
West of the project site, across I-5, the City has received applications for two business parks. Natomas Eastside, located northwest of the I-5/West El Camino interchange, proposes 137 acres of commercial/office use and 21 acres of residential use on an approximately 180 gross acre site. Gateway Centre, located southwest of the I-5/West El Camino interchange, proposes 85 acres of commercial/office use on an approximately 90 gross acre site. Together, the two projects would provide about 3.3 million square feet of office space. A separate EIR is being prepared for the two business parks.

East of the project site, across Truxel, the City has received two applications. A 9.5-acre shopping center has been proposed on the southeast corner of Truxel and West El Camino. East of the shopping center site, a 46-acre residential project called Delta Point has been tentatively approved, consisting of 384 single-family and 232 multiple-family units.

Land Use Plans and Policies

A number of City plans and policies affect the future land use of the site and its vicinity. The SNCP, a guide to the future growth and development of the South Natomas area, is the most important of these plans for purposes of project assessment. The basic goals of the SNCP are to provide urban development which is coordinated with public service provision, to protect the livability of existing development, to assure beneficial new development, and to harmonize the area's development and physical setting. The intent of the SNCP is to provide a residential neighborhood close to the Central Business District (CBD), with limited amounts of commercial and office space, to serve the needs of South Natomas residents.

The SNCP's goals and policies are embodied in the plan's future land use map. The map's future land use designations for the site and its vicinity are shown in Exhibit D-2. As shown, the site is designated as residential, with an average



-LEGEND-

- RESIDENTIAL - 4 THRU 21 UNITS/ACRE - 7AV*
- RESIDENTIAL - 4 THRU 21 UNITS/ACRE - 12 AV*
- RESIDENTIAL - 11 THRU 21 UNITS/ACRE
- RESIDENTIAL - 11 THRU 29 UNITS/ACRE - 22 AV*
- COMMERCIAL - SHOPPING CENTER
- BUSINESS AND PROFESSIONAL OFFICES
- PARKS - OPEN SPACE
- RIVERFRONT DISTRICT
- I-5 CORRIDOR
- E-J ELEMENTARY - JR. HIGH SCHOOL
- S SENIOR HIGH SCHOOL
- F FIRE STATION
- L LIBRARY
- MAJOR OR DIVIDED MAJOR STREET
- COLLECTOR STREET
- MINOR COLLECTOR STREET

* DENOTES OVERALL REQUIRED MINIMUM AVERAGE NET DENSITY

N

EXHIBIT D-2. SOUTH NATOMAS COMMUNITY PLAN LAND USE DESIGNATIONS

NOTE: Does not include amendments to SNCP from Natomas Oaks PUD.

minimum density of 22 units per acre. Most of the land within the vicinity of the site also is designated as residential, with the exceptions of commercial/office use west of I-5 and a shopping center on the southeast corner of West El Camino and Truxel.

Several other City plans also apply to the proposed project. These are the 1974 Sacramento General Plan, the 1980 Central City Plan, the 1975 American River Parkway Plan, and the 1980 Creekside Planned Unit Development (PUD) Schematic Land Use Plan.

Planning Approvals Required

In order to approve the project, the City would have to undertake three major actions. The General Plan and SNCP would need to be amended to change the land use designation of the site from residential to commercial/business and professional offices. The 1980 ordinance designating the Creekside PUD would need to be amended. Lastly, zoning of the site would need to be changed from residential to office building (O-B).

Impacts

Proposed Project

Regional Land Use Impacts. The project would change the SNCP's residential and office land use allocations. The SNCP allocates 2,949 acres for residential use, and the proposed project would reduce this amount by 52 acres, or 1.8 percent. The SNCP allocates 35 acres for office use, and the proposed project would increase this amount by 52 acres, or 149 percent.

In addition to these direct land use changes, the proposed project may have secondary effects on the South Natomas land use pattern. Approval of the project would constitute a precedent for allowing regional office park development east of I-5, and this precedent would be likely to increase demands for additional office or commercial uses on residentially-designated sites east of I-5. Also, if the City seeks to retain its goal of providing about 28,000 dwelling units in the South Natomas area, higher density housing would need to be provided on the remaining residentially-designated parcels. This would involve less emphasis on conventional detached single-family dwellings, and more emphasis on higher density half-plexes, townhouses, condominiums, and apartments. These demands for increased office/commercial development and higher-density residential projects would be intensified if the City approves the Natomas Eastside or Gateway Centre proposals west of I-5.

Local Land Use Impacts. The proposed project would create potential conflicts with the planned residential uses of the contiguous vacant parcels to the east and west of the site. The potential conflict is more serious with the Bennett parcel to the west. The City zoning ordinance (Section 3[d][7]) requires a 6-foot-high masonry or brick fence separating nonresidential uses from abutting residential uses. This wall, together with the required I-5 sound wall along the west side of the Bennett parcel, would create a "fortress" effect which would reduce the marketability of residential units on the Bennett property, thereby increasing the likelihood of a nonresidential project being proposed for the site. Aside from the "fortress" effect, the proposed project would create additional traffic on Azevedo, the street providing access to the Bennett Parcel; the increased traffic also would decrease the desirability of residential use of the Bennett property.

Potential conflicts with the Sammis property to the east are not as serious, since Bannon Slough would act as a buffer between the proposed project and a residential project to the east. The proposed project, however, would generate additional traffic on the proposed east-west local collector connecting the two parcels, thereby decreasing the desirability of residential use of the Sammis property.

Consistency with Land Use Plans and Policies.

South Natomas Community Plan. The proposed project would be inconsistent with the general intent of the SNCP to develop the South Natomas area as a residential community close to the CBD, as well as the SNCP's future land use map, which designates the site for residential use. The SNCP does not recommend regional-scale office developments in South Natomas because of the proximity of South Natomas to the CBD, and because of potential impacts on the transportation system.

The SNCP sets forth a number of specific goals, objectives, policies, and development criteria related to office developments. The consistency of the proposed project with these planning guidelines is summarized in Exhibit D-3. As shown by Exhibit D-3, the proposed project is not consistent with the SNCP's fundamental goals, objectives, and policies related to office development because it provides office space to serve regional rather than planning area needs. However, it is consistent or potentially consistent (depending on final site design) with the SNCP's more detailed development criteria for office developments in South Natomas.

Sacramento General Plan, Central City Community Plan, American River Parkway Plan, Creekside PUD Schematic Land Use Plan. Exhibit D-4 summarizes the consistency of the

Exhibit D-3

Consistency of Proposed Project with South Natomas Community Plan Goals, Objectives, Policies, and Development Criteria Related to Office Development

Goals and Objectives	Assessment of Consistency
Provide commercial and office districts of a size and location to adequately serve existing and anticipated future population of the community, consistent with adequate circulation and transportation facilities.	Not consistent: proposed office space is beyond that needed to serve South Natomas community needs.
Limit commercial and office development to neighborhood and community services and retail sales. Do not permit regional scale developments, especially those which compete with the downtown Sacramento CBD.	Not consistent: 52-acre project may be considered regional scale.
Design all business areas to reduce the potential for conflict with adjacent residential areas.	Not consistent: residential use of property to west impaired by required wall and increased traffic. Residential use of property to east impaired by increased traffic.
Policies	
Support the SNCP standards and locations for all types of future commercial and office development as shown on the plan map.	Not consistent: site not designated on plan map for office development.
Require the proponent of additional commercial and office development to clearly justify the demand to the satisfaction of the Planning Commission and City Council.	Not consistent: the proponent has not provided justification.
Development Criteria	
Buffer/screening provisions on those sides of the development contiguous to residential property.	Consistent: screening on the west would be achieved by a wall. Buffering on the east would be achieved by Bannon Slough and possibly a wall.
Limited ingress and egress onto streets.	Consistent: a single major access at West El Camino is provided.
Provisions which promote cross-site vehicular access between commercial activities rather than dependency on public streets.	Not applicable: since contiguous properties are designated for residential use.
Structures which are efficiently grouped and based on a common architectural theme in harmony with the surrounding area.	Potentially consistent: depending on final site design.
Adequate parking in areas which are carefully landscaped with trees and other vegetation. Parking space requirements are subject to the zoning ordinance.	Consistent: parking areas are landscaped. Parking spaces meet zoning ordinance requirements.
Provisions which facilitate the use of bicycles, walkways, and busses. These include bike racks and storage facilities, bus shelters, and benches.	Potentially consistent: depending on final site design.
Signs that are harmonious with the structures and conform to the City sign ordinance.	Potentially consistent: depending on final site design.
Increased landscaped setbacks along major streets, including the use of earthen berms.	Consistent: a landscaped setback from West El Camino is provided.
Service/trash areas that are not located adjacent to residential uses.	Potentially consistent: depending on final site design.

Exhibit D-4

Consistency of Proposed Project with General Plan, Central City Community Plan, and American River Parkway Plan Policies

Sacramento General Plan Policies	Assessment of Consistency
Support projects directed at retaining and improving the role of the CBD as the major retail trade and financial center for the region.	Consistent: a suburban office development would not compete with CBD for major retail or major financial tenants.
Prevent incompatible commercial development adjacent to the American River Parkway.	Consistent: Garden Highway would buffer the proposed project from the American River Parkway.
Central City Community Plan Goals	
Encourage development of adjacent areas in such a manner as to be compatible with developments in the Central City.	Potentially inconsistent: to the extent that the project impairs marketability of Central City office space.
Continue revitalization of the CBD as a major commercial center in the region.	Potentially inconsistent: to the extent that the project impairs marketability of Central City office space.
Encourage public and private office development, where compatible with the adjacent land uses and circulation system, in the CBD.	Potentially inconsistent: to the extent that the project impairs marketability of Central City office space.
Encourage full utilization of existing office areas in the Central City.	Potentially inconsistent: to the extent that the project impairs marketability of Central City office space.
Encourage coordination of City plans and programs based on the Central City Plan.	Potentially inconsistent: proposed SNCP amendment is potentially inconsistent with the above Central City Plan policies.
American River Parkway Plan Policies	
The City shall promulgate measures to mitigate or eliminate adverse impacts of uses adjacent to the Parkway which may affect the Parkway or other uses outside the Parkway.	Consistent: Garden Highway would buffer the project from the Parkway.
Creekside PUD Schematic Land Use Plan	
39-acre PUD created for residential project.	Not consistent: office uses not consistent with adopted PUD.

proposed project with a number of City plans in addition to the SNCP. As shown, the proposed project is consistent with Sacramento General Plan policies related to the CBD and the American River Parkway. The proposed project, however, is potentially inconsistent with a number of Central City Community Plan goals encouraging revitalization and expansion of the Central City as a commercial/office center. To the extent that the proposed project impairs the marketability of Central City office space, through either direct competition with the Central City or through creating a "drag" on the CBD office market, the project would be inconsistent with Central City Community Plan policies; these potential impacts on CBD office space are reviewed in further detail in Section B, PROJECT DESCRIPTION.

The proposed project is consistent with American River Parkway Plan policies regarding impacts of uses adjacent to the parkway, as shown in Exhibit D-4. Lastly, the proposed project is inconsistent with the 1980 Creekside PUD Schematic Land Use Plan, because the 39-acre PUD was established as a residential project.

No-Project Alternative

Regional Land Use Impacts. Under the no-project alternative, the SNCP's residential and office land use allocations would not change, and additional project-generated demands for office development and higher-density residential development in South Natomas would be avoided.

Local Land Use Impacts. Under the no-project alternative, potential conflicts with neighboring residentially-designated properties to the east and west would be less serious since a wall at the western boundary of the project site would not be required and less traffic would be generated.

Consistency with Land Use Plans. The no-project alternative would be consistent with SNCP policies encouraging a predominantly residential community, as well as the SNCP future land use map, which designates the site for residential use. The no-project alternative would generally be consistent with the applicable policies in a number of other City plans: the Sacramento General Plan, the Central City Community Plan, the American River Parkway Plan, and the Creekside PUD Schematic Land Use Plan.

Comparison

The proposed project would have a number of major land use impacts, compared to the no-project alternative: a 1.8 percent decrease in the SNCP's residential allocation and a 149 percent increase in the SNCP's office allocation; increased demands for additional office and higher-density residential development in South Natomas; potential conflicts with residential-designated properties to the east and west of the project site; and inconsistency with policies of the SNCP, Central City Community Plan, and Creekside Schematic PUD Land Use Plan. In comparison, the no-project alternative would avoid changes in the SNCP land use allocations; avoid increased demands for additional office space and higher-density development; reduce potential conflicts with contiguous parcels; and be consistent with existing land use policies.

Mitigation Measures

Increase Allowable Densities on Remaining South Natomas Residentially-Designated Parcels

To reduce the displacement of residential uses, densities for vacant residentially-designated parcels in South Natomas could be increased to provide 911 replacement dwelling units. According to Planning Department staff (Parker pers. comm.), as of mid-1981, the total amount of residentially-designated land in South Natomas for which subdivisions have not been approved is 889 acres, and this land could realistically accommodate 7,172 dwelling units. The average gross density of remaining residentially-designated land is thus 8.07 units per acre. If the 911 units displaced by the proposed project also were to be accommodated on this land, the average gross density would increase to 9.09 units per acre.

This measure would be effective in offsetting the displacement of residential uses, but may not be feasible since projects at densities higher than currently planned for may not be marketable. Also, higher-density residential development could create localized, site-specific adverse environmental impacts such as less open space and increased traffic, noise, and public facilities requirements.

According to the South Natomas Business Parks Draft EIR, South Natomas has basic limitations in sewerage capacity which could reduce the feasibility of increasing residential densities beyond those of the SNCP:

"Even under the current SNCP development scenario, South Natomas sewage collection systems on both sides of I-5 would be strained. Any additional urban intensification . . . would require construction of supplementary collector lines . . .

"Pump station capacity to the regional wastewater treatment plant is limited. Although a new pump station is being constructed in South Natomas to transport sewage to the regional treatment plant, it would barely have sufficient capacity for SNCP development, and would not have capacity to accommodate the [Natomas Eastside and Gateway Centre] projects plus housing density offset measures.

"A possible solution to South Natomas pump station limitations would be to expand the scope of a current design study effort to convert the existing North Natomas treatment plant to a pump station. An expanded scope-of-study could enable plans to be made to accommodate a portion of South Natomas sewage at the new North Natomas pump station, thereby eliminating pump station limitations in South Natomas. Study expansion could be funded by fair share developer contributions.

"On the other hand, in comparing sewer impacts of such density increases with current SNCP impacts, it should be noted that recent housing density adjustments from the SNCP to reflect actual development patterns (March 1981 city staff calculations) resulted in a greater increase in sewer demand than would the suggested density increases. This indicates that sewer improvements will probably also be needed with the current SNCP."

Require Increased Buffering of Contiguous Parcels to East and West

To reduce the proposed project's potential land use conflicts with contiguous parcels, increased setbacks and landscaped buffers could be required for residential projects proposed on the two parcels. Also, the City could require dwellings to be oriented away from the proposed project site to the extent feasible.

Require Applicant to Justify Office Demand

In conformance with SNCP policies, the applicant could be required to justify office demand in support of the project. The applicant also could be required to demonstrate that adverse effects on the marketability of Central City office space would not occur if the project is approved, through analysis of the specific tenant mix contemplated.

Implement a Mixed-Use Office/Residential Project

A mixed-use office/residential project could be designed for the project site. To the extent that residential uses are increased, the major land use impacts of the proposed project would be reduced.

Section E

POPULATION

Setting

Existing Population and Recent Trends

The 1980 populations of Sacramento County and City were 770,200 and 270,400, respectively, based on 1980 census data. The annual population growth rate in Sacramento County between 1970 and 1980 was approximately 2.2 percent. The unincorporated areas grew at a considerably higher annual rate (2.4 percent) than the City of Sacramento (0.8 percent).

The 1980 population of the South Natomas community is estimated to be 12,230 (Sacramento City Planning Department 1980). This represents an increase of roughly 4,000 persons over the 1975 estimated population of 8,500 (Sacramento City Planning Department, 1978). The annual growth rate in South Natomas between 1970 and 1975 was 2.7 percent, second highest of all Sacramento communities. For 1975-1980 the area had the highest annual growth rate (8.8 percent) of communities within the City (Sacramento City Planning Department 1981).

Projected Population

Sacramento County is projected to increase in population from 770,200 in 1980 to 816,000 in 1985 and 976,700 in the year 2000. The City of Sacramento is projected to grow from 270,400 in 1980 to 317,400 in 1985 (Sacramento City Planning Department 1981).

The South Natomas area is projected to capture an increasing percentage of the City's population, from 3 percent in 1975 to 9 percent by 1995 (Sacramento City Planning Department 1978). From 1980-1985 the projected South Natomas annual growth rate is 6.1 percent, the highest rate for communities within the City (Sacramento City Planning Department 1981). The SNCP projects the South Natomas population to increase from 12,500 in 1980 to 25,900 in 1985; 38,100 in 1995; and 68,600 in the year 2020. The 1980 City Housing Element projects a 1985 South Natomas population of 16,000, which is significantly lower than the SNCP 1985 projection of 25,900.

Impacts

Proposed Project

Direct Impacts. The proposed project would result in the displacement of 911 residential units. At an average of 2.5 persons per dwelling unit the potential population of the South Natomas area would be reduced by 2,277 persons. This would represent a reduction of 4.0 percent of the projected population increase of the community between 1980 and 2020.

Indirect Impacts. Two indirect impacts would occur as a result of development of the proposed project. First, a reduction in the projected growth of the South Natomas area would result in increased growth pressures on surrounding communities, including North Sacramento.

Second, the project would add a number of "new jobs" to Sacramento, resulting in additional population growth not accounted for in current plans (see Section G, EMPLOYMENT). The new direct and secondary jobs could result in an additional 2,130-3,780 residents added to the Sacramento population, using assumptions developed in the South Natomas Business Parks Draft EIR (See Exhibit E-1).

These new residents would be distributed throughout the Sacramento area. For population derived from direct employment, perhaps 30 percent of professional worker households and 20 percent of nonprofessional worker households could be expected to live in South Natomas; for population derived from secondary employment, predictions of residential location are more difficult, but the same assumption used for population derived from direct employment is not unreasonable (Sacramento City Planning Department 1981). Therefore, about 570-1,020 new residents generated by the project would live in South Natomas, assuming 27 percent of the project employees are professional.

No-Project Alternative

The no-project alternative would result in an additional 911 dwelling units in the South Natomas area. Based on an average of 2.5 persons per household, the no-project alternative would increase the population of South Natomas by 2,277 persons.

Table E-1. Potential Growth-Inducing Impact of Proposed Project

Item	Low Estimate (30% of Total Jobs = New Jobs)	High Estimate (40% of Total Jobs = New Jobs)
"New" direct jobs[1]	790	1,060
Total jobs (based on secondary job multiplier of 1.5-2.0)	1,190	2,120
New households (based on 1.4 jobs/household)	850	1,510
Additional population (based on 2.5 persons/household	2,130	3,780

[1]New jobs represent that portion of total jobs added to the labor market area; the remainder represent project-generated jobs shifting from other jobs that would have occurred elsewhere in the labor market without the project. The Exhibit assumes that between 30 and 40 percent of project-generated jobs are new jobs. This and other assumptions used for this Exhibit were developed in the South Natomas Business Parks Draft EIR (City of Sacramento Planning Department 1981).

Comparison

Compared to the no-project alternative, the proposed project would reduce the potential population of South Natomas by 2,277, which would increase growth pressures in surrounding communities. The proposed project would, however, add 2,130-3,780 residents to the Sacramento area because it would add a number of new jobs to Sacramento not accounted for in existing plans; of these, an estimated 570-1,020 would locate within South Natomas.

Mitigation Measures

Increase Allowable Densities on Remaining South Natomas Residentially-Designated Parcels

See LAND USE mitigation measures (Section D).

Section F

HOUSING

Setting

Existing Housing Conditions and Recent Trends

According to the 1980 census, the City of Sacramento had 114,700 households in 1980 located within 11 designated communities. The South Natomas and North Sacramento communities are both designated as "high growth" areas of the City, along with three other communities. Of the five growth areas, South Natomas had the fewest households in 1980 (4,600), and North Sacramento had the second highest number (13,300). As of mid-1981, 4,710 dwelling units had been constructed in South Natomas, with approximately 2,330 of these units built since 1976 (Sacramento City Planning Department 1981).

South Natomas has been experiencing a rapid pace in subdivision activity. In 1980, South Natomas received subdivision applications for 1,501 units, the second highest number in all Sacramento communities. North Sacramento experienced moderate activity, with applications for 298 units.

One indicator of the housing market condition is the dwelling unit vacancy rate. The City of Sacramento's overall vacancy rate for all housing units in 1978 was 2.3 percent. The 1979 survey of multiple family rental vacancy rates, prepared by the Sacramento HUD office, indicates that North Sacramento had the lowest vacancy rate at 1.7 percent, and South Natomas ranked fifth of all Sacramento communities, at 4.6 percent (Sacramento City Planning Department 1981).

New housing prices in South Natomas and North Sacramento are lower than most other growth areas in the City. A 1980 survey of housing prices in new subdivisions indicated a range of $51,950-$77,990 for South Natomas and $43,300-$48,800 for North Sacramento. These two communities also have relatively low rental prices. In 1979 for 3- and 4-bedroom units, South Natomas had the lowest median prices of Sacramento communities, $175 and $195 respectively, and North Sacramento had the third lowest median prices, $220 and $250 respectively (Sacramento City Planning Department 1981).

Housing Projections

The Sacramento City Housing Element projects the number of households in the City to increase to 129,100 by 1985. For South Natomas, the SNCP projects the number of dwelling units to increase to 9,562 in 1985; 14,111 in 1995; 25,407 by the year 2020; and 27,745 at plan build-out. Of the approximately 25,000 units projected for the year 2020, 13,000 are planned for medium to high density development and 12,000 for low density development.

The 1980 City Housing Element projects a more modest near-term growth in South Natomas housing units, from 4,600 in 1980 to 6,600 in 1985. North Sacramento is projected to grow from 13,300 units to 14,250 over the same period.

Impacts

Proposed Project

The proposed project would displace a total of 911 dwelling units. The effects of the project on local and community local housing supplies are shown in Exhibit F-1 below:

Exhibit F-1. Effect of Proposed Project on Local and Regional Housing Supply

	Percent Reduction of Dwelling Units		
	1980	1985	Build-Out
South Natomas	19.8	13.8[1]	3.3[2]
City of Sacramento	0.79	0.79[1]	-

[1] Based on Housing Element projections
[2] Based on SNCP projections

According to Planning Department staff (Parker pers. comm.), as of mid-1981, the total amount of residentially-designated land in South Natomas for which subdivisions had not been approved is 889 acres, with the proposed project (for which a PUD has been approved) included, this average increases to 941. The proposed office park of 52 acres would thus eliminate 5.5 percent of available South Natomas residential land.

Although the proposed project would displace 911 units, its development would likely also have growth-inducing impacts on Sacramento area housing. As shown in Exhibit E-1, the proposed project would add an estimated 850-1,510 new households to the Sacramento area, attributable to new direct and secondary employees generated by the project. Of these, an estimated 230-408 households would locate within South Natomas. The proposed project would thus increase the demand for housing in South Natomas, potentially increasing South Natomas housing prices and lessening the affordability of South Natomas housing for low and moderate income families.

The residential land loss caused by the proposed project could also affect the type and design of housing units. The loss of residential land could result in increased construction of moderate and high density housing, to offset the lost residential land.

No-Project Alternative

Development of the no-project alternative would be consistent with the residential land use designation for the site as designated in the SNCP. The policies of the SNCP require that all projects of 30 gross acres or more provide three or more housing types; this policy is also satisfied by the no-project alternative.

Implementation of the no-project alternative could increase the housing stock available in close proximity to the downtown employment area. Also, this increase in housing would likely increase the affordability of housing in the South Natomas community and the City of Sacramento. Both of these impacts are beneficial, because they are consistent with policies set forth in the SNCP.

Comparison

The proposed project would displace 911 dwelling units that otherwise would be constructed, eliminating 5.5 percent of available residential land in South Natomas. The proposed project would add 850-1,510 new households to Sacramento, of which an estimated 230-408 would locate in South Natomas, thereby increasing housing demand and prices in South Natomas. The no-project alternative would retain 911 units on the site, and would be consistent with SNCP policies regarding residential densities, housing mix, provision of housing close to the Central City, and housing affordability.

Mitigation Measures

Increase Allowable Densities on Remaining South Natomas Residentially-Designated Parcels

See LAND USE mitigation measures (Section D).

Implement Housing Element Measures to Increase Housing Affordability

The City's 1980 Housing Element sets forth a number of measures to increase housing affordability, including the recently adopted condominium conversion ordinance, establishing criteria for increasing residential densities, and exploration of methods for expanding the use of prefabricated housing and public write-down options to reduce housing costs. Implementation of these measures would help mitigate the proposed project's adverse impacts on South Natomas housing prices.

Section G

EMPLOYMENT

Setting

Sacramento Standard Metropolitan Statistical Area

The metropolitan Sacramento area has a broad employment base. Service industries (personal, business, health, and education) account for about 27 percent of the labor force, and state, county and City government account for an additional 25 percent of the Standard Metropolitan Statistical Area (SMSA) labor force (Sacramento City Planning Department 1981). Employment in manufacturing has been declining in recent years, whereas retail-related employment has continued to grow.

Unemployment rates for the Sacramento SMSA have been typically higher than national rates. In 1975, 1978, and 1980, the national unemployment rates average 7.2 percent, while for the same years Sacramento had an unemployment rate of 8.3 percent. Currently, the construction labor sector has the highest overall unemployment rate in the Sacramento area; it represents nearly 30 percent of all unemployed (Sacramento City Planning Department 1981).

South Natomas Area

Local employment in the South Natomas area is limited, consisting mainly of retail and commercial services. Agricultural employment in the area totaled 34 farm laborers in 1970 (Sacramento City Planning Department 1977). Unemployment in the South Natomas/Northgate-Gardenland area was 14.9 percent in 1980, compared with the national unemployment average of 7.2 percent (Sacramento City Planning Department 1981).

Impacts

Proposed Project

Permanent Employment. The proposed project would involve construction of 614,000 square feet of office space. Based on Office of Planning and Research (1978) estimates of 3.5-4.5 employees per 1,000 square feet of office space, between 2,149 to 2,763 permanent jobs would be created by the project.

An estimate of 4.3 jobs per 1,000 square feet of office space was used in the South Natomas Business Parks Draft EIR. Using this estimate, 2,640 jobs would be created by the project.

The firms most likely to locate in the proposed project would involve computer programming and data processing; administrative, clerical and research processing; and professional and business services. The project would tend to lower regional unemployment rates in these industries.

A number of indirect employment effects also would result from construction of the proposed project. They include jobs resulting from additional spending by newly employed wage earners throughout the region, and jobs resulting from the development of secondary business activity in support of the project. For every direct job, 0.5 to 1.0 indirect or secondary jobs can be expected (Sacramento City Planning Department 1981). Using the figure of 2,640 direct jobs, an additional 1,320 to 2,640 secondary jobs could be created, bringing the project's total possible employment impact to between 3,960 and 5,280 employees. Of this total, an estimated 1,190 to 2,120 would be "new" jobs for the Sacramento regional labor market (see Table E-1).

In 1980, an estimated 49,400 persons were unemployed in the Sacramento SMSA (Sacramento City Planning Department 1981). The "new jobs" created by the proposed project could reduce this total unemployment by 2.4 to 4.3 percent.

Construction Employment. The proposed project would provide temporary jobs for a large number of construction workers. As shown in Exhibit G-1, an estimated 1,030 person-years of construction employment would be generated. However, as shown by Exhibit G-1, the proposed project would have no net construction employment impacts because the no-project alternative would generate an equivalent amount of construction employment.

No-Project Alternative

The major employment impact from the implementation of the no-project alternative would be on the construction industry. As shown by Exhibit G-1, the no-project alternative would generate an estimated 1,049 person-years of construction employment.

Comparison

The proposed project would generate an estimated 2,640 direct jobs and 3,960-5,280 total jobs (direct plus secondary); of the latter, 1,190-2,120 would be "new" jobs for the Sacramento regional labor market. The no-project alternative would forego this beneficial employment impact.

Table G-1. Comparison of Construction Employment Impacts

	Proposed Project	No-Project Alternative
Estimated construction valuation ($)[1]	42,980,000	43,737,000
Estimated construction wages ($)[2]	25,788,000	26,242,300
Construction person-years[3]	1,030	1,049
Percent of 1985 Regional Construction Work Force[4]	2.5	2.6

[1]SOURCE: See Appendix I, Exhibit I-7. Construction valuation of $70 per square foot for proposed project and $48,010 per unit for no-project alternative assumed. Latter assumption based on 10 percent profit margin.

[2]Assumed to be 60 percent of construction valuation (Sacramento City Planning Department 1981).

[3]Based on average salary of $25,000 per year (Sacramento City Planning Department 1981).

[4]Based on 41,000-person construction work force projected by the state for Sacramento, Yolo, and Placer Counties (Sacramento City Planning Department 1981).

The proposed project and the no-project alternatives would both generate an equivalent amount of construction employment, slightly over 1,000 person-years. Both alternatives would help reduce currently high levels of construction industry unemployment, accounting for about 2.5 percent of the projected 1985 regional work force.

Mitigation Measures

Because the proposed project's employment impacts are beneficial, no mitigation measures are required.

Section H

PUBLIC FACILITIES AND SERVICES

Police Protection

Setting

The City of Sacramento Police Department is responsible for providing police protection from the downtown central station to the site. There are 512 sworn officers in the Sacramento Police Department, a ratio of approximately 1.85 per 1,000 population. The ratio has declined in recent years, since the number of officers has remained constant while the City's population has increased. The average response time of the City Police Department is 9 minutes over a 24-hour-day period.

Impacts

Proposed Project. According to Sacramento Police Department staff (Overton pers. comm.) the present staff is capable of providing protection to the site. The main function of the police in the proposed office park would be to patrol the area and respond to occasional crime incidents.

Concern was expressed that the crime potential of the site could be significant, given the proximity of low-income, high-crime neighborhoods to the east. The project's street layout does not encourage easy access to all parts of the site, and could result in an increase in response time.

No-Project Alternative. According to Sacramento Police Department staff (Overton pers. comm.) there would be sufficient staff capable of meeting the demands for police protection from the no-project alternative. The main function of the police in a residential project would be responses to crime, parking and circulation problems, and emergency calls.

Comparison. The Police Department is capable of providing adequate protection to either alternative. Since demands for police protection would be greater for the no-project alternative, compared to the proposed office park, the proposed project would have a minor beneficial impact in police protection services. Adequate access for both alternatives would be a problem.

Mitigation Measures

Provide Adequate Lighting. Adequate lighting would deter potential crimes.

Provide Additional Access to Site. The Police Department has suggested that there should be a direct route to the Bennett property from West El Camino, and that the proposed site should be connected directly to Garden Highway. These additional access points, however, would be situated close to the I-5/West El Camino and I-5/Garden Highway interchanges respectively, and therefore would cause potential circulation problems.

Fire Protection

Setting

The project area is currently served by two fire stations, one at Peralta and American Avenue in South Natomas, and the other at Arden Way and Del Paso Boulevard in North Sacramento. These service areas overlap and both stations respond to fires in South Natomas. The City of Sacramento Fire Station Master Plan proposes a relocation of the Peralta Avenue station to the vicinity of Newborough Road and Truxel Road. This new station should be completed by early 1982. The relocation is supported by the South Natomas Community Plan. Response time in the study area is currently greater than the City 3-minute average; however, when the new fire station is built, the response time will be reduced to the City average.

Impacts

Proposed Project. According to City Fire Department staff (Powell pers. comm.) the office park development would likely require a fire flow of approximately 4,500 gallons per minute (gpm). There is currently a problem in supplying this flow to the site. However, when the new 24-inch trunk line across the American River has been constructed (fall 1981), adequate fire flows would be available.

Access to the site for fire protection is inadequate, according to Fire Department staff. A second access has been recommended off West El Camino.

No-Project Alternative. The fire flow for residential developments averages 1,500 gpm, and existing waterlines can supply this flow to the site. The no-project alternative has fire protection access problems similar to the proposed project.

Comparison. Fire flow requirements are considerably greater for the proposed office park than for the no-project alternative, but because the new trunk main across the American River will be capable of providing adequate fire flows for the proposed project, impacts of the proposed project are considered minor. Adequate access for both alternatives is a problem.

Mitigation Measures

Provide Additional Access to Site. See police protection mitigation measure.

Water

Setting

Water is currently supplied to the project vicinity by a series of interconnecting wells. The City Division of Water and Sewers is in the process of constructing a 24-inch transmission water main crossing the American River, terminating at West El Camino. This main should be completed in fall 1981. It would supply water to the proposed project site.

Impacts

Proposed Project. The proposed project would have an estimated water demand of 78 acre-feet per year, assuming a unit water demand of 1.5 acre-feet per acre per year (Sacramento City Planning Department 1977). According to the City Water Division staff (Davis pers. comm.), present and planned facilities would be capable of meeting the water demands of the proposed project. The water mains internal to the site, financed by the developer, would probably be 8 or 10 inches to supply adequate water for fire protection.

No-Project Alternative. The no-project alternative would have an estimated water demand of 213 acre-feet per year, assuming a unit water demand of 4.1 acre-feet per acre per year for high-density residential development (Sacramento City Planning Department 1977). City staff envisions no problems in supplying water to a residential alternative. The water mains internal to the site, financed by the developer, probably would be 6 inches or 8 inches to supply adequate water for fire protection.

Comparison. Water demands of the no-project alternative would be 2.7 times greater than water demands of the proposed project. Since current and planned facilities are capable

of supplying water to the site for either alternative, beneficial impacts of the proposed project are considered minor. For the proposed project, larger water mains would be needed than for the no-project alternative due to increased fire flow requirements.

Mitigation Measures

None required.

Sewer

Setting

The proposed project would connect to the 10-inch public sewer on West El Camino, which connects to the Natomas treatment plant. The Natomas treatment plant is expected to provide sewage treatment for most of South Natomas until completion of the Natomas interceptor and regional treatment facilities in south Sacramento.

Impacts

Proposed Project. The proposed project would generate 79,200 gallons per day (GPD) of wastewater, assuming unit flows of 30 gallons per employee per day (OPR 1978). Existing and planned sewerage facilities are capable of accommodating this flow (Weisenburger pers. comm.). The applicant would be responsible for constructing local collector sewers, including a public sewer connecting to the vacant Bennett parcel west of the site.

No-Project Alternative. The no-project alternative would generate 125,235 GPD of wastewater, assuming unit flows of 55 gallons per capita per day for multifamily units (OPR 1978). Existing and planned sewerage facilities are capable of accommodating this flow (Weisenburger pers. comm.). The applicant would be responsible for constructing necessary local collector sewers.

Comparison. The proposed project would result in a 37 percent reduction in wastewater flows, as compared to the no-project alternative. Although existing and planned sewerage facilities can accommodate flows from either alternative, County Public Works staff has indicated concerns regarding the ability of downstream sewerage facilities to accommodate wastewater flows from the South Natomas Community Plan at build-out (Sacramento City Planning Department 1981). The reduction of wastewater flows resulting from the project is therefore considered a minor beneficial impact because it would increase the capacity of downstream sewerage facilities.

Mitigation Measures

Consult with County Public Works Water Quality Division. The applicant should consult with County Public Works staff regarding precise location of collector sewers serving the site.

Solid Waste Management

Setting

The City of Sacramento Garbage Department is required to collect putrescible wastes inside the city limit once a week. The City is required to service the site if it is developed as residential or if any food wastes are generated from the site (e.g., from a cafeteria). Paper wastes from an office complex could be collected by a private firm on an "as required" basis.

Impacts

Proposed Project. The proposed office park could use either the City of Sacramento Garbage Department or a private firm to collect the garbage. There are no problems in either case in supplying this service to the study area (Smilanish pers. comm.).

No-Project Alternative. The proposed no-project alternative would rely on the City of Sacramento Garbage Department to collect residential wastes. In the design of the residential project, it would be necessary to have a 36-inch clearance to the backyard if this was preferred to frontyard collection. Other services provided by the department include yard debris removal and street sweeping. According to Garbage Department staff (Smilanish pers. comm.), there would be no problem in providing the study area with these services.

Comparison. There would be no problems in providing adequate garbage collection for either alternative, and impacts of the proposed project on solid waste management are considered minor.

Mitigation Measures

None required.

Recreation and Open Space

Setting

A number of parks are within a 1.5-mile radius of the site, including Northgate, a community park; Ninos, a neighborhood park; and Discovery Park, a regional park.

Bannon Slough, designated as a parkway in the South Natomas Community Plan and presently in the acquisition stage, constitutes the eastern boundary of the project site. The portion of the slough adjacent to the site is a link in the overall development plan for the Bannon Slough Parkway. Stretching from the Garden Highway to San Juan Road, the comprehensive plan includes bikeways, open space, preservation of native oaks and wildlife habitats, picnic nodes, and major parks for use by the public. Once developed, the Bannon Slough Parkway would be the only safe off-street access to Discovery Park.

On the west side of the proposed site is part of the recommended I-5 "Beautification Corridor". This area is planned for permanent open space to improve the visual appearance along the freeway. Project impacts on the Beautification Corridor are discussed in Section N, AESTHETICS.

Impacts

Proposed Project.

Need for Park Acquisition. The proposed project would not directly generate the need for additional parks in South Natomas, although office workers do create some demand for recreation and open space, particularly during lunchtime (e.g., joggers, brown-baggers). The project would, however, result in the loss of developer contributions to South Natomas park development estimated to be $764,820; this would make acquisition of the parks called for in the SNCP financially more difficult. (See FISCAL IMPACTS section, Section I).

Bannon Slough Parkway. The proposed project would retain the 40-foot Bannon Slough Parkway envisioned by the SNCP, and the project applicant has indicated a willingness to include a bike route through the parkway or elsewhere on the site (see TRANSPORTATION section, Section J). The recreational attractiveness of the parkway, however, would be adversely affected by the scale of the neighboring office development and by the east-west collector road bisecting the parkway.

No-Project Alternative.

Need for Park Acquisition. The no-project residential alternative would generate a requirement of 12.14 acres of parks. This demand could be accommodated by the proposed Bannon Slough Parkway and by other South Natomas existing and planned parks.

Bannon Slough Parkway. The no-project alternative also retains a 40-foot Bannon Slough Parkway and bicycle trail. The scale of a residential project would be compatible with the adjacent proposed parkway. The parkway's recreational attractiveness would be reduced by the bisecting east-west collector road.

Comparison. The proposed project would eliminate the demand for 12.14 acres of parks generated by the no-project alternative, but would also eliminate an estimated $764,820 in developer contributions to development of South Natomas parks, a major adverse impact. Both projects retain the 40-foot Bannon Creek Parkway called for in the SNCP. The proposed project's scale would reduce the parkway's recreational attractiveness, which also would be reduced by the east-west collector road included in both alternatives; these are considered major adverse impacts.

Mitigation Measures

Increase Building Setbacks from Proposed 40-Foot Bannon Slough Parkway. Although most project office buildings are setback from the proposed parkway at least 5 feet (the minimum setback recommended by the SNCP), portions of some buildings shown on the site plan have no setback from the parkway, causing visual encroachment. The site plan could be revised to provide a uniform 5-foot minimum setback for all office buildings.

Eliminate East-West Collector Road from Site Plan. This measure would maintain Bannon Slough Parkway as an uninterrupted linear recreational corridor. It is probably not feasible, however, because the collector road is required to provide sufficient east-west access to the site and the neighboring Bennett parcel to the west. Elimination of the collector road also would cause further congestion at the West El Camino Avenue/Azevedo Drive intersection.

Schools

Setting

Children between kindergarten and 8th grade living in the project area would attend either Natomas School or American Lake School in the Natomas Union District. Natomas School

has six classrooms available, with a loading capacity for each class of 28. The American Lake School has seven classrooms available; it is currently (fall 1981) adding an additional five classrooms and, in January 1982, a new permanent school will be completed on the American Lake School site. Children between the 9th and 12th grades living in the project area would attend Norte Del Rio or Rio Linda Schools in the Grant Joint Union High School District.

Impacts

Proposed Project. The proposed project would have no direct impact on the present school system. If the employees of the office park move their residences to South Natomas this could indirectly influence the number of children attending area schools.

No-Project Alternative. The no-project alternative calls for 911 residential units. Using the 0.26 student/household ratio currently used in South Natomas, the no-project alternative would add 237 students to the area school system, 137 in grades kindergarten to 8th and 100 in grades 9th to 12th. According to Natomas Union District staff (Cross pers. comm.) and the Grant Joint Union High School District (Matlock pers. comm.), schools serving the study area would have sufficient capacity to accommodate this increase, once the new school is constructed on the American Lake School site.

Comparison. The proposed project would reduce demands on community school requirements, compared to the no-project alternative, and this is considered a minor beneficial impact.

Mitigation Measures

None required.

Transit

Setting

The Regional Transit District of Sacramento (RT) would provide transit service to the project site. Bus route 14 runs along West El Camino past the project site, providing rush-hour service to downtown Sacramento every 30 minutes and nonrush-hour service every 60 minutes. A new route, 86-87, which started in June 1981 as a trial service for a year, runs along West El Camino past the project site, and also provides primarily rush-hour service to downtown Sacramento. The new line was provided as part of an experiment to increase public transit service to the rapidly

developing South Natomas residential community. After 1 year of operation this new line will be reviewed to determine the feasibility of permanent service (Martin pers. comm.).

Impacts

Proposed Project. Existing bus lines have the capacity to serve the needs of the project. Peak use of bus service will be during the morning and evening rush hours. RT has indicated concern that conversion of South Natomas residentially-designated lands to office use would create a land use pattern less amenable to efficient transit service. Discretionary transit trips in Sacramento are primarily made between residental areas and downtown, and it is less likely that transit would be used for a work trip to the proposed project since South Natomas would be served by only one or two lines (Sacramento City Planning Department 1981).

No-Project Alternative. Existing bus lines also have the capacity to serve the needs of the no-project alternative. Peak use of bus service also would be during morning and evening rush hours. The no-project alternative would generate greater commuter transit patronage than would the proposed project.

Comparison. The proposed project would create a land use pattern less amenable to efficient transit service. Because less transit patronage would result under the proposed project, the continuation of the experimental route 86-87 would be less financially feasible. Adverse impacts of the proposed project on transit service are considered minor.

Mitigation Measures

Provide Designated Bus Turnout on the South Side of West El Camino at Azevedo. As suggested by RT, the turnout should preferably be on the far side of the West El Camino/Azevedo intersection. Buses should be able to stop entirely out of the travel lane.

Provide and Maintain a Bus Shelter or Covered Waiting Area for the Above Bus Stop. RT recommends that maintenance of the shelter be the responsibility of the property owner.

Provide Walkways Throughout the Project Connecting Directly to the Bus Stop. RT also suggests that building accesses be oriented toward the bus stop and walkways, and that office buildings be clustered near the street.

Drainage

Setting

The project site is located within the Natomas Area Storm and Sanitary Sewer Assessment District, administered by the City of Sacramento. Drainage from the project site is collected by a storm drain trunk line which eventually connects to the East Drainage Canal near the I-5/I-880 intersection. Runoff collected in the East Drainage Canal flows to the Natomas Main Drainage Canal, which is operated and maintained by Reclamation District 1000. At the south end of the canal, flows are pumped into the Sacramento River by pumping plants 1A and 1B, with a combined capacity of 871 cubic feet per second (cfs).

Impacts

Proposed Project. Based on City design criteria of 0.3 cfs per acre for commercial-industrial land uses, the proposed project would generate an estimated peak runoff flow of 15.6 cfs. This represents the local drainage from the site that must be handled by City storm drains. This is a significant increase over current runoff from the site, caused by introduction of impervious surfaces.

Reclamation District 1000 has its own design criteria for the canals and pumping stations that serve the Natomas area on a regional basis. The district predicts a total of 24.44 cfs from a 100-year storm that would have to be handled by its canals and pumping stations (Betts pers. comm.). The district further indicates that this represents an increase of 11.44 cfs above 13.0 cfs, the amount that would be generated by low-density residential development.

No-Project Alternative. Based on City design criteria of 0.2 cfs per acre for residential land uses, the no-project alternative would generate a peak runoff flow of 10.4 cfs, also representing a significant increase over current site runoff. Reclamation District 1000 indicates that the current SNCP residential density would result in 23.0 cfs, an increase of 10 cfs above 13.0 cfs, the amount that would be generated by low-density residential development.

Comparison. The proposed project would generate local storm runoff flows 50 percent higher than under the no-project alternative, based on City design criteria. Reclamation District 1000 staff (Betts pers. comm.) has indicated that the project would generate only 1.44 cfs, or 6 percent more, than the no-project alternative. Using either estimate, the absolute increases in runoff are relatively small, and considered to be a minor adverse impact.

In order to accommodate increased runoff from the proposed project, the district would have to add pumping capacity to its existing system and charge the developer a one-time drainage fee. This fee would be based on a comparison of project or no-project alternative conditions to favor low-density residential land uses. Fees would be required in either case, although the amounts would differ.

Mitigation Measures

Payment of One-Time Drainage Fee. Reclamation District 1000 will require the developer to pay a one-time drainage fee before it will approve the proposed rezoning. The district has estimated this fee to be $57,200 for the project, and $50,000 for the no-project alternative (Betts pers. comm.).

Section I

FISCAL IMPACTS

Setting

Fiscal Year 1981-1982 Budget

The fiscal outlook of the City of Sacramento is reviewed in detail in Appendix I. Highlights of the City's preliminary fiscal year 1981-1982 budget of $149,519,000 are as follows:

- Overall 2.1 percent increase over fiscal year 1980-1981 final budget.
- No new programs or services proposed.
- Staffing in police and fire departments held at current levels.
- Slight reduction in general government appropriations.
- Fee increases for several enterprise funds (waste removal, sewers, parking) to maintain their self-supporting status.
- Annual tax override proposed to collect $850,000 to pay for 1965 Citywide drainage bonds.
- Loss of approximately $2.8 million in state bailout assistance.
- A new City Department of General Services is created.
- Elimination of contributions to community-based organizations is proposed.
- 73 percent of general revenue-sharing funds from the federal government will be used for operating expenses.
- The Capital Improvement Budget totalling $14 million has been raised by $1 million to provide for a communications center and a new fire station in the Natomas area.

Public Service Responsibilities

A number of City departments and special districts would be responsible for providing public services to the proposed project. These agencies and their funding sources are shown in Exhibit I-1.

Exhibit I-1. Agency Responsibility and Source of Funds for Public Service Delivery[1]

Municipal Function and Services	City or District Responsibility	Source of Funds	
		Capital Improvements	Operating and Maintenance
PUBLIC SAFETY			
- Police	Police Department	Governmental	Governmental
- Fire	Fire Department	Governmental	Governmental
PUBLIC WORKS			
- Streets and Lights	City Engineer Department	Governmental Developer	Governmental
- Water	City Engineer Department	Developer	Fee
- Sewer	City Engineer Department	Developer	Fee
- Waste Removal	City Engineer Department	Fee	Fee
COMMUNITY SERVICES			
- Park	Community Services Department	Governmental Developer	Governmental
LIBRARY AND CULTURE			
- Library	Library Department	Governmental	Governmental
DISTRICT SERVICES			
- Schools	Natomas Union District	State Building Fund	State Subventions
	Grant Joint Union High School District	State Building Fund	State Subventions
- Public Transit	Regional Transit District	Federal Funds (UMTA) Local Funds	Box Fares; City, County, State and Federal Funds
- Drainage	Reclamation District 1000	Developer	Assessment Distri

[1]Based on Fiscal Year 1981-1982 preliminary budget. Source of funds for some municipal functions can vary from year to year.

Impacts

Assumptions and Methods

The objective of the fiscal impact assessment conducted for this EIR was to compare the difference in fiscal impact between implementation of the proposed Creekside office park project and implementation of the no-project residential alternative. The detailed methods and results of the fiscal impact assessment are presented in Appendix I.

A number of key assumptions were made. First, only direct impacts were considered. No secondary effects, such as additional revenues resulting from increases in value of adjacent property, were considered.

Second, estimates of costs and revenues were based on current conditions and are represented in 1981 dollars; that is, the projects were evaluated as if they were completed and operating today. Although it is recognized that costs will increase over the years because of inflation, it was assumed that inflationary increases in costs and revenues will be proportional.

Third, only local public costs and revenues were considered. Although the analysis identifies the responsible entity for all public improvement and operating costs, only the costs which would be paid for by local taxpayers were considered. Because some municipal agencies operate as self-supporting enterprise entities (e.g., water, sewer, and waste removal) different project demands on these services will not affect the local taxpayer. Therefore, the difference in service demands for these services was not considered to have a fiscal effect on the City.

Because of special funding conditions for the school districts, Regional Transit District, and Reclamation District 1000 (which provides drainage services), these entities were evaluated independently from municipal services.

Most of the cost and revenue information for this analysis was obtained through interviews with local public officials. For some estimates, however, data from other fiscal studies prepared for the City of Sacramento were relied upon.

Municipal Public Service Expenditures

Implementation of either of the two project alternatives would result in additional expenditures by municipal agencies and local districts. These expenditures include both one-time capital improvement expenditures and recurring annual operating and maintenance costs.

Exhibit I-2 is a summary of the cost effect of implementing the proposed project. As shown, for municipal services, the proposed project would result in a one-time capital cost saving of $327,780, attributable to reduced parks development expenditures, and an annual operation and maintenance cost saving of $73,560, attributable to reduced expenditures for police and parks services.

Net Effect on Special Districts

Exhibit I-3 is a summary of the net fiscal effect of implementing the proposed project on school districts, Regional Transit, and Reclamation District 1000. With the possible exception of the Natomas Union School District, the proposed project would have no net fiscal effect on any of these districts, either because they rely primarily on nonlocal funding sources (school districts, Regional Transit), or because increased revenues would offset increased costs (Reclamation District 1000).

Public Revenue Generation

Sources of revenue affected by the two alternatives include one-time taxes and fees, and annual revenue sources. Exhibit I-4 is a summary of the proposed project's impact on public revenue generation.

As shown by Exhibit I-4, the one-time revenues generated from implementation of the proposed project exceed the one-time revenues from the no-project alternative by $271,792, primarily attributable to increases in the building permit fee and construction excise tax. Annual revenues from implementation of the proposed project, however, are estimated to be $8,686 less than the annual revenues generated from the no-project alternative. This is primarily because the proposed project does not generate any additional revenues from population-based state subventions.

Summary of Impacts

The estimated fiscal effect on the City from implementation of the proposed project is shown in Exhibit I-5. As presented, municipal costs, both one-time capital costs and annual operating costs, are projected to be lower as a result of implementation of the proposed project. Also, implementation of the proposed project would result in an additional $271,792 in one-time revenues. Annual revenues from implementation of the proposed project, however, are projected

Exhibit I-2. Comparison of Impacts on Municipal Services and Cost Effect from Implementation of Proposed Project

Municipal Services	Comparison of Impacts: Proposed Project	Comparison of Impacts: No-Project Alternative	Difference in Impact as a Result of Implementation of Proposed Project	Cost Effect from Implementation of Proposed Project: One-Time Capital Cost	Cost Effect from Implementation of Proposed Project: Annual Operation and Maintenance Costs
Police Protection	Increase demand for traffic control	Increase demand for service calls	Reduction of 1 sworn officer	No effect	-$25,000
Fire Protection	Require fire flow of 4,500 gpm contribute to need for new fire station	Require fire flow of 1,500 gpm contribute to need for new fire station	Increase fire flow requirements by 3,000 gpm	No effect	No effect
Streets & Lights	Increase use of roadways and need for street maintenance	Increase use of roadways and need for street maintenance	Increase slightly need for street maintenance	No effect	Minor effect - not quantifiable
Water	Total consumption - 78-acre-feet per year	Total consumption - 213-acre-feet per year	Reduction of 135 acre-feet per year	No effect	No effect
Sewer	Generate 79,200 gallons/day	Generate 125,235 gallons/day	Reduction of 46,035 gallons/day	No effect	No effect
Waste Removal	Require pick-up and disposal of additional solid wastes	Require pick-up and disposal of additional solid wastes	Similar to no-project alternative	No effect	No effect
Parks	No significant impact since no additional demands on parks and recreational facilities would be generated	Require acquisition, development and maintenance of 12.14 acres of new parks	Eliminate need to acquire, develop, and maintain 11.35 acres of new parks	-327,780	-48,560
Library	Increase need for library services	Increase need for library services	Similar to no-project alternative	No effect	No effect
Total Cost Effect on Municipal Services from Implementation of Proposed Project				-327,780	-73,560
District Services					
Schools	No impact	Increase enrollment by 137 students in Natomas Union School District Increase enrollment by 100 students in Grant Joint Union High School District	Decrease enrollment in local school districts by 237 students	See Exhibit I-3	See Exhibit I-3
Regional Transit	Some increase in ridership demand	Increase ridership demand	Decrease in daily ridership demand	See Exhibit I-3	See Exhibit I-3
Drainage	Increase storm runoff pumping requirements by 11.44 cfs	Increase storm runoff pumping requirements by 10 cfs	Increase storm runoff pumping requirements by 1.44 cfs	See Exhibit I-3	See Exhibit I-3

Exhibit I-3. Fiscal Effect on Districts From Implementation of Proposed Project

	Revenues	Costs		Net Effect
		One-Time Capital	Operating	
Schools				
-Natomas Union School District	Decreased state funds to district by approximately $1,600 per student annually or $219,200	If permanent facility is not available, would eliminate need for lease of 9 new temporary classrooms at $2,000 per unit; if permanent facility is available, no effect	Would increase operating costs per student	If permanent facility is not available, would eliminate cost of $18,000; if permanent facility is available, no net effect
-Grant Joint Union High School District	Decreased state funds to district by approximately $2,000 per student annually, or $200,000	No effect	Would increase operating costs per student	Because of dependence on state funding, no net effect
Sacramento Regional Transit District	Decrease fare box revenues slightly	No effect	No effect	Because of primary dependence on external sources of funding, no significant effect
Reclamation District 1000	Increase one-time revenues by approximately $7,000	$7,000 capital investment in pumping capacity	No effect	No net effect

Exhibit I-4. Comparison of Project Impact on Public Revenue Generation

Revenue Source	Proposed Project ($)	No-Project Alternative ($)	Revenue Difference From Implementation of Proposed Project ($)
One-Time Taxes & Fees			
- Building Permit Fee	105,480[1]	63,900[2]	+ 41,580
- Construction Excise Tax	429,800	155,000	+274,800
- Sewer Connection Fee	57,240	103,320	- 46,080
- Seismic Motion Instrumentation Fee	2,578	1,086	+ 1,492
TOTAL ONE-TIME TAXES & FEES	595,098	323,306[3]	+271,792
Annual Taxes & Fees			
- Property Tax	Total $564,880[4] Local Share (33%) = 186,410	Total $485,950 Local Share (33%) = 160,363	+ 26,047
- Subventions			
• State	No effect	30,588	- 30,588
• Federal	No effect	No effect	-
- Utility User Tax[5]	12,894	14,490	- 1,596
- Property Turnover Tax	21,746	24,295	- 2,549
TOTAL ANNUAL TAXES & FEES	221,050	229,736	- 8,686

[1]Based on 40 buildings at an average of 15,350 square feet per building and an average permit cost of $2,637 per building. Construction cost = $70 per square foot.

[2]Based on 71 buildings at an average of 12,148 square feet per building and an average permit cost of $900 per building. Construction cost = $18 per square foot.

[3]Does not include recreational development tax revenues and in lieu fees from parkland dedication ordinance which have been included in calculating the City's cost for acquisition and development of required new parks.

[4]Market value based on $92 per square foot.

[5]Based on cost per square foot per year for an all-electric source with heat pump: residential = $.336 per square foot per year; nonresidential = $.42 per square foot per year. Estimates provided by SMUD.

Exhibit I-5. Estimated Difference in Municipal Costs and Revenues From Implementation of the Proposed Project

	Difference From Implementation of the Proposed Project ($)
Capital (One-Time)	
Savings in Capital Costs	+327,780
Revenues	+271,792
NET	+599,572
Operating (Ongoing)	
Savings in Operating Costs	+ 73,560
Revenues	- 8,686
NET	+ 64,874

to be $8,686 less than the no-project alternative. This is primarily due to the increase in population-based state subventions which would result from implementation of the no-project alternative. This revenue differential, however, is likely to be reduced as state subventions are reduced in the future.

The cost and revenue projections in this analysis are considered reasonable estimates of the differences likely to result from implementation of the proposed project. Because no attempt has been made to estimate all project costs and revenues, these estimates should not be used to evaluate the total fiscal effect from implementation of the proposed project. Because the intent of this analysis has been to provide a relative comparison of the fiscal effect of the project alternatives, cost and revenue estimates have only been calculated where differences in public improvements, service demands, and revenue generation can be expected to have some local fiscal effect.

Changes in the structure of local public finance and public service delivery are expected to occur. As a result, any assessment of project impacts on existing fiscal conditions is likely to become rapidly outdated.

Mitigation Measures

Because the net fiscal impact of the proposed project would be beneficial, no mitigation measures are required. Mitigation measures related to the delivery of individual public services have been presented in the PUBLIC SERVICES AND FACILITIES section (Section H), and the TRANSPORTATION section (Section J).

Section J

TRANSPORTATION

Setting

Traffic and Circulation

Existing Roadway System. Regional access to the South Natomas area is provided by two major freeways, Interstates 880 and 5. Three major arterials, El Camino Avenue, Garden Highway, and Northgate Boulevard, also provide regional access. Interstate 5 is eight lanes wide south of I-880 and six lanes wide to the north. I-880 is six lanes wide. The major arterials are currently two lanes wide in the South Natomas area.

Planned Roadway Improvements. Under the circulation system proposed to implement the South Natomas Community Plan (SNCP), the arterials will be widened and new collector streets will be constructed. The following projects are called for in the SNCP circulation system, and are assumed as a base case (setting) for the traffic impact analysis in this section:

- Widen El Camino Avenue from two to four lanes with turn pockets at intersections (120-foot right-of-way) and bicycle lanes.
- Widen Garden Highway from two to four lanes with turn pockets at intersections (74-foot right-of-way) and bicycle lanes.
- Widen the balance of Truxel Road to four lanes with turn pockets at intersections and bicycle lanes.
- Signalize the intersections of El Camino Avenue and Truxel Road; Garden Highway and Truxel Road; and the I-5 offramp to West El Camino Avenue.

Base Case Traffic Conditions. The base case used for assessing proposed project impacts consists of future traffic conditions that would result with build-out of the SNCP. Directional a.m. and p.m. peak-hour traffic volumes under the base case are shown in Exhibits J-1 and J-2. The general traffic pattern shown indicates movement away from the project site at the morning peak and toward the project site at the evening peak.

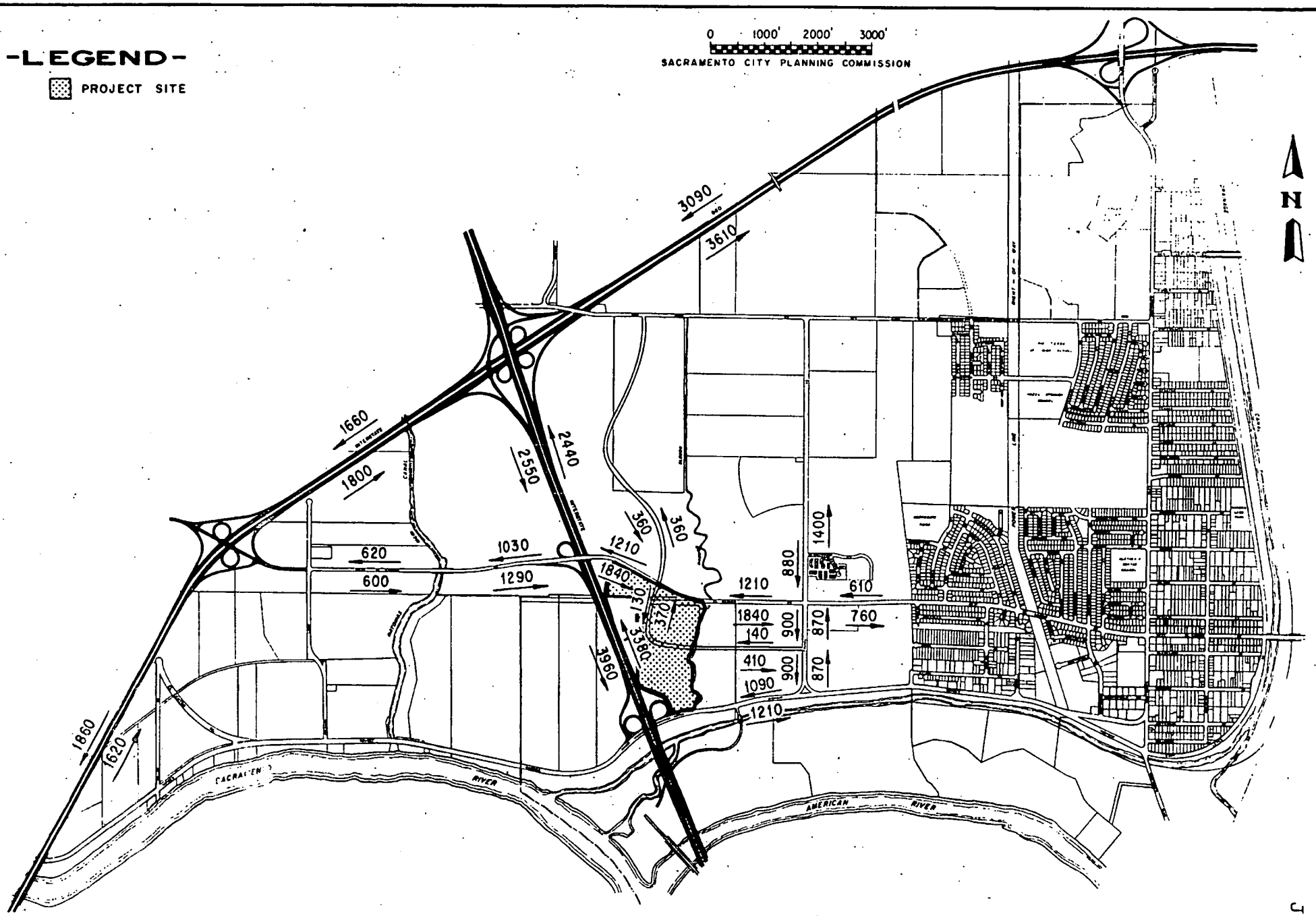


EXHIBIT J-1. AM PEAK HOUR TRAFFIC VOLUMES: BASE CASE (SNCP)

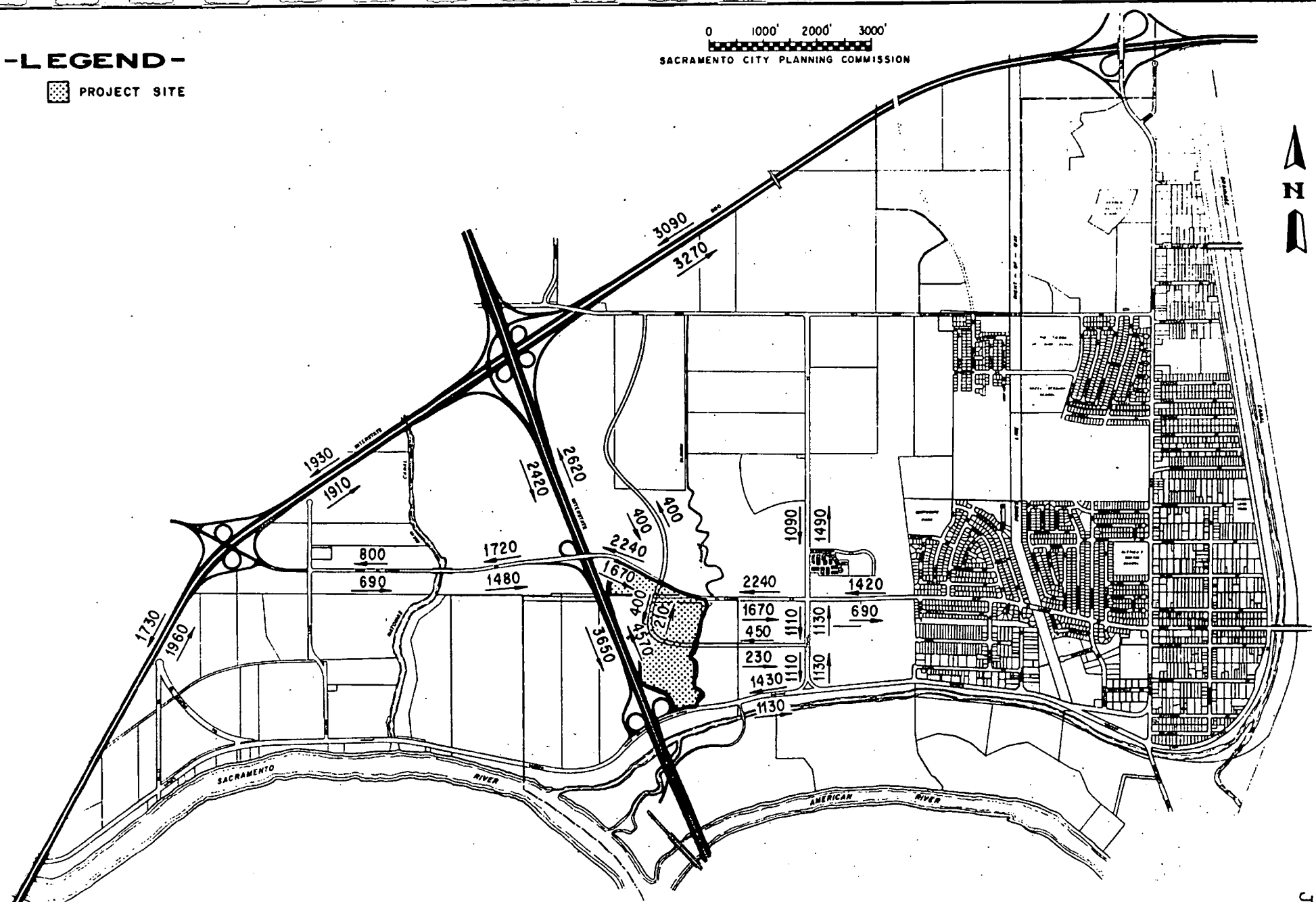


EXHIBIT J-2. PM PEAK HOUR TRAFFIC VOLUMES: BASE CASE (SNCP)

J3

Methods and assumptions used to generate Exhibits J-1 and J-2 are discussed in Appendix II. The base case volumes are derived from a variety of sources, and are not based on a single firm foundation, but represent a reasonable background against which the proposed project can be evaluated.

Transit Service. Sacramento Regional Transit District provides transit service to the project site via routes 14 and 86/87. These routes, as well as potential impacts of the proposed project on transit service, are discussed in Section H (PUBLIC FACILITIES AND SERVICES).

Bicycle Access

Major existing east-west bicycle routes in the vicinity of the project site are located along Garden Highway and along the American River Parkway; the latter bicycle route provides access to downtown Sacramento. North-south routes in the vicinity of the site have not been developed to date; bicyclists must currently use Truxel Road for north-south trips. The City Bikeway Master Plan calls for bicycle routes along Northgate Boulevard, Truxel Road, San Juan Road, West El Camino Avenue, and Natomas Oaks Drive, in addition to the existing routes along Garden Highway and American River Parkway.

The SNCP calls for a north-south bicycle path along Bannon Slough from San Juan Road to the north to Garden Highway to the south. Construction of this path, part of which could run through the proposed project site, has not been initiated.

Impacts

Proposed Project

Traffic and Circulation.

Trip Generation and Vehicle Miles Travelled. Impacts of the proposed project on trip generation and vehicle miles travelled are shown in Exhibit J-3. The proposed project would generate 9,200 trips per day, 44 percent more than the no-project alternative, and 71,380 vehicle miles travelled per day, also 44 percent more than the no-project alternative.

Exhibit J-3. Trip Distribution and Comparison of Vehicle Miles Travelled

Origin-Destination Area and Access Route	Average Miles Travelled	Percentage of Project-Generated Trips[1]	Vehicle Trips per Day Generated by Development of Project Site[2]		Daily Vehicle Miles Travelled Generated by Development of Project Site	
			No-Project Alternative	Proposed Project	No-Project Alternative	Proposed Project
West (I-880)	15	5	320	460	4,790	6,920
South/Southeast (I-5)	9	45	960	1,380	8,610	12,440
East (Northgate, etc.)	6	15	2,870	4,140	17,220	24,860
North/Northeast (I-5, Northgate, etc.)	11	25	1,590	2,300	17,530	25,320
Internal	2	10	640	920	1,280	1,840
TOTALS		100	6,380	9,200	49,430	71,380
Net Change			+2,833		+21,950	

[1]Based on South Natomas Community Plan.

[2]Based on 7 trips per dwelling unit per day for no-project alternative and 15 trips per 1,000 square feet office space per day for proposed project (Sacramento City Planning Department 1981).

SOURCE: Jones & Stokes Associates, Inc.

Peak-Hour Traffic Levels. Exhibits J-4 and J-5 indicate changes in a.m. and p.m. peak-hour traffic levels that would result from implementing the proposed project. Peak-hour traffic impacts of the proposed project were estimated by determining differences between the traffic generated by the proposed project and the no-project alternative; assigning those traffic increments to specific routings; and adding or subtracting the increments from the base case volumes on each route.

Should a mixed residential/office project be considered, its traffic impacts can be roughly estimated by changing the increments shown in parentheses in Exhibits J-4 and J-5. For example, if a half residential/half office project were considered, the increments shown in Exhibits J-4 and J-5 should be divided in half and the total traffic volumes increased or decreased accordingly.

Roadway Capacity. As can be seen from Exhibits J-4 and J-5, proposed project traffic impacts are less than 5 percent in magnitude, except in the immediate vicinity of the project site. Under the proposed project, morning peak hour traffic away from the project site decreases, while morning traffic coming to the project site increases, with the increases more than offsetting the decreases (Exhibit J-4). The reverse of this directional pattern is seen in the evening, with increases also exceeding decreases (Exhibit J-5).

A comparison of the volumes indicated in Exhibits J-4 and J-5 with theoretical roadway capacities of about 1,800 vehicles per lane per hour indicates that project-generated traffic increases would create no capacity problems on roadway links between intersections or on freeways.

Intersection Capacities and Levels of Service. Exhibit J-6 indicates the effect of the proposed project on intersection capacities. As shown, the proposed project would have a minor impact on intersection capacities, affecting the p.m. peak hour capacities of critical intersections by 2 percent or less. Methods and assumptions for the intersection analysis are described in Appendix II.

Levels of service for critical intersections also are indicated in Exhibit J-6. Levels of service are defined in Exhibit J-7; the City requires an acceptable level of service of C for the design of new roadways.

As shown by Exhibit J-6, the proposed project would not result in discernible changes in levels of service. Even if a 1 or 2 percent change were to occur at one of the defined breakpoints between service levels (for instance, a preproject level C condition at 77 percent capacity, compared to a postproject level D condition at 79 percent capacity) the difference would not be perceptible.

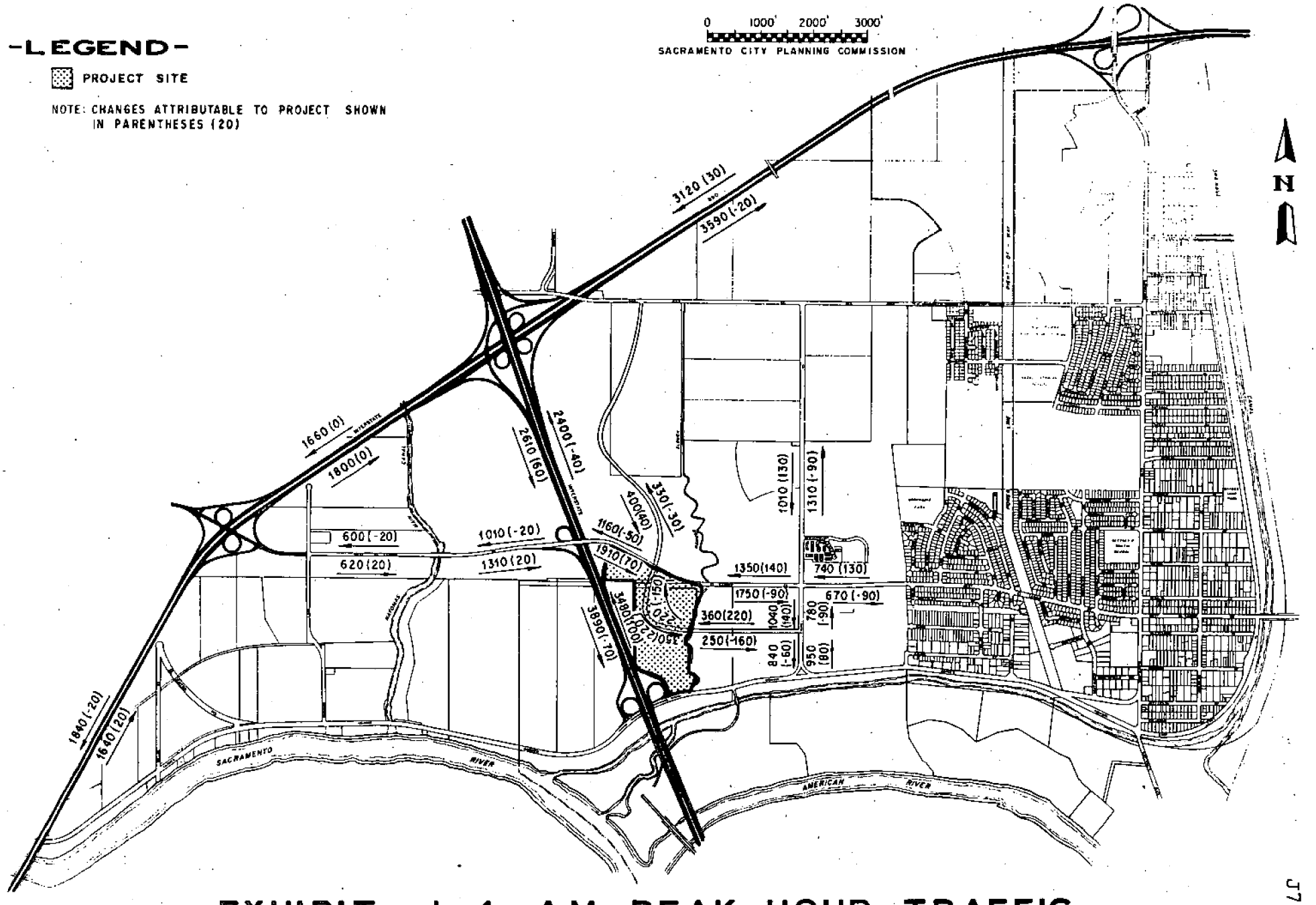


EXHIBIT J-4. AM PEAK HOUR TRAFFIC VOLUMES: WITH PROPOSED PROJECT

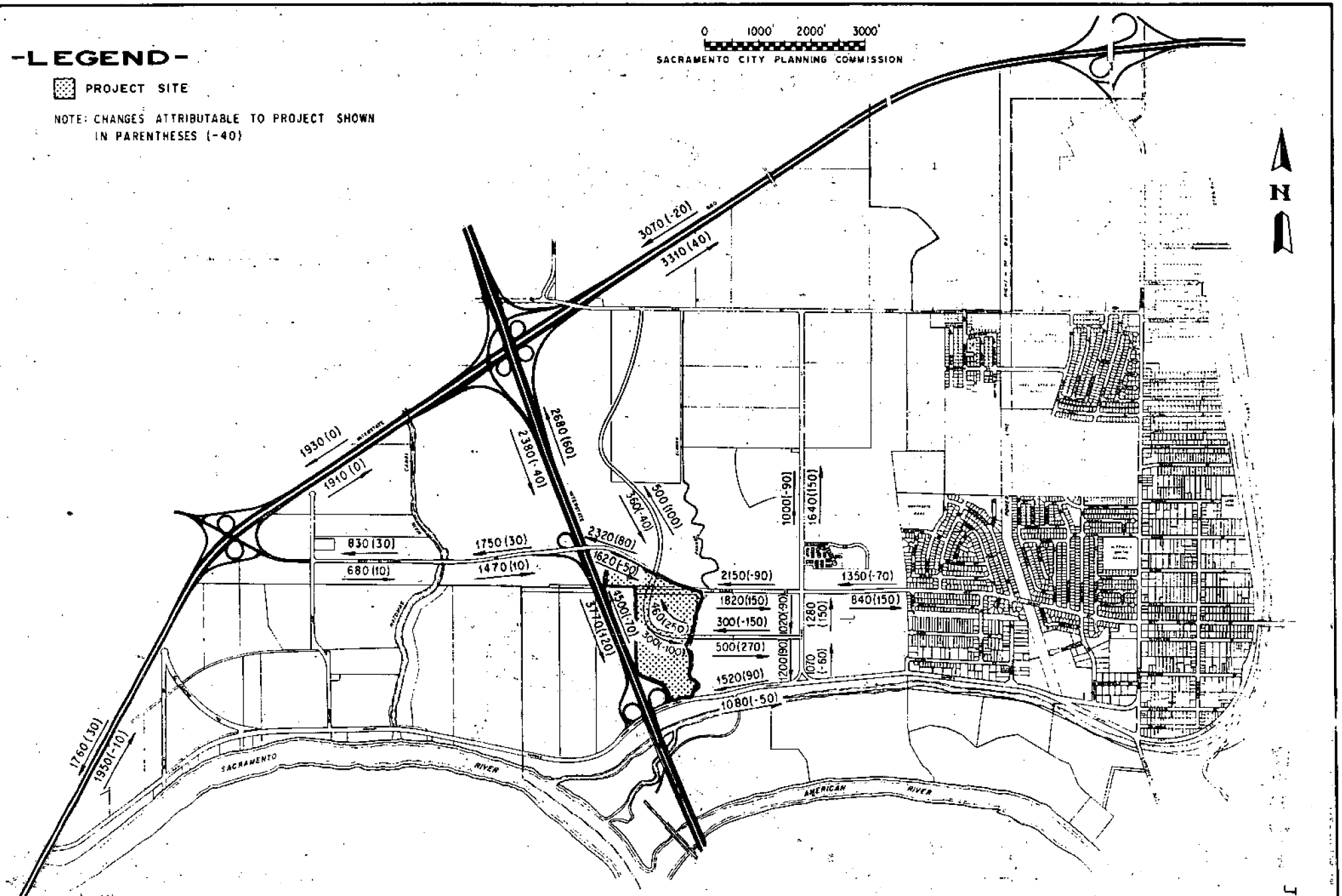


EXHIBIT J-5. PM PEAK HOUR TRAFFIC VOLUMES: WITH PROPOSED PROJECT

Exhibit J-6. Impact of Proposed Creekside Office Park on Selected Intersection Capacities and Levels of Service[1]

Intersection	P.M. Peak Hour Levels of Service and Percentage of Capacity Used		Incremental Change in Available Capacity
	SNCP	Project	
I-5 Northbound Offramp to Garden Highway	A(42%)	A(43%)	-1%
I-5 Southbound Offramp to Garden Highway	C(71%)	C(69%)	+2%
I-5 Northbound offramp to West El Camino	B(60%)	B(61%)	-1%
Azevedo-West El Camino	E(95%)	E(96%)	-1%
Truxel-West El Camino	E(96%)	E(95%)	+1%
Truxel-New Collector	A(47%)	A(46%)	+1%
Truxel-Garden Highway	C(69%)	C(67%)	+2%

[1]See Exhibit J-7 for definitions of levels of service. This exhibit assumes roadway improvements required by the SNCP circulation system. See Appendix II for limitations of intersection analysis.

SOURCE: Jones & Stokes Associates, Inc.

Exhibit J-7. Definition of Levels of Service

Level of Service	Percentage of Available Capacity Used by Predicted Traffic Volume	Definition
A	0%-56%	Free-flow conditions. No signal phases fully utilized. No congestion.
B	56%-67%	Nearly free flow, with occasional flow restrictions within groups of vehicles. Occasional signal phases fully utilized. Little to no congestion.
C	67%-78%	Stable operation, drivers may feel restricted within groups of vehicles. Some signal phases fully utilized and some vehicles may have to wait through more than one signal phase. Moderate congestion.
D	78%-89%	Approaching unstable flow, with dense groups of vehicles. Most signal phases fully utilized, and some delays may be substantial. Heavy congestion.
E	89%-100%	Unstable flow, with nearly all signal phases fully utilized and substantial delays. Long queues of vehicles may develop. Very heavy congestion.
F	over 100%	Jammed, forced flow conditions. All signal phases fully utilized, substantial delays, long queues. Actual volumes handled may be less than 100% of capacity due to jams.

SOURCES: Highway Capacity Manual, National Academy of Sciences, 1965; Transportation Research Circular No. 212, National Academy of Sciences, 1980.

It should be noted that the intersections of West El Camino Avenue with Azevedo Drive and with Truxel Road would be at capacity and operating at level of service E with or without the project. These two intersections would be heavily congested, with long delays and queued vehicles. The proposed project, however, would have virtually no effect on this congestion.

Internal Circulation.

Site Access and Circulation. The proposed project would be primarily served by the extension of Azevedo Drive south of West El Camino Avenue. Secondary access to the site would be provided by a proposed east-west local collector connecting to Truxel Road. Local access to the north part of the site would be provided by a 30-foot driveway off West El Camino Avenue. Internal circulation would be served by individual driveways and a cul-de-sac stub.

Access to and circulation patterns within the Creekside office park appear to be generally adequate. Two potential problems are the expected congestion of the West El Camino Avenue/Azevedo Drive intersection (which would occur under either the proposed project or the no-project alternative); and conflicts of cars using the 30-foot driveway with West El Camino Avenue through traffic. Mitigation measures for these potential problems are suggested at the end of this section.

Access to Bennett Property. The project site would provide the primary access for the planned residential development on the Bennett parcel lying between the project site and I-5. The access would consist of a local collector intersecting the extension of Azevedo Drive about 800 feet south of West El Camino Avenue. More direct access to the Bennett parcel would be desirable for emergency vehicles and to reduce traffic volumes within the project site. However, a direct access to the Bennett parcel off West El Camino Avenue would be immediately adjacent to the I-5 northbound off-ramp at West El Camino Avenue, and such a direct access would have a high potential for traffic accidents.

Cumulative Traffic Impacts. The proposed project's traffic impacts have been analyzed on a cumulative basis, in that full development of South Natomas under the SNCP is assumed in both the base case and proposed project conditions. Proposed departures from the SNCP could change these cumulative impacts. These include the proposed 52-acre Delta Point project, located southeast of the West El Camino/Truxel Road intersection, and the Natomas Eastside and Gateway Centre business parks proposed west of I-5; cumulative impacts of the business parks are not analyzed here, but will be assessed in the Creekside office park Final EIR.

The proposed Delta Point project would have an average density of 11.85 units per net acre, exceeding the SNCP minimum average required density of about nine units per acre for the parcel. Exhibit J-8 indicates changes in traffic volume that would result from projects at these two densities. Assuming half of the indicated 68 vehicle peak-hour increase in traffic uses the Truxel-Creekside office park collector intersection, no capacity problems would arise, and none of the critical moves would be affected. Capacity analyses previously presented in prior analyses would be unaffected.

Parking. The Creekside office park project proposes 1,535 spaces, consistent with City of Sacramento zoning requirements (Exhibit J-9). A review of other guidelines indicates a potential demand of over 2,000 spaces (Transportation and Traffic Engineering Handbook, Institute of Transportation Engineers 1976). Thus the potential exists for a shortage of parking spaces to develop. Such a shortage may result in vehicles illegally parked, extensive use of on-street parking (if allowed), loss of customers by office park tenants, increased fuel use and increased vehicle emissions.

Bicycle Access. The proposed project site plan does not show a bicycle path along the Bannon Slough parkway, but the project applicant has indicated a willingness to include a bicycle path through the site (Durling pers. comm.). This bicycle path would form the southern leg of the Bannon Slough bicycle path shown in the SNCP. Until the Bannon Slough bicycle path is implemented, bicyclists travelling to the American River Parkway would travel a circuitous route, going east on the east-west collector, south on Truxel Road, and then either east or west on Garden Highway to a parkway entrance.

If the SNCP's Bannon Slough bicycle path is eventually implemented, bicycle crossings at West El Camino Avenue and Garden Highway would be required. At Garden Highway, options exist for the bicycle crossing location, which could either be at the southern end of the project site, as shown in the SNCP, or further east of the site, across from the existing entrance to Discovery Park. The latter option would have the advantage of providing a direct crossing from the site and adjacent properties to American River Parkway.

No-Project Alternative

Traffic and Circulation. As shown by Exhibit J-3, the no-project alternative would generate 6,380 vehicle trips per day and 49,430 vehicle miles travelled per day. Remaining impacts of the no-project alternative are identical to the base case traffic conditions previously analyzed in this section.

Exhibit J-8. Estimated Traffic Increases Due to Delta Point Density Increase

Density	Number of Dwelling Units	Traffic Generation Factor	Resulting ADT	Resulting P.M. Peak Hour
9 DU/Acre	468	8 trips/DU	3,744	449
11.85 DU/Acre	616	7 trips/DU	4,312	517
Increase			571	68

Exhibit J-9. Comparison of Parking Space Provision and Requirements

	Proposed Project	No-Project Alternative
Number of spaces provided	1,535	1,367[1]
City zoning ordinance requirement	1,528[2]	911[3]
"True demand" requirement[4]	2,016	1,367

[1]Consists of 1,008 spaces for Creekside PUD and 359 spaces for 13-acre remainder of site (see Exhibit B-4).

[2]One space per 400 square feet gross floor area.

[3]One space per dwelling unit.

[4]3.3 spaces for 1,000 square feet gross leasable area; 1.5 spaces per unit for multifamily one- and two-bedroom residential uses (SOURCE: Recommended minimum standards cited in Institute of Transportation Engineers 1976).

Parking. The no-project alternative would provide 1,367 parking spaces, which is consistent with City requirements and other guidelines (see Exhibit J-9).

Bicycle Access. The no-project alternative, like the proposed project, offers the opportunity for construction of the southern leg of the SNCP's Bannon Slough bicycle path.

Comparison

Traffic and Circulation. The proposed project would generate 2,833 additional trips per day and 21,950 additional vehicle miles travelled per day, a 44 percent increase compared to the no-project alternative. However, the proposed project would have no significant impacts on roadway capacities, intersection capacities, and intersection levels of service, compared to no-project conditions. The intersections of West El Camino Avenue with Azevedo Drive and Truxel Road would have unacceptable levels of service (E) under both the proposed project and the no-project alternative.

The proposed project has potentially minor access problems at the West El Camino Avenue/Azevedo Drive entrance because of traffic congestion, and at the proposed 30-foot driveway off West El Camino Avenue. The no-project alternative would encounter the former problem but not the latter, since a driveway is not proposed for the residential project.

Parking. Both the proposed project and the no-project alternative would meet City parking requirements. However, the proposed project could experience a shortage of parking spaces as measured by other guidelines for parking space requirements, a potentially major impact.

Bicycle Access. Both the proposed project and the no-project alternative offer the opportunity for construction of the southern leg of the SNCP's Bannon Slough bicycle path, a beneficial impact.

Mitigation Measures

Traffic and Circulation

Signalize the Intersections of West El Camino Avenue/Azevedo Drive, West El Camino Avenue/Truxel Road, and Truxel Road/East-West Local Collector. Signalization of these intersections would assist traffic flows in the vicinity of the project site. It would be needed under either the

proposed project or the no-project alternative. The West El Camino Avenue/Truxel Road intersection is on the City's priority list for signalization.

Widen West El Camino Avenue to Six Lanes From I-5 Past Truxel Road. Widening of West El Camino Avenue from 4-6 lanes would raise the level of service from E to D at both the Azevedo Drive and Truxel Road intersections. The widening would need to extend from east of Truxel Road (end point not evaluated) to just west of Azevedo Drive. The roadway would narrow to 4 lanes at I-5. The cost of this widening is estimated to be about $100,000 (excluding right-of-way costs) for the areas west of Truxel Road. Financing sources for these costs are uncertain.

If West El Camino Avenue were to be widened, all additional right-of-way would have to be acquired on the south side of the street, since improvements are already in place on the north. Acquisition of this additional right-of-way could be opposed by existing property owners south of West El Camino. Other potential problems with road widening noted by City traffic engineering staff (Bloodgood pers. comm.) include potential structural problems with the West El Camino bridge overcrossing at I-5 (if the widening is extended as far as the bridge), and the possibility that the West El Camino off-ramp from I-5 may need to be shortened.

Implement Trip Reduction Measures. Trip reduction measures would help reduce future unacceptable levels of service (E) projected for the intersections of West El Camino Avenue with Azevedo Drive and Truxel Road. Such measures include implementation of flex-time work schedules and carpooling programs by future tenants of the project. These measures would need to be implemented by project tenants, and the City would find them difficult to enforce.

Design 30-Foot Driveway off West El Camino Avenue for Right-In/Right-Out Only. To reduce potential conflicts between driveway traffic and West El Camino Avenue through traffic, a turnout lane should be provided for the driveway, and the driveway should be designed to be right-in/right-out only.

Widen 30-Foot Driveway Off West El Camino Avenue to 35 Feet. This widening, which is permitted by City standards, would allow better secondary access to the project site.

Prepare Updated South Natomas Transportation Study and Comprehensive Capital Improvements Program. As noted in Appendix II, the traffic analysis supporting the SNCP has become outdated since its preparation in 1977. Approval of the proposed project and other proposed departures from

the SNCP would further support the need for a new community-wide transportation study and capital improvements program. As suggested by the South Natomas Business Parks Draft EIR, fair-share contributions from project applicants could be used to help finance such a study.

Parking

Review Proposed Project Parking Requirements. Once the final design of the project is completed and the nature of the future tenants is better known, a more precise determination of project parking requirements can be made. This review may indicate that more parking spaces are needed than the minimum number specified by the City zoning ordinance.

Bicycles

Complete Planning for Bannon Slough Bicycle Path. The City should complete planning for the Bannon Slough bicycle path in order to determine the best bicycle path alignment. This should include selection of a preferred Garden Highway crossing. A crossing east of the site, across from the existing Discovery Park entrance, would provide a direct crossing to the American River Parkway; this crossing could be combined with a right-in/right-out local collector off Garden Highway to provide limited traffic access to both the project site and the adjacent Sammis property, thereby providing the opportunity for developer financing of the crossing.

Construct Bicycle Path Through Project. This path would constitute the southern leg of the SNCP's Bannon Slough bicycle path.

Section K

AIR QUALITY

Setting

Urban emission sources in the Sacramento Metropolitan area contribute to two existing air quality problems. Federal and state air quality standards for ozone and carbon monoxide are currently being exceeded (Exhibit K-1). Ozone is not emitted directly into the air, but is formed through a complex series of chemical reactions involving other compounds which are directly emitted. The time period required for these reactions makes ozone a regional pollution problem. Carbon monoxide (CO) is directly emitted from a variety of sources, with motor vehicles the dominant source in most areas. CO problems are usually rather localized. Most CO problems involve high traffic volumes and significant traffic congestion.

Impacts

Proposed Project

Air quality analyses of the proposed project focused on localized CO problems. Projected 1987 8-hour average CO levels at various locations are presented in Exhibit K-2. Modeling procedures and assumptions are discussed in Appendix III. Vehicle emission rates were determined using the California Air Resources Board's EMFAC 6C computer program. Dispersion modeling was performed using a programmable calculator version of the CALINE 3 model Benson 1979). The results presented in Exhibit K-2 do not show any CO problems. Traffic on local roadways will produce 8-hour CO levels below 4 ppm (parts per million) at all receptor sites. Assuming a "background" CO concentration of 2-3 ppm from other sources not directly analyzed, total CO levels would be 6-7 ppm at the site showing the highest levels. This is still less than the federal 8-hour CO standard of 9 ppm.

No-Project Alternative

Development of the project site under the no-project alternative would involve residential rather than office development. Projected 1987 CO concentrations at various

Exhibit K-1. Summary of Air Quality Data From Monitoring Stations Near the Project Area

Monitoring Station	Parameter	Carbon Monoxide					Ozone				
		1976	1977	1978	1979	1980	1976	1977	1978	1979	1980
1025 P Street	Peak Hour Value[1]	17	13	15	11	12	0.15	0.16	0.14	0.13	0.14
	Peak 8-Hour Value[1]	11.3	8.3	7.0	7.1	7.6	NA	NA	NA	NA	NA
	Days Exceeding Standard[2]	2	0	0	0	0	ND	ND	6	2	14
Creekside School	Peak Hour Value[1]	23	18	19	15	16	0.16	0.19	0.22	0.20	0.18
	Peak 8-Hour Value[1]	19.6	13.5	11.9	11.8	11.8	NA	NA	NA	NA	NA
	Days Exceeding Standard[2]	24	12	7	6	6	ND	ND	15	2	30
North Highlands	Peak Hour Value[1]	ND	10	10	8	10	ND	0.14	0.21	0.17	ND
	Peak 8-Hour Value[1]	ND	6.6	6.0	4.9	5.5	NA	NA	NA	NA	ND
	Days Exceeding Standard[2]	ND	0	0	0	0	ND	ND	17	5	ND

NOTES:

NA = not applicable
ND = no data

[1]Parts per million, by volume (ppm)
[2]For ozone, days with a peak hourly value exceeding the 0.12 ppm federal standard; for carbon monoxide, days with a peak 8-hour average value exceeding the 9 ppm federal standard.

DATA SOURCES: California Air Resources Board 1976-1980.

Exhibit K-2. Summary of Air Quality Modeling Results

Contributing Roadway	Carbon Monoxide Concentration (ppm) Produced by Highway Traffic at Various Locations With Winds From Various Directions											
	No Project				Proposed Project				Difference Due to Project			
	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Receptor #1: Northwest Corner of Bennett Parcel												
Interstate 5	0.73	0.83	0.81	1.01	0.73	0.85	0.83	1.03	0.00	+0.02	+0.02	+0.02
Ramps at Garden Highway	0.11	0.17			0.12	0.19			+0.01	+0.02		
Ramps at W. El Camino	0.02	0.36	0.50	0.51	0.02	0.33	0.46	0.47	0.00	-0.03	-0.04	-0.04
West El Camino			0.05	0.75			0.05	0.81			0.00	+0.06
Azevedo	0.02				0.02				0.00			
Truxel												
Collector	0.01				0.01				0.00			
Garden Highway	0.09				0.09				0.00			
TOTAL	0.98	1.36	1.36	2.27	0.99	1.37	1.34	2.31	+0.01	+0.01	-0.02	+0.04
Receptor #2: Southern End of Project Site Near Freeway Ramps												
Interstate 5	0.02	0.87	0.78	1.06	0.02	0.87	0.78	1.07	0.00	0.00	0.00	+0.01
Ramps at Garden Highway	0.69	0.29	0.44	0.16	0.74	0.32	0.48	0.18	+0.05	+0.03	+0.04	+0.02
Ramps at W. El Camino				0.01				0.01				0.00
West El Camino				0.02				0.02				0.00
Azevedo			0.01	0.14			0.01	0.16			0.00	+0.02
Truxel												
Collector												
Garden Highway	0.21	0.56			0.21	0.56			0.00	0.00		
TOTAL	0.92	1.72	1.23	1.39	0.97	1.75	1.27	1.44	+0.05	+0.03	+0.04	+0.05

Exhibit K-2. (cont'd.)

Contributing Roadway	Carbon Monoxide Concentration (ppm) Produced by Highway Traffic at Various Locations With Winds From Various Directions											
	No Project				Proposed Project				Difference Due to Project			
	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Receptor #3: 100 Ft. South of W. El Camino/I-5 Off-Ramp Intersection												
Interstate 5	0.14	0.60	0.51	0.68	0.14	0.61	0.52	0.68	0.00	+0.01	+0.01	0.00
Ramps at Garden Highway	0.07				0.11				+0.04			
Ramps at W. El Camino		1.05	0.63	0.62		0.95	0.57	0.56		-0.10	-0.06	-0.06
West El Camino	1.49	1.13	2.58	0.72	1.50	1.14	2.65	0.79	+0.01	+0.01	+0.07	+0.07
Azevedo	0.07				0.08				+0.01			
Truxel												
Collector												
Garden Highway	0.10				0.10				0.00			
TOTAL	1.87	2.78	3.72	2.02	1.93	2.70	3.74	2.03	+0.06	-0.08	+0.02	+0.01
Receptor #4: 100 Ft. Northwest of W. El Camino/Azevedo Intersection												
Interstate 5		0.37	0.34	0.24		0.37	0.35	0.24		0.00	+0.01	0.00
Ramps at Garden Highway		0.04				0.04				0.00		
Ramps at W. El Camino			0.21				0.20				-0.01	
West El Camino	2.06	1.90	2.69	0.02	2.07	1.91	2.71	0.02	+0.01	+0.01	+0.02	0.00
Azevedo	0.19	0.13	0.27		0.21	0.15	0.28		+0.02	0.00	+0.01	
Truxel												
Collector	0.07				0.08				+0.01			
Garden Highway	0.02	0.01			0.02	0.01			0.00	0.00		
TOTAL	2.34	2.47	3.51	0.26	2.38	2.48	3.54	0.26	+0.04	+0.01	+0.03	0.00

Exhibit K-2. (cont'd.)

Contributing Roadway	Carbon Monoxide Concentration (ppm) Produced by Highway Traffic at Various Locations With Winds From Various Directions											
	No Project				Proposed Project				Difference Due to Project			
	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Receptor #5: 100 Ft. Northeast of W. El Camino/Truxel Intersection												
Interstate 5		0.29	0.22	0.12		0.29	0.22	0.12		0.00	0.00	0.00
Ramps at Garden Highway												
Ramps at W. El Camino			0.10				0.10				0.00	
West El Camino	0.66	0.68	0.32		0.66	0.68	0.32		0.00	0.00	0.00	
Azevedo			0.05	0.03			0.05	0.03			0.00	0.00
Truxel		1.01	0.89	1.00		1.04	0.94	1.06		+0.03	+0.05	+0.06
Collector		0.09				0.10				+0.01		
Garden Highway	0.08				0.08				0.00	0.00		
TOTAL	0.74	2.07	1.58	1.15	0.74	2.11	1.63	1.21	0.00	+0.04	+0.05	+0.06

NOTES:

Wind angles are the compass direction (relative to true north) from which the wind blows: north = 0°, east = 90°, south = 180°, west = 270°.

See Appendix III for details of modeling procedure and schematic diagram of roadway/receptor locations.

locations are shown in Exhibit K-2. Predicted CO levels are almost identical with those predicted for the proposed project.

Comparison

Exhibit K-2 shows that there is essentially no difference in predicted 1987 8-hour CO levels on or near the project site for development under the proposed project or no-project alternatives. The contribution of the two alternatives to regional pollutant emissions is estimated in Exhibit K-3. The proposed project will increase regional pollutant emissions by incrementally minor amounts. Compared to the no-project alternative, there would be a 44 percent increase in emissions from vehicle traffic associated with the project site. Thus, while the magnitude of the emissions increase would be small, the relative change between the proposed project and the no-project alternative would be more significant.

Mitigation Measures

1. Implement Trip Reduction Measures

See TRANSPORTATION section (Section J)

Exhibit K-3. Emissions From Vehicle Traffic Generated by Development of the Project Site

Pollutant	Emissions (Pounds Per Day)					
	No-Project Alternative		Proposed Project		Increase Due to Project	
	1987	2000	1987	2000	1987	2000
Carbon Monoxide	801.00	1,648.89	1,156.69	2,381.10	355.69	732.21
Reactive Organics	58.60	117.09	84.63	169.09	26.03	52.00
Nitrogen Oxides	95.03	199.53	137.23	288.14	42.20	88.60
Sulfur Oxides	7.63	21.79	11.02	31.47	3.39	9.68
Particulates	12.21	32.69	17.62	47.21	5.42	14.52

NOTES:

Year 2000 VMT from Exhibit J-3; 1987 VMT estimated as 35 percent of year 2000 VMT.

Vehicle emission rates based on the EMFAC 6C computer program output provided by the California Air Resources Board. Emission rates based on: 40°F air temperature for carbon monoxide and 80°F air temperature for other pollutants; a vehicle fleet mix of 69.1 percent autos, 22.5 percent light trucks, 2.3 percent medium trucks, 2.4 percent heavy duty gasoline trucks, 2.6 percent heavy duty diesel vehicles, and 1.1 percent motorcycles; a vehicle operating mode mix of 40.8 percent cold start VMT, 18.5 percent hot start VMT, and 40.7 percent hot stabilized VMT.

Vehicle speed mix accounted for as 5 percent VMT at 20 mph; 20 percent VMT at 30 mph; 75 percent VMT at 55 mph.

Section L

NOISE

Setting

Noise levels are normally measured on a decibel scale. The nature of the decibel scale prevents a simple addition of decibel (dB) values when determining the sound level produced by a combination of different noise sources. In general, the composite noise level from two identical sources will be 3 db higher than either individual noise source. Most people judge a 10 db increase in noise level to be a doubling in loudness. A large number of weighting schemes have been devised to reflect such factors as: the sensitivity of the human ear to specific sound frequencies; annoyance factors for particular sound frequencies; or annoyance factors for sounds at particular times of the day (usually evening and night-time hours).

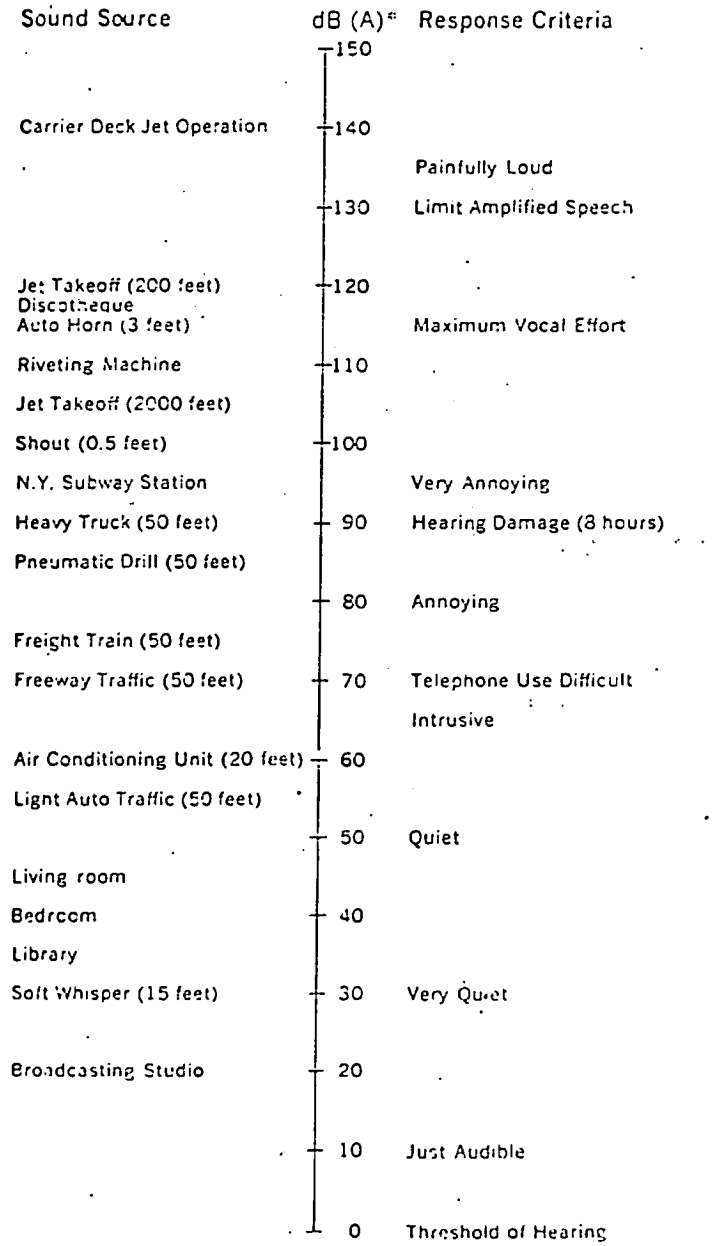
The most commonly used decibel scale is the A scale (dBA). Exhibit L-1 indicates dBA levels associated with a variety of common noise sources. Typical noise levels in the project vicinity are probably 60-65 dBA (City of Sacramento 1975a). The Noise Element for the City of Sacramento uses the day-night noise level scale (L_{dn}) to assess the compatibility of land uses with overall noise levels in an area (Exhibit L-2). The L_{dn} scale is based on dBA measurements over a full day, with noise levels at night (10:00 p.m. - 7:00 a.m.) weighted by an additional 10 dB.

Impacts

Proposed Project and No Project Alternatives

Future noise levels in the project site vicinity were analyzed using the Federal Highway Administration's (FHWA) traffic noise prediction model. Details of this analysis are presented in Appendix IV. Assuming buildout traffic and roadway conditions, there was virtually no difference in noise levels between proposed project and no project (residential development) conditions. Exhibit L-3 illustrates peak hour noise levels on and adjacent to the project site under proposed project and no project conditions. The noise level contributions of various

Exhibit L-1. Weighted Sound Levels and Human Response

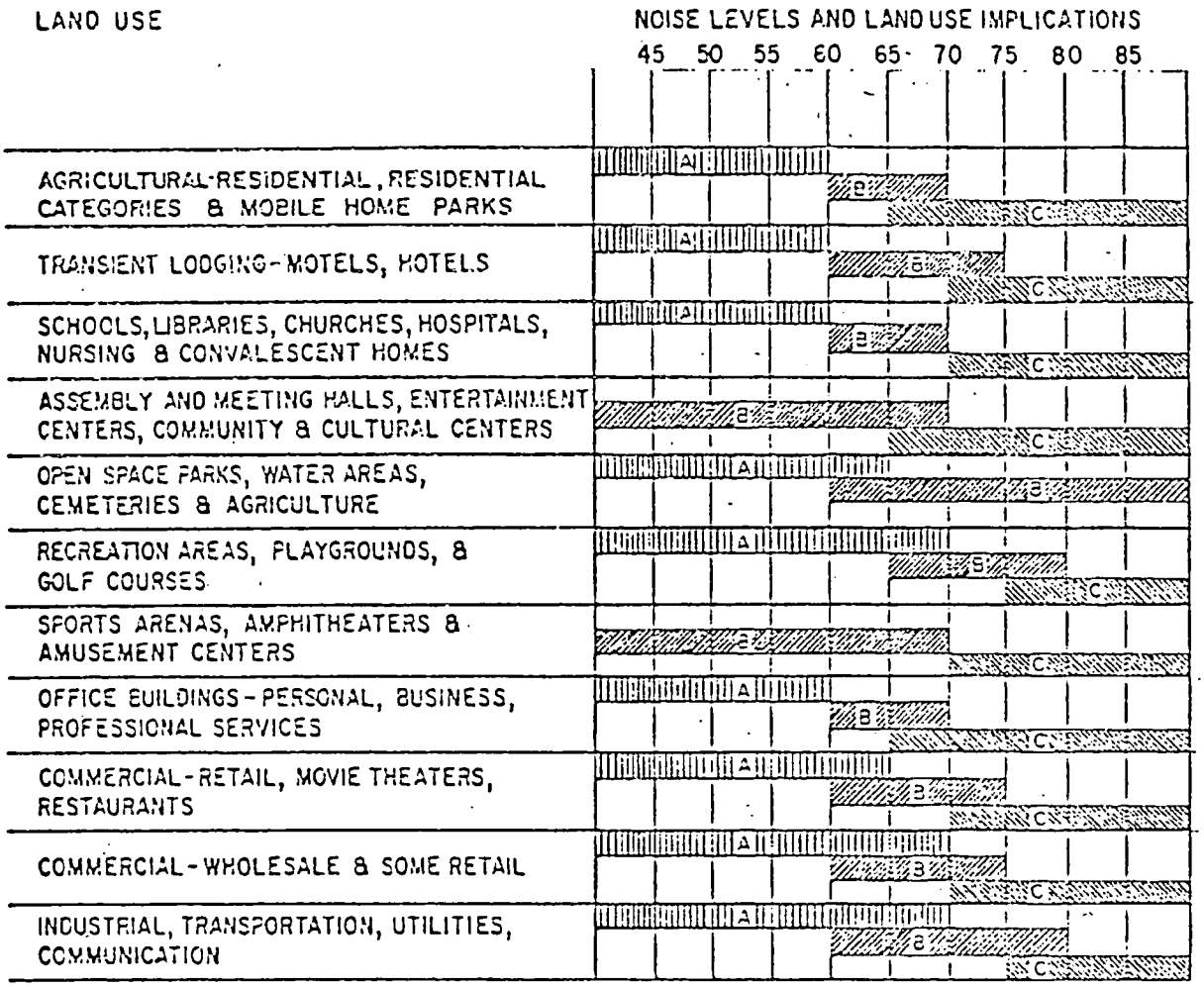


*Typical A-Weighted sound levels taken with a sound-level meter and expressed as decibels on the scale. The "A" scale approximates the frequency response of the human ear.

SOURCE: Council on Environmental Quality 1970.

Exhibit L-2

LAND USE COMPATIBILITY FOR COMMUNITY NOISE



A — SATISFACTORY; NO SPECIAL REQUIREMENTS.

B — USE SHOULD BE PERMITTED ONLY AFTER CAREFUL STUDY & INCLUSION OF PROTECTIVE MEASURES IF NEEDED.

C — USE SHOULD BE DISCOURAGED. IF PERMITTED, NOISE REDUCTION MEASURES MUST BE TAKEN.

NOTE: NOISE INSULATION FEATURES FOR NEW CONSTRUCTION SHOULD BE SUCH THAT AN INTERIOR L_{dn} OF 45 dB WILL BE ACHIEVED IN AREAS WHERE PEOPLE SLEEP.

SOURCE: Sacramento City Planning Department 1975a.

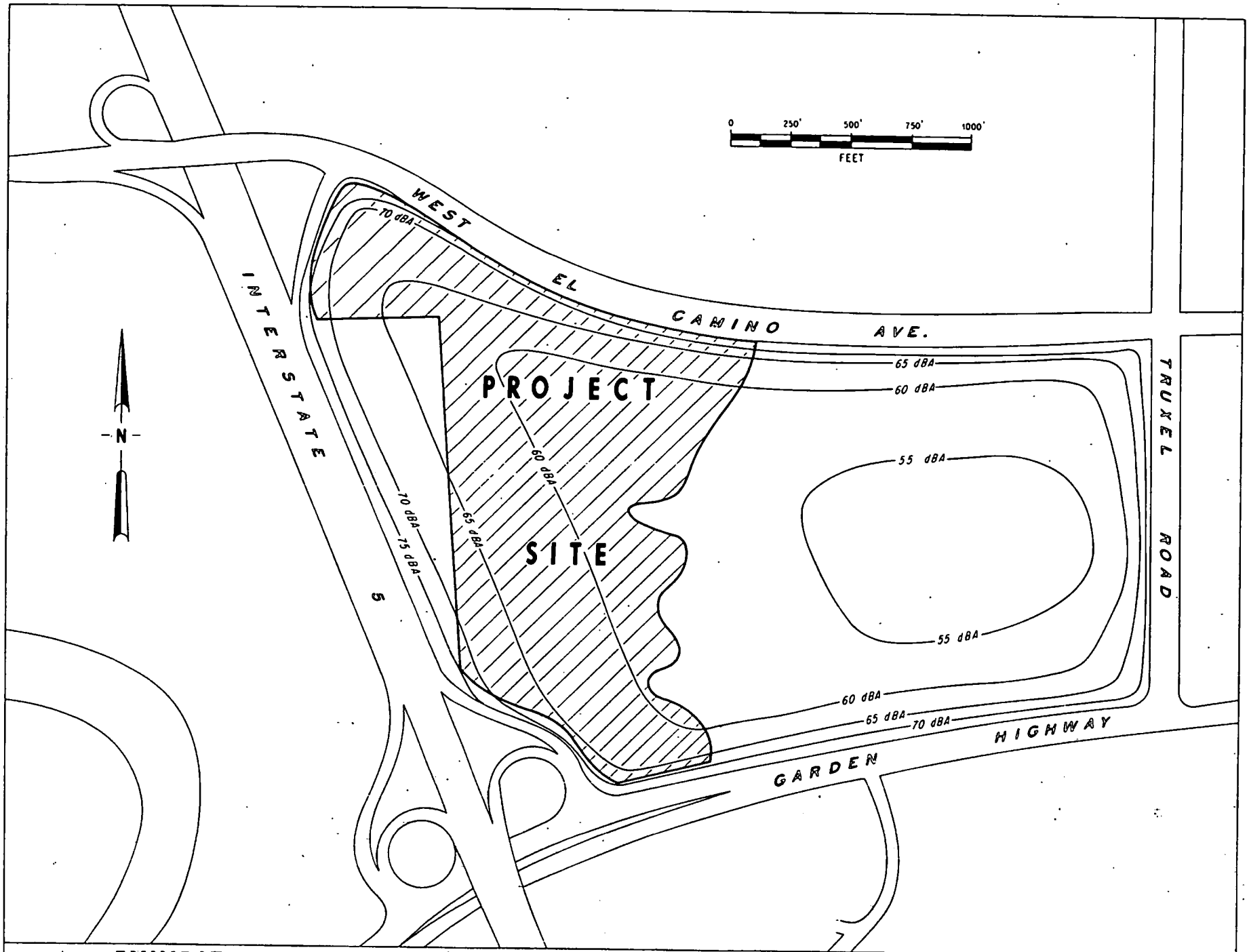


EXHIBIT L-3. PEAK HOUR NOISE LEVELS (dBA) UNDER NO PROJECT OR PROPOSED PROJECT CONDITIONS

roadways at six locations in the project site vicinity are shown in Exhibit L-4, and the six analysis locations are described in Exhibit L-5. Interstate 5 is the predominant noise source on most of the project site. West El Camino Avenue is a significant contributor to noise levels along the northern side of the project site.

The land use compatibility chart in the City's Noise Element (Exhibit L-2) used to determine the acceptability of different noise levels for different land uses is based on the L_{dn} procedure. While L_{dn} noise levels have not been specifically calculated for the project site, they should be within 1 or 2 decibels of the peak hour noise levels shown in Exhibit L-3. According to Exhibit L-2, much of the project site is rated as category B (careful study of noise reduction measures) for both residential and office land uses. The Noise Element categorizes residential uses as "sensitive" and office uses as "moderately sensitive" to noise impacts.

Comparison

As shown by Exhibit L-4, noise levels in the project site vicinity would essentially be the same under both proposed project and no-project conditions; increased traffic generated by the proposed project does not translate into noticeably different noise impacts, as modelled using FHWA procedures. The residential uses proposed by the no-project alternative would, however, be more sensitive to noise impacts from adjacent roadways than the commercial uses called for by the proposed project.

Mitigation Measures

Construction of Noise Barriers

The most effective method of reducing highway noise involves construction of noise barriers (walls or berms). Such measures involve serious considerations of cost and aesthetics. Noise barriers are most effective for locations immediately behind the barrier. A noise barrier along the western boundary of the project site would be more effective in shielding the site than would a barrier adjacent to Interstate 5.

Use of Noise-reducing Building Design and Materials

Noise levels inside buildings can be reduced by a variety of building design techniques and careful choice of building materials for sound-insulating properties. Although such techniques can be quite effective for commercial and office uses, they are less effective for residential areas where significant activity may occur outdoors.

Exhibit L-4

ROADWAY CONTRIBUTIONS TO PEAK HOUR NOISE LEVELS (dBA)

Roadway	Receptor #1		Receptor #2		Receptor #3		Receptor #4		Receptor #5		Receptor #6	
	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project
Interstate 5	73.3	73.3	63.9	64.0	57.7	57.7	-	-	51.8	51.9	69.5	64.5
Ramps at Garden Highway	53.4	53.4	-	-	-	-	-	-	38.9	38.9	62.5	62.5
Ramps at West El Camino	45.6	45.8	65.7	65.6	41.1	41.4	-	-	-	-	37.7	38.0
West El Camino	46.5	46.4	65.0	64.7	63.4	63.4	60.9	60.9	44.0	44.1	42.8	42.7
Azevedo	44.5	45.1	-	-	56.2	56.8	-	-	-	-	41.2	41.8
Truxel	37.3	37.2	-	-	41.6	41.5	65.7	65.7	63.6	63.7	36.9	37.0
Collector	39.8	40.4	-	-	-	-	39.9	40.5	41.6	42.2	48.7	49.3
Garden Highway	48.6	48.7	-	-	-	-	47.5	47.5	70.3	70.4	57.8	57.8
TOTAL	73.4	73.4	69.7	69.6	65.1	65.1	67.0	67.0	71.2	7.13	67.3	67.3

Notes:

- = roadway contribution not analyzed for this receptor; contribution expected to be insignificant based on analyses of other receptor locations.

All calculations performed using FHWA highway traffic noise prediction model (Barry and Reagan 1978); see Appendix IV for additional details.

Exhibit L-5

RECEPTOR LOCATIONS USED FOR NOISE MODELING

RECEPTOR	LOCATION
1	100 feet east of the outer lane of Interstate 5, midway between the north-bound on-ramp from Garden Highway and the north-bound off-ramp to West El Camino Avenue
2	100 feet south of the junction of West El Camino Avenue and the off-ramp from Interstate 5
3	100 feet southeast of the Azevedo/West El Camino intersection
4	100 feet southwest of the West El Camino/ Truxel intersection
5	100 feet northwest of the Truxel/Garden Highway intersection
6	100 feet northeast of the north-bound on-ramp to Interstate 5 from Garden Highway, at the point where the on-ramp turns toward the freeway

Section M

ENERGY

Setting

Electricity services for the South Natomas community are provided by the Sacramento Municipal Utility District (SMUD). Natural gas is provided by the Pacific Gas and Electric Company (PG&E).

Impacts

Proposed Project

Annual Energy Use. With the development of the proposed office park, the annual energy requirements are estimated to be 847,320 therms (see Exhibit M-1). (One therm is equivalent to 100,000 British Thermal Units [BTUs] of heat, 10 kilowatt hours of electricity, or 0.74 gallons of gasoline.) This includes energy for lighting, heating, cooling, ventilation, and appliances.

Transporation-Related Energy Consumption. The proposed project would generate over 26 million vehicle miles annually, which is equivalent to an annual energy value of about 2.15 million therms (see Exhibit M-2).

No-Project Alternative

Annual Energy Use. The no-project alternative would require an estimated 1.28 million therms per year for lighting, heating, cooling, ventilation, and appliances (see Exhibit M-1).

Transportation-Related Energy Consumption. The no-project alternative would generate over 18 million vehicle miles annually, which is equivalent to an annual energy value of about 1.49 million therms.

Comparison

When both energy uses are combined, the proposed project would use an estimated 2,994,162 therms of energy per year. This is 8.4 percent greater than the no-project alternative, which would use an estimated 2,761,986 therms annually. This increase is considered to be a minor adverse impact.

Exhibit M-1. Comparison of Estimated Annual Energy Consumption

Alternative	Land Use	Quantity Factor	Annual[1] Therms	Annual Consumption
Project	Office	614,000 square feet	1.38 therms/sq. ft.	847,320
No-Project	Residential	911 units	1,400[2] therms/unit	1,275,400

[1]SOURCE: California State Energy Commission - as cited in South Natomas Business Parks Draft EIR.

[2]Assuming all units have uniform energy consumption characteristics.

Exhibit M-2. Comparison of
Transportation Energy Consumption

	Project	No-Project
Vehicle Miles Traveled[1]	26,054,065 (71,381 daily)	18,041,220 (49,428 daily)
Average Energy Consumption (vehicle mpg)	16.4	16.4
Total Annual Fuel Consumption (gallons)	1,588,663	1,100,074
Energy Value of Total Annual Fuel Consumption (therms)[2]	2,146,842	1,486,586

[1] See Section J - TRANSPORTATION.

[2] 0.74 gallon = 1 therm.

Mitigation Measures

Implement Energy Conservation Measures Beyond Title 24 and UBC Requirements

All new commercial-industrial construction in the state must meet minimum energy conservation standards set forth in Title 24 of the California Administrative Code and the Uniform Building Code. Implementation of measures beyond these requirements should be considered because the annual energy use of the proposed project is significant, even though it is somewhat lower than the no-project alternative. Some of these additional energy conservation measures have been identified in the South Natomas Business Parks Draft EIR.

Implement Trip Reduction Measures

See TRANSPORTATION section (Section J).

Section N

AESTHETICS

Setting

The proposed site is currently a flat vacant lot used for agricultural production. Bannon Slough, the eastern boundary of the site, supports a visually attractive linear corridor of oak trees and native shrubs. Oak trees and native shrubs are also located in a linear corridor along the PG&E easement in the north part of the site; native shrubs may also be found adjacent to the I-5 right-of-way at the southwestern edge of the site.

To the south of the site beyond Garden Highway is the American River Parkway; to the north beyond West El Camino are residential developments; to the west across I-5 and to the east beyond Bannon Slough is agricultural land. The flat site is clearly visible from the three roads that border it. Garden Highway is built on a levee that overlooks the site. From I-5, the entire site is clearly visible from the Garden Highway overpass.

Along Bannon Slough and the section of Garden Highway bordering the site, established oak trees reduce the visibility of the site from the south and east. There is a PG&E transmission line running east to west along the northern part of the site. In the northeast corner of the site another transmission line runs south. Only a small section of the latter line is on the proposed site, the rest lying east of Bannon Slough.

Impacts

Proposed Project

General Appearance. The proposed project design is currently conceptual and specific architectural details have not been determined. Following Planned Unit Development (PUD) approval, the specific building designs would be decided. According to the project applicant, the theme of the project would blend into the area and be consistent with the architectural design of the surrounding projects. The project would be clearly visible from the north and southbound lanes of I-5 and along West El Camino. Only that part of the site not obscured by oak trees would be visible from Garden Highway.

Wall at Western Boundary. A 6-foot high masonry or brick wall would be required by the City zoning ordinance along the western boundary of the proposed site. The wall would be aesthetically unappealing. The combination of this wall and the required sound wall on the west end of the Bennett property would create a "fortress effect", making residential use of the Bennett property less desirable.

Theoretically, the City zoning ordinance would require a wall at the eastern boundary of the site as well, separating the project site from the residentially-designated Sammis property. However, Bannon Slough provides considerable buffering between the two parcels, and because construction of a wall would have adverse effects on slough biology, it is likely a variance from the wall requirement would be considered.

I-5 Beautification Corridor. Where the project borders the I-5 interchanges at the south and the north, a 25-foot landscaped buffer zone is proposed. This would form part of the I-5 "Beautification Corridor". The aim of the corridor, to be landscaped with native trees and wildflowers, is to provide a visually attractive buffer along the I-5 entryway to the City. The proposed width of the I-5 buffer zone along interchanges; as described in the South Natomas Community Plan, is 25 feet beyond the existing right-of-way. The proposed project is consistent with this 25-foot requirement.

Loss of Native Vegetation. Although the project site plan calls for preserving mature trees on the site and a 40-foot Bannon Slough Parkway, the site's visual attractiveness would be reduced by elimination of natural vegetation other than mature trees adjacent to the I-5 right-of-way, along the PG&E transmission line corridor, and along Bannon Slough. Within the Bannon Slough area lying outside the 40-foot retained parkway, the proposed project would eliminate 66 percent of the riparian woodland habitat found on the project site, a major adverse visual impact. For further details, refer to the BIOLOGY section (Section Q).

No-Project Alternative

General Appearance. The design of the no-project alternative is currently conceptual. Its theme would be consistent with the residential development in the area. Similar to the proposed project, the no-project alternative would be visible from I-5, West El Camino and Garden Highway.

Wall at Western Boundary. In the case of the no-project alternative, no wall would be required along the western border of the project site.

I-5 Beautification Corridor. In the southern portion of the site where the project borders the I-5/Garden Highway, a 100-foot buffer zone was proposed in the Creekside Schematic PUD. This buffer zone would form part of the I-5 Beautification Corridor, and its width would exceed requirements of the SNCP.

Loss of Native Vegetation. The no-project alternative, like the proposed project, calls for preserving mature trees on the site and a 40-foot Bannon Slough Parkway, but the site's visual attractiveness would similarly be reduced by elimination of native vegetation other than mature trees. For further details, refer to the BIOLOGY section (Section Q).

Comparison

Both alternatives would change the current open space appearance of the project site to one of low-rise development. The proposed project would require an aesthetically unappealing wall at the western boundary of the site. Both alternatives would retain buffer zones adjacent to the I-5 interchanges consistent with SNCP requirements, and both would eliminate significant amounts of Bannon Slough native riparian woodland at the western edge of the site, a major adverse visual impact.

Mitigation Measures

Increase Building Setbacks From Proposed 40-Foot Bannon Slough Parkway

See PUBLIC FACILITIES AND SERVICES section (Section H).

Maintain Native Vegetation Along I-5 Right-of-Way and PG&E Transmission Line Easement, and Within Proposed 40-Foot Bannon Slough Parkway

See BIOLOGY section (Section Q).

Avoid or Minimize Development Within the Riparian Woodland Habitat Lying Outside Proposed 40-Foot Bannon Slough Parkway

See BIOLOGY section (Section Q).

Section O

HYDROLOGY AND WATER QUALITY

Setting

Surface Water

No permanent surface waters exist on the project site. Bannon Slough, forming the eastern boundary of the site, has standing water only during the rainy season, and is dry the rest of the year.

The project site is currently in agricultural use. Runoff from agricultural areas typically contains relatively high concentrations of turbidity, pesticides, nutrients, and salts. Runoff from the site is collected by storm sewers and eventually reaches the Sacramento and American Rivers via the East Drainage Canal and Natomas Main Drainage Canal.

Groundwater and Subsurface Conditions

The South Natomas area is not an important recharge area for the groundwater basin underlying Sacramento (Sacramento City Planning Department 1977). Therefore, the project site is not considered to be a significant groundwater recharge area. While some recharge probably occurs from rainfall and agricultural irrigation, the major sources of recharge in the area are the Sacramento and American Rivers.

The Natomas area has previously been an area of groundwater overdraft due to agricultural pumping. A cone of depression is located in the vicinity of the project site (DWR 1974).

As noted in the South Natomas Community Plan Draft EIR, portions of the project site adjacent to Garden Highway are subject to recurrent seepage conditions, creating a saturation of the ground surface and, at times, standing water. Seepage is caused by river water seeping directly through permeable gravels underneath levees, and occurs only during prolonged periods of high river flows.

Flood Hazard

According to the 1978 Flood Insurance Study for the City of Sacramento, 100-year floods will be contained within

the Sacramento River levees and within the drainage channels in the Natomas area. The project site is thus adequately protected from 100-year floods, assuming adequate drainage facilities are provided discharging to the drainage channels.

Impacts

Proposed Project

Surface Water. The proposed project would increase peak runoff from the site because of the introduction of impervious surfaces. As shown in Exhibit O-1, peak flows are estimated to be 15.6 cfs under City criteria, and 24.44 cfs under Reclamation District 1000 criteria. The proposed project also would tend to increase nonpoint source pollutant loadings. An estimated 11,440 pounds per year of suspended solids would be generated (see Exhibit O-1).

Groundwater and Subsurface Conditions. Groundwater overdrafts would cease as remaining agriculture is replaced by urban development, and water is supplied from surface sources. Lawn irrigation and natural recharge could aggravate high water table conditions and cause property damage.

Groundwater seepage adjacent to Garden Highway could interfere with project construction and the placement of underground utilities, and could cause property damage once the project is constructed.

No-Project Alternative

Surface Water. As shown in Exhibit O-1, the no-project alternative would generate peak runoff flows of 10.4 cfs using City design criteria, or 23.0 cfs using Reclamation District 1000 criteria, and would generate a nonpoint source suspended solids loading of 8,840 pounds per year.

Groundwater and Subsurface Conditions. Groundwater and subsurface conditions would pose potential risks similar to those encountered by the proposed project.

Comparison

The proposed project would generate peak runoff flows 6-50 percent higher than the no-project alternative, depending on the criteria applied; the impact of the increased runoff on Reclamation District 1000 facilities is discussed in the PUBLIC FACILITIES AND SERVICES (Section H).

Exhibit O-1. Peak Runoff Flows and Runoff Pollutant Loadings: Proposed Project Compared to No-Project Alternative

	Proposed Project	No-Project Alternative	Percent Increase Project vs. No-Project
Peak Runoff Flows (cfs) - City Design Criteria[1]	15.6	10.4	50
Peak Runoff Flows (cfs) - RD 1000 Criteria[2]	24.4	23.0	6
Total Suspended Solid Pollutant Loading (lbs/year)[3]	11,440	8,840	29

[1]Based on City design criteria of 0.3 cfs per acre for commercial uses and 0.2 cfs per acre for residential uses.

[2]Betts pers. comm. See PUBLIC FACILITIES AND SERVICES section (Section H), drainage subsection for basis.

[3]Based on emission rate of 220 lbs. per acre per year for commercial uses and 170 lbs. per acre per year for multifamily residential uses (Sacramento City Planning Department 1981, based on unpublished data of Sacramento County Regional Sanitation District).

The proposed project is estimated to generate nonpoint source pollutant loads 29 percent higher than the no-project alternative. The absolute amount of this increase, 2,600 pounds per year, is relatively small compared to the total urban runoff pollutant load to the Sacramento River of 17.8 million pounds per year (Sacramento City Planning Department 1977).

Both alternatives would be subject to risks from seepage conditions and high groundwater.

Mitigation Measures

Payment of One-Time Drainage Fee

See PUBLIC FACILITIES AND SERVICES section (Section H).

Implement Measures to Reduce Nonpoint Source Pollutant Loads

Although the individual contribution of the proposed project to urban runoff pollutant loads is relatively small, cumulative increases in nonpoint source pollutant loads from developments throughout the Sacramento River drainage could be significant. For this reason, measures to reduce nonpoint source pollutant loads, such as frequent street-sweeping and catch basin cleaning, greater on-site retention of runoff, on-street parking restrictions, and effective litter control may be considered.

Implement Engineering Measures to Protect Against Seepage and High Groundwater

These measures should include proper site grading to facilitate drainage, proper design of foundation structural details, and installation of subsurface tile drainage systems (Sacramento City Planning Department 1977).

Section P

GEOLOGY AND SOILS

Setting

Geology and Seismicity

The Creekside office park study area is located in the broad structural trough of the Sacramento Valley. The surface post-Eocene deposits, which consist of beds of gravel, sand silt, clay, tuff, conglomerate, sandstone, silkstone and claystone, lie unconformably over sedimentary rocks and deposits of either Cretaceous or Eocene age.

There is no evidence of faults underlying the Sacramento metropolitan area; however, there are faults and fault zones in close proximity to Sacramento. These include: the Dunnigan Hills fault about 30 miles to the southwest, the Midland fault 35 miles to the southwest, and a number of small faults to the east along the Sierra Nevada foothills (Greensfielde 1974). Urban structures in the study area will lie on unconsolidated sediments and are therefore subject to liquefaction, causing more severe ground deformation through seismic activity than areas on consolidated material (Sacramento City Planning Department 1977).

Soils

The soils of the study area are of the Columbia series. The Columbia series consists of alluvial soils recently accumulated from mixed igneous and sedimentary rock material. In the study area the Columbia soils overlie the darker, finer-textured soils of the Sacramento series. Soils of the Columbia series are light brown and friable; they do not puddle easily and may be worked at high moisture contents (U. S. Soil Conservation Service 1954).

The soils contain some clay, which shrinks or swells with changes in moisture content. Potential shrink-swell problems would be more prevalent on the north portion of the site, where more clay is located. Rapid withdrawal of water from these soils will cause subsidence.

Impacts

Proposed Project

Soil Erosion. Construction will expose soil surfaces, presenting a potential for soil erosion on the study area. The erosion hazard is expected to be less than significant.

Expansive Soils. The site's low-to-moderately expansive soils, on which all the buildings will be constructed, are prone to differential movement, causing cracking of foundations and pavements with seasonal changes in moisture content. The larger the building, the more sensitive it will be to these expansive soils.

Subsidence and Liquefaction. The subsidence potential is minimal. If during construction it is necessary to withdraw substantial quantities of water from the soil, then state and federal programs that require groundwater replacement should be implemented. The potential for liquefaction occurring is also minimal. However, if there was a severe earthquake damage could occur.

No-Project Alternative

Geological and soil constraints, similar to those described above, would be present for the no-project alternative.

Comparison

Geological and soils constraints would be similar for both the proposed project and the no-project alternative, and are capable of mitigation by the measures listed below.

Mitigation Measures

Implement Standard Construction Practices to Reduce Erosion

A number of standard construction practices will reduce the potential for erosion. These mitigation measures include:

1) Minimizing the length of time that the surface is exposed.

2) Periodic sprinkling of the disturbed area.

3) Covering disturbed soils with a mulch to retard erosion.

4) Limiting and enforcing low speeds of vehicles on exposed soil surfaces.

Design Structures to Minimize Soils and Geologic Hazards

Development on expansion-prone soils is not unusual and can be mitigated by routine engineering design procedures. The problem of liquefaction can be mitigated by strengthening the building foundation (Sacramento City Planning Department 1974); design level geotechnical studies should be made to evaluate liquefaction potential for each project structure. Lastly, implementation of 1973 Uniform Building Code requirements adopted by the City would reduce the potential for severe damage sustained by a large magnitude earthquake.

Section Q

BIOLOGY

Setting

The biological setting of the project site is described in detail in Appendix V. Three habitat types are present on the site: agricultural, fence row, and riparian woodland.

Agricultural Habitat

Agricultural habitat occupies about 45 acres (87 percent) of the project site. A nonirrigated safflower crop occupies about 39 acres, and a waste field of past agricultural operations occupies about 6 acres. The biological value of this habitat type is relatively low.

Fence Row Habitat

About 2 acres of fence row habitat occupies the I-5 right-of-way along the southwestern portion of the site and the PG&E transmission line rights-of-way. Strips of oaks, elderberry shrubs, and tall grasses found in these locations provide habitat for a variety of bird species, as well as small mammals, reptiles, and amphibians.

Riparian Woodland Habitat/Bannon Slough

Riparian woodland occupies about 5 acres (10 percent) of the project site. The total Bannon Slough woodland area south of West El Camino Avenue is 9 acres, with the remaining 4 acres found on the Sammis property bordering the project site to the east.

The riparian woodland is dominated by a tree overstory consisting of over 30 mature oak trees (greater than 6 inches) and several large cottonwoods. The oak trees are in vigorous condition, with good form and color; although some have been fire damaged, all are viable and expected to survive for a substantial period to time under present conditions. Natural oak regeneration is represented by abundant oak saplings and seedlings throughout the slough area. In addition to the oaks and cottonwoods, other vegetation found in the slough area includes black walnut and fig trees, and blue elderberry, button bush, and blackberry shrubs.

The riparian woodland provides suitable habitat for numerous wildlife species, including a large variety of bird species such as mourning dove, scrub jay, western kingbird, ring-necked pheasant, and American kestrel, all of which were observed in field visits to the site.

Rare, Threatened, or Endangered Species

No rare, threatened, or endangered species are believed to inhabit or use the site (see Appendix V). Although the South Natomas Community Plan indicates the possible presence of the giant garter snake, a state-listed rare species, its typical habitat is open water bordered by grasses and forbs, and this habitat is absent from the project site.

Impacts

Proposed Project

Agricultural Habitat. The proposed project will have minor impacts on biological resources of the agricultural habitat type. Few naturally occurring species use the agricultural fields at this time. Loss of the agricultural fields will remove foraging habitat for some species (e.g., ring-necked pheasant, black-tailed jackrabbit) that also use fence row and riparian woodland habitats for nesting and cover.

Fence Row Habitat. The proposed project may have a major impact on the present fence row habitats. A landscape corridor is proposed for the edge of the project site along I-5. If the present naturally occurring fence row vegetation (small trees, shrubs, dense clumps of grasses and weeds) is replaced by ornamental irrigated plants, species presently using fence row habitat would be replaced by species adaptable to urban environments (e.g., mockingbird, house sparrow).

Along the PG&E transmission line corridor, several oak trees are proposed to be retained, according to the site plan. Although some wildlife use of this area would thereby be retained, use by some species could not continue, and the viability of the retained oak trees would be threatened by construction activities and irrigation; these considerations are discussed in further detail in the following section discussing potential impacts on the Bannon Slough oak trees.

Exhibit Q-2. Loss of Riparian Woodland Habitat Caused by Proposed Project

	Acreage (approximate)	Percent of Project Site Woodland	Percent of Total Woodland
Habitat loss caused by project:			
- office park development	3	60	33
- roadway across slough area	0.3	6	3
Habitat to be retained by 40-foot Bannon Slough Parkway	1.7	34	19
Present habitat on project site	5	100	55
Present habitat on adjacent property (Sammis parcel)	4	-	45
Total riparian woodland habitat in Bannon Slough area between Garden Highway and West El Camino Avenue	9	-	100

SOURCE: Jones & Stokes Associates, Inc.

Fragmentation of Habitat by Roadway. Construction of the roadway in the proposed location across the Bannon Slough area would fragment the largest contiguous area of existing woodland habitat. This fragmentation would disrupt the habitat corridor from Discovery Park to the Bannon Slough Parkway north of West El Camino Avenue. Wildlife diversity in the parkway north of El Camino Avenue would decrease as the habitat connection to the Discovery Park, a source area for migrations, is broken.

Viability of Retained Mature Trees. Construction activities and irrigated landscaping could threaten the mature trees retained within the proposed project. Oak tree root systems inhabit generally that area demarcated by the downward vertical project of their foliage canopies. The outline of a tree canopy is called the tree's dripline. Construction activities (e.g., foundations, ditches, grading) within a tree's dripline will destroy portions of the tree's root system, often causing its death. Furthermore, oak trees are susceptible to root fungi attack when irrigated; naturally they occur in non-irrigated environments. Commonly, irrigated landscaping within an oak tree's dripline causes death of the tree (Heritage Oaks Committee 1976; Rogers 1980).

Loss of Habitat Within Proposed 40-Foot Bannon Slough Parkway. A parkway 40 feet wide outward from the property line (i.e., the centerline of Bannon Slough) has been proposed. Such a parkway could maintain some riparian woodland habitat, depending on how it was managed. If ornamental landscaping with a recreational bike trail through the parkway were undertaken, the present woodland habitat value would be eliminated. Elimination of dense understory vegetation and disturbance by human recreation and domestic pets would cause this habitat value loss. The present wildlife species diversity would be reduced, and urban-adapted species would replace wildland-adapted species.

No-Project Alternative

Because the no-project alternative also calls for preservation of only a 40-foot parkway corridor along Bannon Slough, impacts caused by the proposed project (discussed in previous section) also would result from the no-project alternative. The impacts of outdoor recreation and domestic pets on retained woodland habitat would be greater with a residential development than with the proposed office park.

Comparison

Both alternatives would have similar major adverse impacts on biological resources through elimination or major modification of fence row habitats; direct loss of 66 percent of the high quality Bannon Slough woodland habitat present on the site; fragmentation of the Bannon Slough woodland habitat by the east-west collector road; threats to the viability of the mature trees retained by the alternatives; and loss of habitat within the proposed 40-foot Bannon Slough Parkway. The no-project alternative would cause greater disturbance to wildlife habitat retained by the proposed 40-foot parkway because of increased use by the public and domestic pets.

Mitigation Measures

Fence Row Habitat

Maintain Native Vegetation Along I-5 and PG&E Transmission Line Easement. Wildlife species native to these fence row habitats could be maintained under a program of native vegetation management in these areas, reducing replacement by urban adapted wildlife.

Riparian Woodland Habitat

Avoid or Minimize Development Within the Riparian Woodland Habitat Lying Outside Proposed 40-Foot Bannon Slough Parkway. This measure could best be implemented by redrawing the boundaries of the proposed 40-foot Bannon Slough Parkway to conform more closely to the existing boundaries of the riparian woodland habitat. With this measure, the present high habitat quality and high wildlife species diversity would be maintained to a large degree. Opportunities to observe native wildlife and "natural" areas would be available to local residents and visitors. Expertise is available to maintain native vegetation in a manner compatible with aesthetics and human safety. Savings in energy and labor may result from such natural landscape management.

The financial feasibility of expanding the Bannon Slough Parkway is uncertain. If the site plan were revised to provide for an equivalent amount of office space using more 2-story structures, the project could still be financially feasible. Also, building could be allowed closer to the property line at the northern portion of the parkway, where the 40-foot boundary currently includes small acreages of agricultural habitat.

Locate Collector Road Crossing Further North Where Riparian Woodland Habitat is Nonexistent or Narrow. A relatively large contiguous area of riparian woodland habitat could be maintained if the road were relocated; wildlife species requiring the larger habitat area, as opposed to separated small areas, would be maintained. This measure could, however, conflict with City policies discouraging cul-de-sacs longer than 500 feet, because the Azevedo Drive cul-de-sac could exceed 500 feet if the collector road were moved further north.

Avoid Construction Activities and Irrigated Landscaping Within Driplines of Retained Oak Trees. Maintaining the integrity of oak tree root systems during construction, and management of native nonirrigated vegetation beneath oak trees, would ensure the oak tree's continued existence on the project site. The Sacramento City Heritage Tree Ordinance recommends such measures.

Maintain Natural Vegetation Occurring Within Proposed 40-Foot Bannon Slough Parkway. Some wildlife species native to riparian woodland habitat could be maintained under a program of native vegetation management within the 40-foot Bannon Slough Parkway. This measure would require elimination of artificial landscaping and the Bannon Slough bike trail within the parkway. The bike trail could be located along the edge of the retained habitat, or along planned roadways.

Limit Public Access to Areas of Native Woodland Habitat. Barriers to human and pet access, such as dense shrubbery or fences, could be used to limit the disturbance of retained woodland habitat. Wildland adapted and disturbance susceptible species could be maintained by this measure, and replacement by urban adapted species would be reduced. Total elimination of public access would be inconsistent with the recreational objectives for Bannon Slough Parkway envisioned by the SNCP. If a limited number of access points to the parkway and a marked footpath were provided, the parkway could be used for hiking, nature study, and picnicking without causing major disruptions to wildlife.

Section R

CULTURAL RESOURCES

Setting

A cultural resources investigation and record search was undertaken for this EIR by the California Archeological Site Survey (CASS) regional office. The records search found that two surveys had been carried out on the vicinity of the proposed site by Steven B. Dondero and Ann Peak and Associates. The investigation concluded that no previously recorded cultural resources, either prehistoric or historic, are known to occur on the project site.

Impacts

Neither the proposed project nor the no-project alternative is likely to adversely affect cultural resources, given the low sensitivity of the project site.

Mitigation Measures

Participation of Archeologists During Construction

The CASS regional office recommends that "if during construction unusual amounts of historic, glass, ceramics, metal, nails, etc., or prehistoric artifacts such as arrowheads, beads, mortar or human bones are discovered work should be halted immediately until a professional archeologist can be called in to assess the find and determine its significance. This would include recommendations for the preservation or mitigation of the remains if they are judged to be significant".

Section S

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APPENDICES

Appendix I

FISCAL IMPACT ASSESSMENT

Setting

Introduction

Since the passage of Proposition 13, several important changes have occurred in the way which local governments provide for new development. Because local governments can no longer rely upon primarily property tax revenue to offset additional public service expenditures, higher development fees and assessments are now typically levied. In addition, most local jurisdictions require some developer responsibility for project-related public improvements.

Increasingly, local governments have become more dependent on external sources of government funds. Since Proposition 13, state "bailout funds" have been made available to local governments to ease the impact of property tax reductions. In this past year, the state surplus has been exhausted. This situation, in conjunction with a slowing economy and the changed administration in Washington, have contributed to considerable revenue uncertainty at the local level.

Planning for revenue uncertainties requires new and innovative approaches to local public financing. Concepts such as mutual benefit districts and capital improvement development funds are being investigated as alternatives for financing capital projects such as fire stations and libraries. Additional developer requirements for on-site features such as sprinklers and security patrols can help reduce the demands on key public services. As conventional sources of funding become more difficult to obtain, these new approaches to local government financing are increasingly likely to be considered.

Assumptions and Methods

The objective of this analysis is to compare the difference in fiscal impact between implementation of the proposed Creekside office park project and implementation of the no-project residential alternative. To accomplish this, the following assumptions have been made.

First, only direct impacts are considered. No secondary effects such as additional revenues resulting from increases in value of adjacent property have been considered.

Second, estimates of costs and revenues are based on current conditions and are represented in 1981 dollars; that is, the projects are evaluated as if they were completed and operating today. Although it is recognized that costs will increase over the years because of inflation, it is assumed that inflationary increases in costs and revenues will be proportional.

Third, only local public costs and revenues are considered. Although the analysis identifies the responsible entity for all public improvement and operating costs, only the costs which would be paid for by local taxpayers are considered. Because some municipal agencies operate as self-supporting enterprise entities (e.g., water, sewer and waste removal) different project demands on these services will not affect the local taxpayer. Therefore, the difference in service demand for these services is not considered to have a fiscal effect on the City.

Because of special funding conditions for the school districts, Regional Transit District and Reclamation District 1000 (which provides drainage services), these entities were evaluated independently from municipal services.

Most of the cost and revenue information for this analysis was obtained through interviews with local public officials. For some estimates, however, data from other fiscal studies prepared for the City of Sacramento have been relied upon.

Current (Fiscal Year 1981-1982) Budget Highlights

The following Exhibit I-1 and budgetary highlights are excerpted from the preliminary Fiscal Year 1981-1982 budget for the City of Sacramento. Budgetary highlights are as follows:

- Overall 2.1 percent increase over Fiscal Year 1980-1981 final budget.
- No new programs or services proposed.
- Staffing in police and fire departments held at current levels.
- Slight reduction in general government appropriations.

Exhibit I-1. Preliminary FY 1981-82 City of Sacramento Budget

	Final Budget 1980-81	Preliminary Budget 1981-82	Change From 1980-81 Budget	
			Dollar	Percentage
General Government	$ 7,547,786	$ 7,155,449	$ (392,337)	(5.2%)
Public Safety	44,982,429	45,809,965	827,536	1.8%
Public Works	38,309,939	36,066,737	(2,243,202)	(5.9%)
Community Services	12,403,106	12,545,306	142,200	1.1%
Library & Culture	6,787,569	6,839,000	51,431	.8%
General Services	-0-	4,294,044	4,294,044	---
Non-Departmental	23,494,628	22,688,727	(805,901)	(3.4%)
Operating Total	$133,525,457	$135,399,228	$1,873,771	1.4%
Capital Improvements	12,861,200	14,120,050	1,258,850	9.8%
Grand Total	$146,386,657	$149,519,278	$3,132,621	2.1%

SOURCE: City of Sacramento Preliminary Fiscal Year 1981-1982 Budget.

- Fee increases for several enterprise funds (waste removal, sewers, parking) to maintain their self-supporting status.
- Annual tax override proposed to collect $850,000 to pay for 1965 Citywide drainage bonds.
- Loss of approximately $2.8 million in state bailout assistance.
- A new City Department of General Services is created.
- Elimination of contributions to community-based organizations is proposed.
- Seventy-three percent of general revenue-sharing funds from the federal government will be used for operating expenses.
- The capital improvement budget totaling $14 million has been raised by $1 million to provide for a communications center and a new fire station in the Natomas area.

Assessment of Impacts

Public Service Expenditures

Implementation of either of the two project alternatives would result in additional expenditures by municipal agencies and local districts. These expenditures include both one-time capital improvement expenditures and recurring annual operating and maintenance costs. Exhibit I-2 shows agency responsibilities and sources of funds for public service delivery and Exhibit I-3 shows the cost effect of implementing the proposed project.

Municipal Agencies.

Police. Development of the proposed site under either alternative would not necessitate any additional capital improvements to the downtown central police station which services the site. As shown on Exhibit I-3, the proposed project would require some additional traffic control services. This increase in police services, however, would be more than offset by an increase in service calls under the no-project alternative. The net result from implementation of the proposed project would be the reduction of one additional sworn officer at an annual salary of approximately

Exhibit I-2. Agency Responsibility and Source of Funds for Public Service Delivery[1]

Municipal Function and Services	City or District Responsibility	Source of Funds	
		Capital Improvements	Operating and Maintenance
PUBLIC SAFETY			
- Police	Police Department	Governmental	Governmental
- Fire	Fire Department	Governmental	Governmental
PUBLIC WORKS			
- Streets and Lights	City Engineer Department	Governmental Developer	Governmental
- Water	City Engineer Department	Developer	Fee
- Sewer	City Engineer Department	Developer	Fee
- Waste Removal	City Engineer Department	Fee	Fee
COMMUNITY SERVICES			
- Park	Community Services Department	Governmental Developer	Governmental
LIBRARY AND CULTURE			
- Library	Library Department	Governmental	Governmental
DISTRICT SERVICES			
- Schools	Natomas Union District	State Building Fund	State Subventions
	Grant Joint Union High School District	State Building Fund	State Subventions
- Public Transit	Regional Transit District	Federal Funds (UMTA) Local Funds	Box Fares; City, County, State and Federal Funds
- Drainage	Reclamation District 1000	Developer	Assessment District

[1]Based on Fiscal Year 1981-1982 preliminary budget. Source of funds for some municipal functions can vary from year to year.

Exhibit I-3. Comparison of Impacts on Municipal Services and Cost Effect from Implementation of Proposed Project

Municipal Services	Comparison of Impacts: Proposed Project	Comparison of Impacts: No-Project Alternative	Difference in Impact as a Result of Implementation of Proposed Project	Cost Effect from Implementation of Proposed Project: One-Time Capital Cost	Cost Effect from Implementation of Proposed Project: Annual Operation and Maintenance Costs
Police Protection	Increase demand for traffic control	Increase demand for service calls	Reduction of 1 sworn officer	No effect	-$25,000
Fire Protection	Require fire flow of 4,500 gpm contribute to need for new fire station	Require fire flow of 1,500 gpm contribute to need for new fire station	Increase fire flow requirements by 3,000 gpm	No effect	No effect
Streets & Lights	Increase use of roadways and need for street maintenance	Increase use of roadways and need for street maintenance	Increase slightly need for street maintenance	No effect	Minor effect - not quantifiable
Water	Total consumption - 78-acre-feet per year	Total consumption - 213-acre-feet per year	Reduction of 135 acre-feet per year	No effect	No effect
Sewer	Generate 79,200 gallons/day	Generate 125,235 gallons/day	Reduction of 46,035 gallons/day	No effect	No effect
Waste Removal	Require pick-up and disposal of additional solid wastes	Require pick-up and disposal of additional solid wastes	Similar to no-project alternative	No effect	No effect
Parks	No significant impact since no additional demands on parks and recreational facilities would be generated	Require acquisition, development and maintenance of 12.14 acres of new parks	Eliminate need to acquire, develop, and maintain 11.35 acres of new parks	-327,780	-$48,560
Library	Increase need for library services	Increase need for library services	Similar to no-project alternative	No effect	No effect
Total Cost Effect on Municipal Services from Implementation of Proposed Project				-327,780	-$73,560
District Services					
Schools	No impact	Increase enrollment by 137 students in Natomas Union School District Increase enrollment by 100 students in Grant Joint Union High School District	Decrease enrollment in local school districts by 237 students	See Exhibit I-4	See Exhibit I-4
Regional Transit	Some increase in ridership demand	Increase ridership demand	Decrease in daily ridership demand	See Exhibit I-4	See Exhibit I-4
Drainage	Increase storm runoff pumping requirements by 11.44 cfs	Increase storm runoff pumping requirements by 10 cfs	Increase storm runoff pumping requirements by 1.44 cfs	See Exhibit I-4	See Exhibit I-4

$25,000. To the extent that additional administrative costs would be incurred from hiring one additional officer, this annual cost (based solely on annual salary) would be underestimated.

Fire. Development of the proposed site under either alternative would contribute to an existing need for one additional fire station in the South Natomas area. Because public improvement expenditures for water laterals to provide adequate fire flows to the site would be borne by the developer, no additional costs to the City would be incurred. Operating costs for fire protection under both alternatives would be affected similarly.

Streets and Lights. Standard roadway improvements (e.g., street widening, curbs, gutters, sidewalks) on arterials adjacent to the proposed development are typically the responsibility of the developer. Where arterials are greater than 40 feet in width, the City generally reimburses the developer for improvements to the roadway such as medians and inside lanes. Although expenditures for signals are usually made by the City, in some cases, developers have been required to install them. Both projects would result in similar needs for street and light improvements, which would likely be a shared responsibility between the developer and the City.

Implementation of the proposed project would generate some additional traffic; as a result, maintenance requirements for streets and lights could be increased slightly. This increase, however, would not have a significant effect on annual operating costs of the City.

Water. Capital expenditures for laterals to hook up to the water main currently being extended to the South Natomas area are borne by the project developer. As a result, no additional costs would be incurred by the City if either project were implemented.

The City's annual operating and maintenance requirements for water service are met through fees which essentially offset the costs. As a result, implementation of either project would not impose any additional costs on the City.

Sewer. Sewer connection fees are imposed on all new developments to cover costs for regional trunklines, interceptors and treatment. Sewer connection fees represent the "buy-in" cost to the regional system. No additional costs would be incurred by the City. Because sewer service is operated on a fee basis, implementation of either alternative would not impose additional operating costs on the City.

Waste Removal. If the proposed project is implemented, waste removal could be provided by either a private collector or the City. Waste removal under the no-project alternative would be provided by the City. Because the City charges a waste removal fee which covers both capital and operating expenditures, additional demands on waste removal services from either project would not result in any additional municipal cost.

Parks. The City uses 5 acres per 1,000 population as a standard for determining park needs. To acquire and develop new parks, a parkland dedication ordinance and a recreational development tax are applied to new residential development. Under a worst case situation, City staff (Linggi pers. comm.) estimates that only 70 percent of the acquisition and development costs of new parks are currently provided by the parkland dedication ordinance and recreational development tax. At a cost of approximately $90,000 per acre, each new acre of parkland would therefore cost the City approximately $27,000, with the developer responsible for the remaining $63,000.

The net result from implementation of the proposed project would therefore be to eliminate a one-time capital expenditure by the City for 12.14 acres of park, at a savings of $327,780. Although the proposed project would avoid City parks-related capital costs, the reduction of $764,820 in developer contributions would make it more difficult to finance the park system planned by the SNCP.

In addition to eliminating the need for acquisition and development of parks, implementation of the proposed project would avoid additional costs for operation and maintenance of the parks. Current costs of operation and maintenance are estimated at $4,000 per acre; implementation of the proposed project would thereby effectively reduce the City's annual operating budget for parks by $48,560.

Library. Development of either alternative would increase the need for library service in the South Natomas area. Although residential use is generally considered more important in determining the need for new library facilities, some office complexes have special research needs which libraries try to accommodate. Implementation of either project would thus affect annual operation and maintenance costs of libraries similarly.

Special Districts. Fiscal effects of the proposed project on special districts are summarized in Exhibit I-4.

School Districts. Implementation of the proposed project would not place additional demands on the school districts. Implementation of the no-project alternative would affect both the Natomas Union School District and the Grant Joint Union High School District.

Exhibit I-4. Fiscal Effect on Districts From Implementation of Proposed Project

	Revenues	Costs		Net Effect
		One-Time Capital	Operating	
Schools				
-Natomas Union School District	Decreased state funds to district by approximately $1,600 per student annually or $219,200	If permanent facility is not available, would eliminate need for lease of 9 new temporary classrooms at $2,000 per unit; if permanent facility is available, no effect	Would increase operating costs per student	If permanent facility is not available, would eliminate cost of $18,000; if permanent facility is available, no net effect
-Grant Joint Union High School District	Decreased state funds to district by approximately $2,000 per student annually, or $200,000	No effect	Would increase operating costs per student	Because of dependence on state funding, no net effect
Sacramento Regional Transit District	Decrease fare box revenues slightly	No effect	No effect	Because of primary dependence on external sources of funding, no significant effect
Reclamation District 1000	Increase one-time revenues by approximately $7,000	$7,000 capital investment in pumping capacity	No effect	No net effect

Natomas Union School District. The Natomas Union School District provides schooling for students from kindergarten through the 8th grade. Based on a student generation rate of 0.15 elementary school students per household, the no-project alternative would generate approximately 137 students.

The district currently uses temporary classroom facilities which are leased from the state at a cost of $2,000 per unit. District funds, obtained primarily from state funds (90-95 percent), with some local property tax money (about 5 percent), are used to lease the classrooms. The developer has been an additional source of funds for classroom facilities; a state law allows for assessment of impact fees on new homes when schools are at capacity. To date, however, the Natomas Union District has not applied for impact funds, but rather has relied on voluntary contributions from developers. Because of carryover funds from previous years, the district will not require contributions from developers for the 1981-1982 fiscal year.

Although state disbursements for permanent classrooms are provided eventually, they typically lag several years behind need. As a result, temporary classrooms are common. Based on a need factor of 55 square feet per student for kindergarten through 6th grade and 75 square feet per student for grades 7 and 8, the additional 137 students, assuming 80 percent for grades K through 6th and 20 percent for grades 7 and 8, would require 8,075 square feet of classroom. At 960 square feet per classroom, the additional students would require 9 new temporary classrooms. The lease cost to the district at $2,000 per classroom would be $18,000. Because no additional state funds would be provided, this cost would be met from existing funds of the district. If permanent school facilities are available, the lease cost to the district would be avoided.

Grant Joint Union High School District. The Grant Joint Union High School District provides schooling for students in grades 9 through 12. Based on a student generation rate of 0.1 student per household, the no-project alternative would generate approximately 100 students. At present, excess capacity exists within the school district; no plans to build or add on are currently being considered (Matlock pers. comm.).

District funds are provided primarily by state subventions through a complex formula involving approximately 80 percent state funds and the remainder based indirectly on local property tax assessments. The current revenue limit for the district is $1,982 per student. Although increases in local assessed value from additional residential development do not directly change the revenues per student received from the state, an increase in local assessed value does make the district less vulnerable to variable state financing.

Two options would be available to the district if financing problems occur. First, an impact fee could be imposed on new residential development to cover costs. The second option would be to borrow money from the state. The Leroy Greene School fund has been established to provide for such school district borrowing.

Summary. The proposed project would have no net effect on local school district financing. Because of the school districts' dependence on state funds, any reduction on state funds from implementation of the proposed project would be essentially offset by reductions on total operating costs.

Regional Transit District. Currently, the Regional Transit District of Sacramento provides transit services to the project area. Two lines, routes number 14 and number 86-87, service West El Camino adjacent to the project site. Route number 86-87 is a 1-year experimental route funded by the state.

As shown on Exhibit I-5, it is projected that approximately 32 percent of Regional Transit's revenues for the Fiscal Year 1981-1982 would come from the fare box. The remainder would come from a variety of local, state and federal sources.

If the proposed site is developed, the developer would be required to deposit $5,000 per required shelter in a trust account with Regional Transit. This money would be used to construct and to help maintain the new bus shelters. According to a Regional Transit spokesperson (Martin pers. comm.), the fee charged ($5,000 per shelter) is no longer sufficient to cover construction and improvement cost of shelters. An increase in this fee is likely in the near future.

The proposed project would result in a reduced number of riders. This difference in demand could play some role in determining the viability of line 86-87, because line 86-87 would have to be funded locally following the 1-year experiment.

Drainage. Reclamation District 1000, a special district which serves the northwest quadrant of the metropolitan area, would collect stormwater drainage from the site and pump it to the Sacramento River. Reclamation District 1000 provides this service based on a 1973 agreement with the City.

Development of either the proposed project or the no-project alternative would result in runoff in excess of that which the district had agreed to accept from the site. The

Exhibit I-5. Projected Source of Funding for Regional Transit District Fiscal Year 1981-1982

Source	% of Total Operating Budget
Fare Box	32.3%
Local General Funds (City of Sacramento and County of Yolo)	<1%
Contractor Jurisdictions (Davis, Woodland, Roseville, Yolo County)	2.3%
Local Transportation Funds (¼ of 1¢ of sales tax within County of Sacramento)	39%
State Transit Assistance Fund (Gasoline tax fund)	4.4%
State Money From Demonstration Project in South Natomas Area	>1%
Federal Urban Mass Transportation Administration (UMTA)	17.6%
Nontransportation Revenues (Interest from investments)	>1%
TOTAL OPERATING BUDGET	98.6%[1]
Capital Program - 80% Federal Funds (UMTA) 20% District Earmarked Funds	

[1]Does not add up to 100% due to rounding.

SOURCE: Sacramento Regional Transit District.

1973 agreement was based on development of the site for low density residential units. Implementation of either the proposed project or the no-project alternative would require additional pumping capacity. At approximately $4,000-$5,000 for each additional cubic foot per second, it is estimated that the proposed project would be required to pay a one-time drainage fee of $57,200; the one-time drainage fee for the no-project alternative is estimated at $50,000 (Betts pers. comm.).

General capital expenditures and ongoing operation and maintenance costs for Reclamation District 1000 are met through fees levied on ratepayers in the assessment district. These fees are unlikely to be affected by either the proposed project or the no-project alternative.

Public Revenue Generation

Sources of revenue affected by the two alternatives include one-time taxes and fees, and annual revenue sources.

One-Time Taxes and Fees. One-time taxes and fees include building permit fees, construction excise tax, recreational development tax, sewer connection fee, and seismic motion instrumentation tax. With the exception of the recreational development tax, the effect on these taxes from implementation of the two alternatives is presented in Exhibit I-6. Project effect on the recreational development tax has not been included in Exhibit I-6 because it was previously considered in determining municipal costs for acquisition and development of parks. This tax, however, has been estimated separately and is discussed below.

Building Permit Fees. Building permit fees are calculated based on construction cost. A graduated fee schedule is used for construction costs up to $100,000. A fee of $2.30 is charged for each $1,000 or fraction thereof in excess of $100,000.

For residential developments, the fee is calculated on the basis of $18 per square foot construction cost, which is approximately 50 percent of actual construction cost. The fee is assessed on each individual building. For nonresidential development, the fee is calculated on the actual construction cost. A 65 percent plan-check supplement is also charged for nonresidential developments. This additional fee, however, is used to hire consulting engineers to review plans and therefore only offsets additional costs.

Exhibit I-6. Comparison of Project Impact on Public Revenue Generation

Revenue Source	Proposed Project ($)	No-Project Alternative ($)	Revenue Difference From Implementation of Proposed Project ($)
One-Time Taxes & Fees			
- Building Permit Fee	105,480[1]	63,900[2]	+ 41,580
- Construction Excise Tax	429,800	155,000	+274,800
- Sewer Connection Fee	57,240	103,320	- 46,080
- Seismic Motion Instrumentation Fee	2,578	1,086	+ 1,492
TOTAL ONE-TIME TAXES & FEES	595,098	323,306[3]	+271,792
Annual Taxes & Fees			
- Property Tax	Total $564,880[4] Local Share (33%) = 186,410	Total $485,950 Local Share (33%) = 160,363	+ 26,047
- Subventions			
• State	No effect	30,588	- 30,588
• Federal	No effect	No effect	-
- Utility User Tax[5]	12,894	14,490	- 1,596
- Property Turnover Tax	21,746	24,295	- 2,549
TOTAL ANNUAL TAXES & FEES	221,050	229,736	- 8,686

[1]Based on 40 buildings at an average of 15,350 square feet per building and an average permit cost of $2,637 per building. Construction cost = $70 per square foot.

[2]Based on 71 buildings at an average of 12,148 square feet per building and an average permit cost of $900 per building. Construction cost = $18 per square foot.

[3]Does not include recreational development tax revenues and in lieu fees from parkland dedication ordinance which have been included in calculating the City's cost for acquisition and development of required new parks.

[4]Market value based on $92 per square foot.

[5]Based on cost per square foot per year for an all-electric source with heat pump: residential = $.336 per square foot per year; nonresidential = $.42 per square foot per year. Estimates provided by SMUD.

As shown in Exhibit I-6, the proposed project would generate $105,480 in building permit fees; the no-project alternative would generate $63,900. The revenue difference from implementation of the proposed project is $41,580.

Construction Excise Tax. The construction excise tax is calculated at the rate of 1 percent of construction and development costs for nonresidential developments. For residential developments, the tax is also 1 percent of construction costs based on $18 per square foot construction cost.

As shown in Exhibit I-6, the proposed project would generate $429,800 in construction excise taxes; the no-project alternative would generate $155,000. The revenue difference from implementation of the proposed project is $274,800.

Sewer Connection Fee. The sewer connection fee represents a one-time charge for hookup to the regional system. The fee is $120 per housing unit and $1,080 per acre for nonresidential development.

As shown in Exhibit I-6, the proposed project would generate $57,240 in sewer connection fees; the no-project alternative would generate $103,320. The revenue difference from implementation of the proposed project is a loss of $46,080.

Seismic Motion Instrumentation Fee. The seismic motion instrumentation fee is calculated on the basis of $0.07 for each $1,000 of construction cost. Residential construction cost is based on $18 per square foot; nonresidential construction cost is based on the actual construction cost.

As shown in Exhibit I-6, the proposed project would generate $2,578 in seismic motion instrumentation fees; the no-project alternative would generate $1,086. The revenue difference from implementation of the proposed project is $1,492.

Parkland Dedication Ordinance. The parkland dedication ordinance requires new residential developments to "dedicate land for a local park sufficient in size and topography to serve the residents of the subdivision". The land required under the ordinance is calculated based on the number of acres and maximum allowable densities in each zoning classification. In many cases, in lieu fees are substituted for a portion or all of the land dedication requirements. The in lieu fees are calculated by multiplying the amount of land required for dedication by the fair market value (per acre) of the property to be subdivided.

Recreational Development Tax. The recreational development tax is levied on new residential development to offset development costs of new parks. The residential development tax in conjunction with the park land dedication ordinance provides approximately 70 percent of acquisition and development costs of parks.

The recreational development tax is calculated on the basis of bedrooms per unit. It is estimated that the no-project alternative would generate $247,250 in recreational development taxes.

Annual Revenue Sources. Annual revenue sources include property taxes, state and federal subventions, utility user taxes, property turnover taxes, sales taxes, business license taxes, and business inventory funds. Because sales taxes are based on gross receipts, it is not expected that either project would generate significant revenues from this tax. In addition, revenues from business license taxes are not expected to be significant even though a portion of these tax revenues are collected from businesses on other than a gross receipts basis. As a result, sales taxes and business license taxes are not considered in this analysis.

Because of the recent repeal of the tax on business inventories, local governments no longer receive tax revenues on the basis of individual business inventories. Instead, local governments are reimbursed by the state for the lost tax revenues based on a set formula, which increases annually at a 2 percent rate. As a result, implementation of either project would have no significant effect on the City's business inventory revenues and is therefore not considered in this analysis.

Property Taxes. The current property tax rate is $4.00 per $100 of assessed value or $1.00 per $100 of market value. The market value of the proposed project is estimated at $56,488,000 (Exhibit I-7). This would yield an annual property tax of $564,880 of which 33 percent or $186,410 is received by the City.

The market value of the no-project alternative is estimated at $48,592,740 (Exhibit I-7). This would yield an annual property tax of $485,950 of which the City's share (33 percent) would be $160,363. The property tax revenue increase from implementation of the proposed project would thus be $26,047.

It should be noted that the estimated differential in property tax revenues of the two projects is likely to decrease over time. This is because the assessed property

Exhibit I-7. Comparison of Project Data

	Proposed Project	No-Project Alternative
Acres	53	53
Dwelling Units[1]	-	911
Population Increase (2.5 persons per dwelling unit)	-	2,277
Employment (4.3 employees per 1,000 square feet)	2,640	-
Square Feet	614,000	862,540[4]
Office Replacement Value ($70 per square foot) ($)	42,980,000	-
Office Land Value ($140,000 per acre) ($)	7,420,000	-
Office Market Value ($92 per square foot)[2] ($)	56,488,000	-
Residential Value ($53,340 per unit)[3] ($)		48,592,740

[1] Includes 404 apartments, 407 condominiums, and 100 townhouses.
[2] Includes replacement value at $70 per square foot, land value at $12 per square foot, and profit at $10 per square foot.
[3] Assumes average sales price of $35,000 for apartments, $65,000 for condominiums, and $80,000 for townhouses.
[4] Assumes average square feet per unit as follows: apartments, 705 square feet; condominiums, 1,100 square feet; townhouses, 1,300 square feet.

value (the basis for determining property tax revenues) of the residential alternative is expected to increase at a faster rate than the assessed value of the proposed project. Under provisions of Proposition 13, the growth in assessed property value is limited to 2 percent annually unless the property is sold, at which time the property is reassessed at its current value. Since the turnover of commercial/ office property is estimated to occur approximately once every 6.5 years as compared to approximately once every 5 years for residential property, the growth in assessed value (and therefore property tax revenues) of the proposed project will lag behind the growth in assessed value of the residential alternative. This would result in a slower rate of growth in annual property taxes under the proposed project.

State Subventions. Several state subventions, such as the cigarette tax, motor vehicle in-lieu fees, and gas tax are population based. In Fiscal Year 1980-1981, the population-based state subventions were $24.00 per capita. Because of the recent enactment of Senate Bill 102, several sources of state subventions (e.g., highway carriers tax, liquor license, bank tax fees and motor vehicle in lieu fees) have been reduced or eliminated. As a result, it is estimated that state subventions are likely to be reduced to $13.43 per capita for the current 1981-1982 fiscal year. Since the proposed project would directly decrease the City's population by an estimated 2,277 persons, this would reduce the annual state subventions to the City by an estimated $30,588. (Indirect growth-inducing effects of the proposed project are not considered here, but to the extent the project induces additional population growth through provision of "new" jobs, reductions in population-dependent revenues would be lessened.)

It should be noted that the state is expected to continue its current trend toward reducing state revenues distributed to local jurisdictions. To the extent that future state subventions are reduced, the $13.43 per capita estimate would be overstated.

Federal Subventions. Federal subventions, such as general revenue sharing funds and community development block grant funds, are based on formulas which consider a variety of need factors. The primary factors, however, are per capita income of the area and the level of taxation. According to a spokesperson in the City Manager's office (Medema pers. comm.), the population factor plays a very small role in determining the City's share of federal subventions. Since implementation of either project is not expected to change the overall per capita income of the City, it is assumed that federal subventions would not be affected by project implementation.

Utility Users Tax. The City of Sacramento levies a 5 percent municipal tax on all utility bills. On the basis of average cost per square foot per year utility user taxes for both residential and nonresidential developments can be estimated.

Assuming an average annual cost per square foot of $0.336 for residential developments (Hook pers. comm.) and $0.42 for nonresidential developments (Rohrer pers. comm.), the annual utility users tax is estimated to be $12,894 for the proposed project and $14,490 for the no-project alternative. The annual revenue difference in utility user taxes from implementation of the proposed project is a loss of $1,596.

Property Turnover Tax. Property turnover taxes are calculated on the basis of ¼ of $0.01 of the sale price of property on the day of sale. Assuming that residential property would be sold on the average of once every 5 years and commercial/office property would be sold on the average of once every 6.50 years, property turnover taxes can be calculated. Based on present market values, and assuming that both developments would increase in value at the same rate, the proposed project would generate $2,549 less than the no-project alternative on an average annual basis.

Summary of Revenue Difference From Implementation of the Proposed Project. The one-time revenues generated from implementation of the proposed project exceed the one-time revenues from the no-project alternative by $271,792. Annual revenues from implementation of the proposed project, however, are estimated to be less by $8,686 than the annual revenues generated from the no-project alternative. This is primarily because the proposed project does not generate any additional revenues from population-based state subventions. As previously noted, the current level of state subventions (approximately $13.43 per capita) is likely to be reduced over the next few years. The effect of reductions in state subventions would be to reduce the projected annual revenue difference between the two alternatives.

Conclusions

The fiscal effect on the City from implementation of the proposed project is shown in Exhibit I-8. As presented, municipal costs, both one-time capital costs and annual operating costs are projected to be lower as a result of implementation of the proposed project. Also, implementation of the proposed project would result in an additional $271,792

Exhibit I-8. Estimated Difference in Municipal Costs and Revenues From Implementation of the Proposed Project

	Difference From Implementation of the Proposed Project ($)
Capital (One-Time)	
Savings in Capital Costs	+327,780
Revenues	+271,792
NET	+599,572
Operating (Ongoing)	
Savings in Operating Costs	+ 73,560
Revenues	- 8,686
NET	+ 64,874

in one-time revenues. Annual revenues from implementation of the proposed project, however, are projected to be $8,686 less than the no-project alternative. This is primarily due to the increase in population-based state subventions which would result from implementation of the no-project alternative. This revenue differential, however, is likely to be reduced as state subventions are reduced.

The cost and revenue projections in this analysis are considered reasonable estimates of the differences likely to result from implementation of the proposed project. Because no attempt has been made to estimate all project costs and revenues, these estimates should not be used to evaluate the total fiscal effect from implementation of the proposed project. Because the intent of this analysis has been to provide a relative comparison of the fiscal effect of the project alternatives, cost and revenue estimates have only been calculated where differences in public improvement and service demands and revenue generation can be expected to have some local fiscal effect.

Changes in the structure of local public finance and public service delivery are expected to occur. As a result, any assessment of project impacts on existing fiscal conditions is likely to become rapidly outdated.

Appendix II

TRAFFIC ANALYSIS METHODS AND ASSUMPTIONS

Base Case Traffic Volumes

The traffic analyses in this EIR compare SNCP conditions (base case) to the altered conditions that would exist with the proposed Creekside office park. An updated description of base case traffic conditions apparently does not exist (Spiers pers. comm.). The traffic analysis presented in the 1977 Draft EIR for South Natomas Community Plan apparently is outdated in that no progress has been made on a Truxel Road interchange with I-880, and some changes in land uses have occurred.

The base case for traffic analysis of the Creekside office park project was drawn from analyses performed for the South Natomas Business Parks Draft EIR (which were of limited detail east of I-5); the South Natomas Community Plan Draft EIR; and recent traffic counts by Caltrans and the City of Sacramento. Exhibit II-1 documents the key data sources and assumptions used to generate base case, proposed project, and no-project alternative traffic volumes. The various sources often required considerable adjustment to prevent obvious discontinuities in traffic volumes and to assign turning movements for later evaluation of intersection capacities. The base case values as presented in this EIR are therefore not based on a single firm foundation, but are rather developed from available data and projections to represent a reasonable background against which the Creekside project can be evaluated.

Because base case traffic volumes include traffic that would be generated at SNCP build-out, they include traffic that would be generated by residential development of the currently-vacant Bennett, Sammis, and Delta Point parcels at densities called for in the SNCP. The cumulative traffic impacts analysis in Section J assesses potential traffic impacts of approving a project exceeding SNCP minimum densities on the Delta Point parcel.

Exhibit II-1. Traffic Analysis Data Sources and Assumptions

Base Case

- ADTs per 11/77 Draft EIR, South Natomas Community Plan
- I-5 ADTs from 1979 Caltrans 1979 Traffic Volumes on California State Highways, plus SNCP-induced traffic from Draft EIR, SNCP, or estimated by Jones & Stokes Associates.
- Peak-hour volumes from CH2M Hill analysis in South Natomas Business Parks Draft EIR.
- Azevedo and internal collectors estimated by Jones & Stokes Associates from Draft EIR, SNCP.
- Truxel estimated by Jones & Stokes Associates from City counts.

Impacts of Alternatives

- Percent of volume in morning and evening peak hours:
  - Morning: residential, 9.5 percent[1]
    office, 8 percent[1]
  - Evening: residential, 11.3 percent[2]
    office, 10 percent[2]
- Percent in and out:
  - Morning: residential, 25 percent in,[1] 75 percent out[1]
    office, 80 percent in,[1] 20 percent out[1]
  - Evening: residential, 66.3 percent in,[2] 33.7 percent out[2]
    office, 20 percent in,[2] 80 percent out[2]
- All values rounded to nearest 10. All 5's rounded to give highest volume.

Source:

[1] Jones & Stokes Associates, based on review of Institute of Traffic Engineers, Transportation and Traffic Engineering Handbook and other sources.

[2] CH2M Hill, South Natomas Business Parks Draft EIR.

Proposed Project Traffic Volume Impacts

Peak-hour traffic volume impacts were estimated using the souces and assumptions shown in Exhibit II-1. As an indication of traffic volume impacts on a 24-hour basis, average daily traffic (ADT) impacts of the proposed project were also estimated. Postproject ADT volumes are shown in Exhibit II-2.

Intersection Capacity Analysis

Intersections in the vicinity of the project were reviewed to estimate the effects of the proposed project. The evening peak hour was selected for analysis, since volumes are highest at this time, and any capacity problems should be readily apparent. Capacities were analyzed on a basis essentially consistent with that used in the South Natomas Business Parks Draft EIR. Assumptions were made as to turning movements and through movements at each selected intersection. Summations of critical traffic movements (unadjusted) were then made for base case and project conditions. The results were compared to theoretical capacities, and increases or decreases in capacity were estimated. Total capacity (100 percent) was assumed equal to 1,800 vehicles per hour for the sum of the critical moves (two-phase signal), 1,720 vehicles per hour (three-phase signal), or 1,650 vehicles per hour (four or more phase signal).

The intersection analyses are presented in Exhibits II-3 through II-8, and roadway geometrics assumptions for these analyses are presented in Exhibit II-9. The results of the analyses, summarized in Section J, indicated that the proposed project would affect intersection capacities by 2 percent or less in the evening peak hour. Inspection of morning traffic volumes indicated that results for the morning would be similar, and it was concluded that no useful purpose would be served by repeating the analysis for the morning peak hour, nor by refining the evening peak hour critical movement analysis to follow detailed adjustment procedures.

The capacity percentages and levels of service shown in Section J are highly dependent on the assumptions upon which they are based. As previously discussed, the base case estimates are not firmly based. Further tenuous assumptions are involved (in both base case and project conditions) in assuming turning movements and intersection striping. An attempt was made to identify the sensitivity of both the capacity percentages and the incremental change in available capacity (the latter of which measures the project's impact).

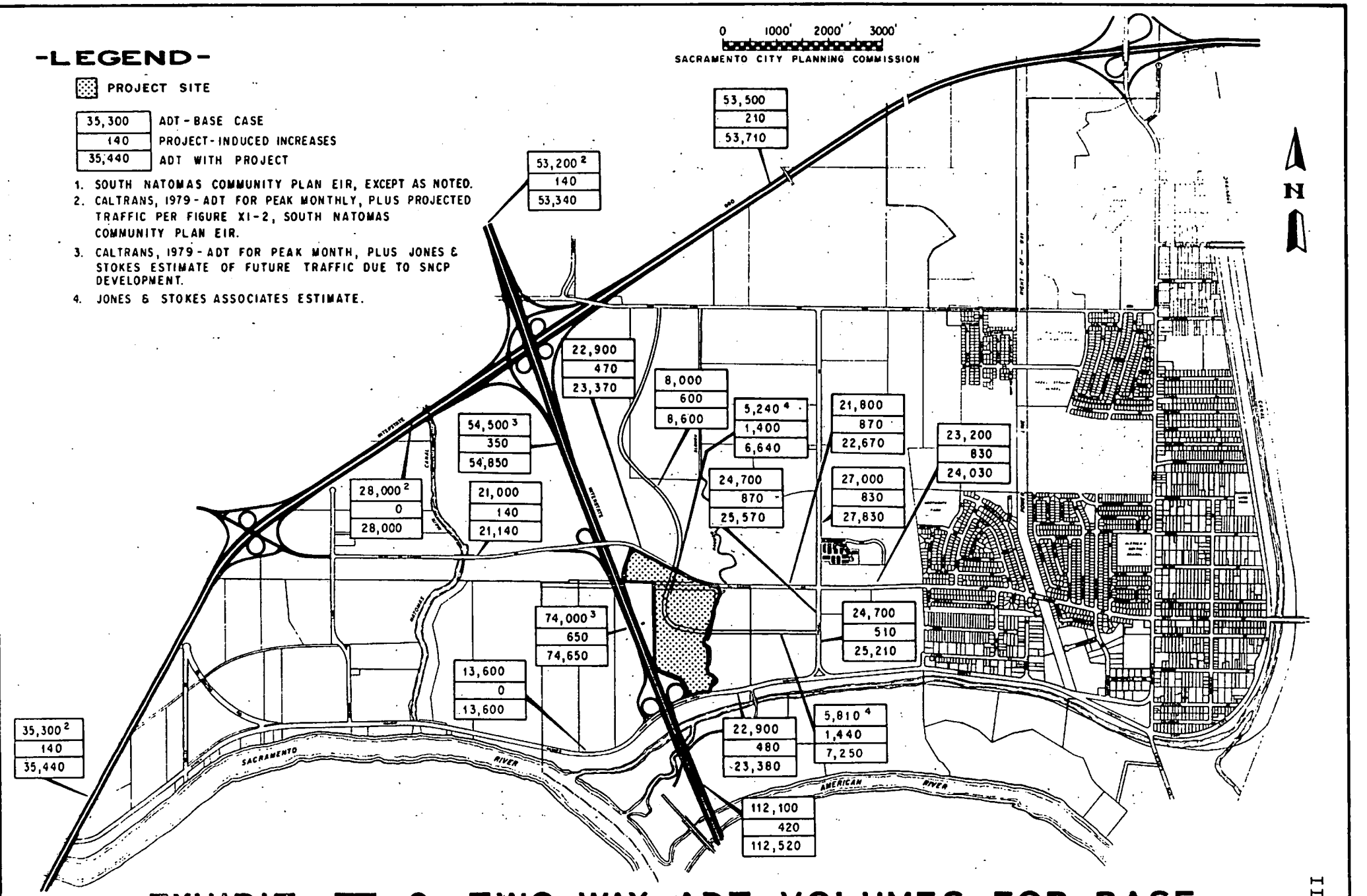
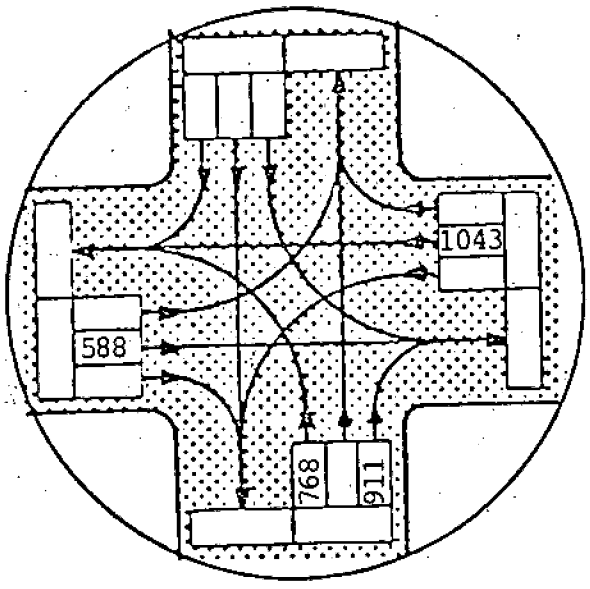


EXHIBIT II-2. TWO-WAY ADT VOLUMES FOR BASE & WITH PROPOSED PROJECT (1)

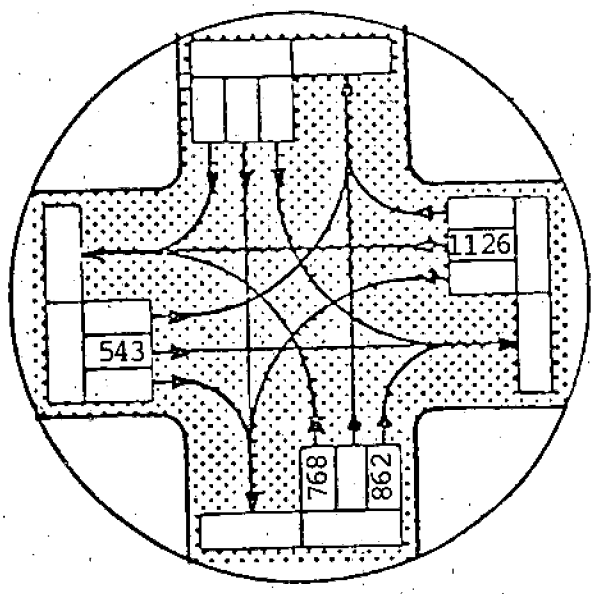
Exhibit II-3

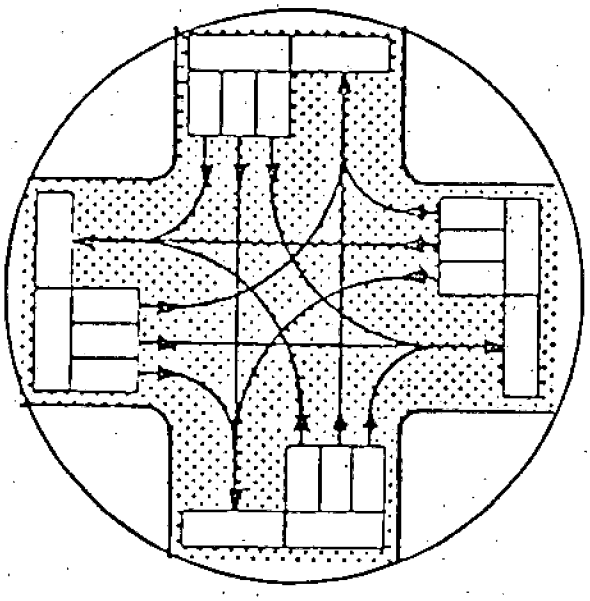
West El Camino/I-5 Interchange (Off Ramp): P.M. Peak Hour

SNCP



Creekside





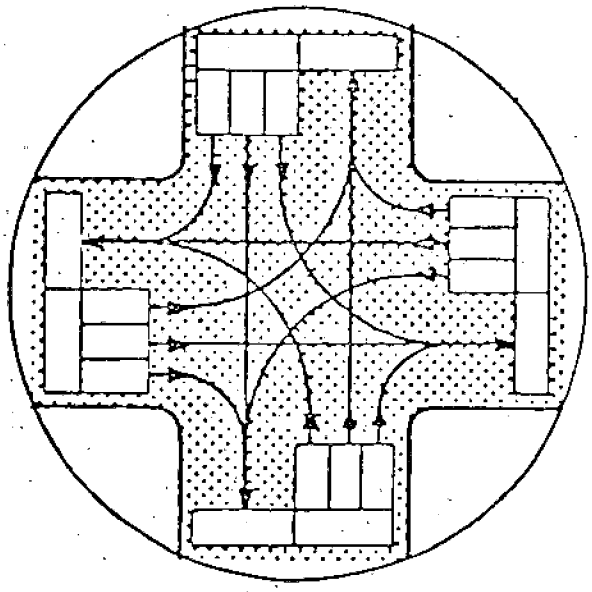


Exhibit II-4

West El Camino/Azevedo: P.M. Peak Hour

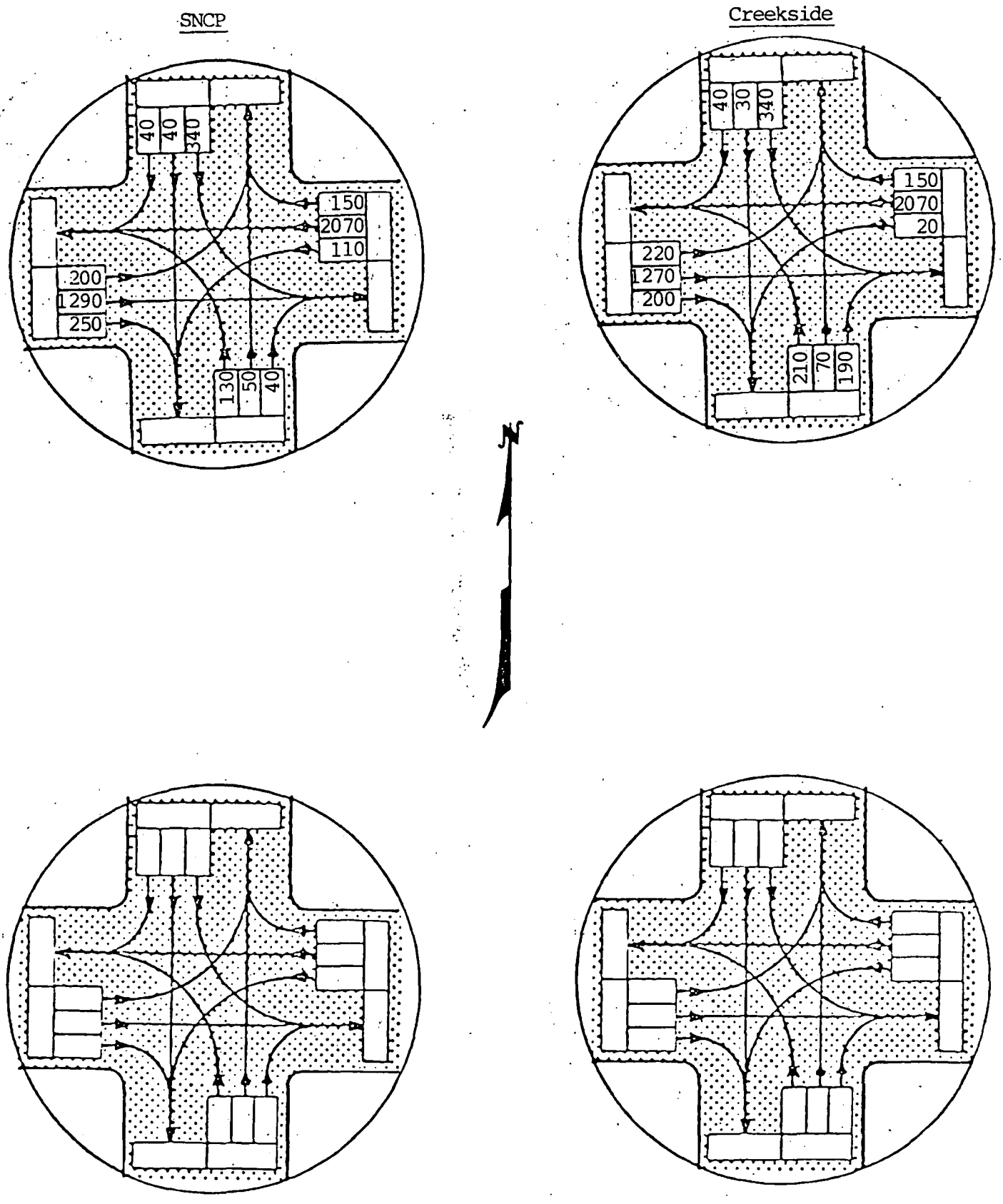
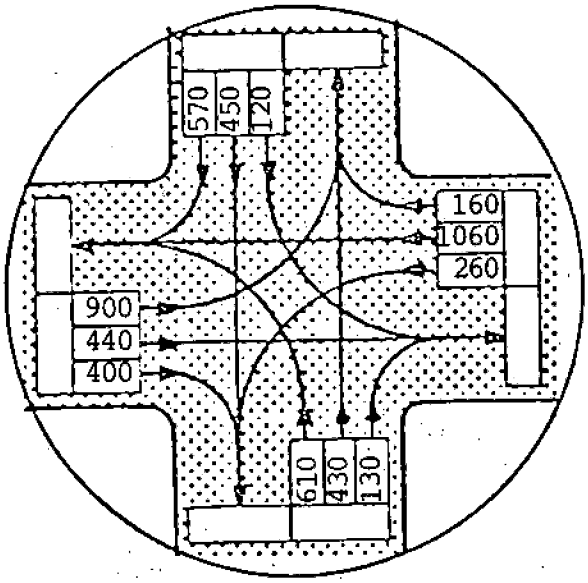


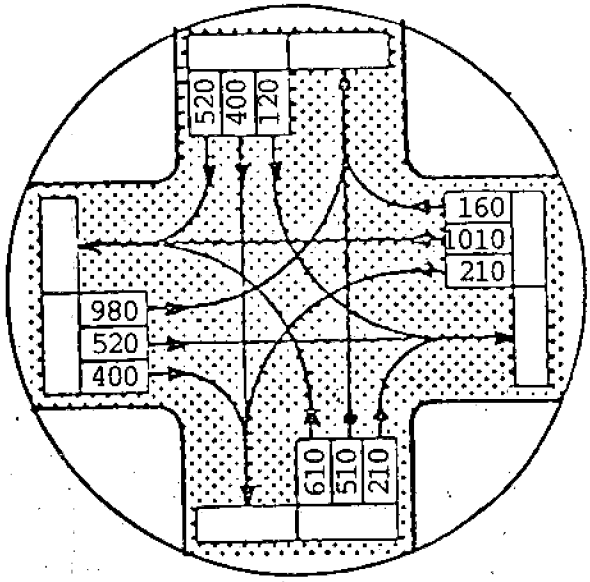
Exhibit II-5

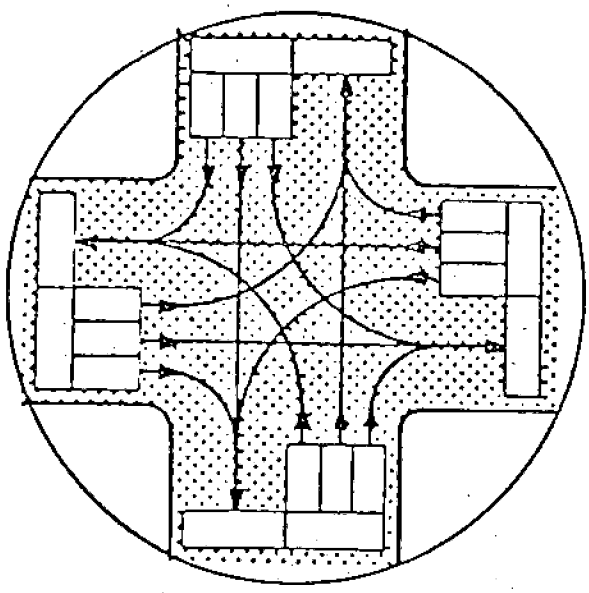
West El Camino/Truxel Intersection: P.M. Peak Hour*

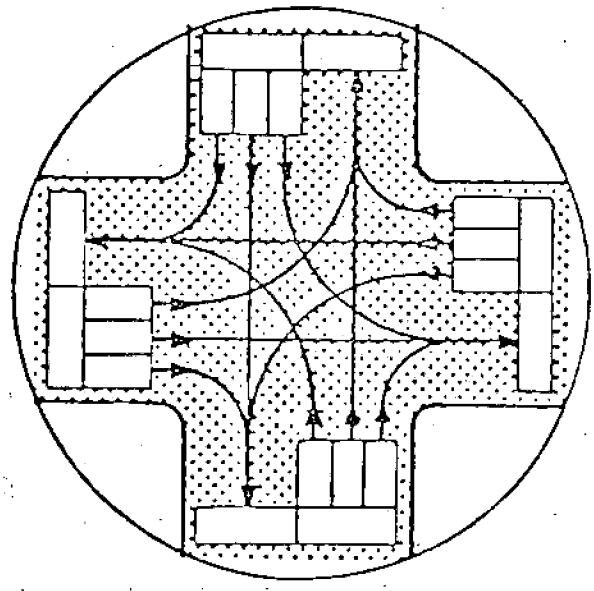
SNCP



Creekside





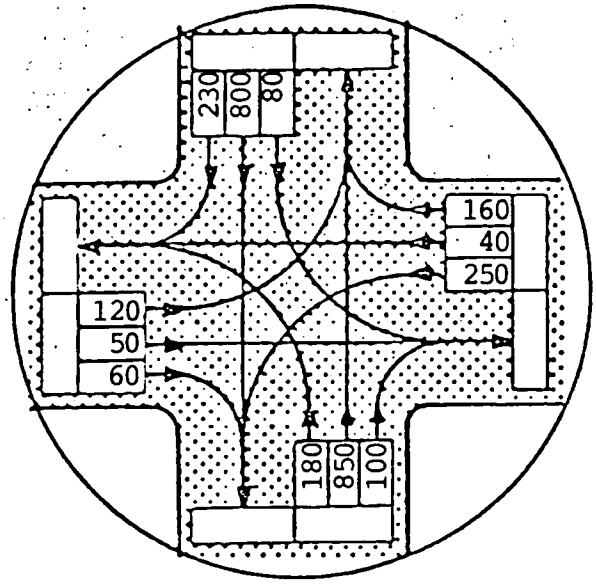


*NOTE: Because of high traffic volume, it is assumed that two left-turn lanes will be needed for eastbound vehicles on West El Camino turning left on Truxel.

Exhibit II-6

Truxel/New East-West Collector Intersection: P.M. Peak Hour

SNCP



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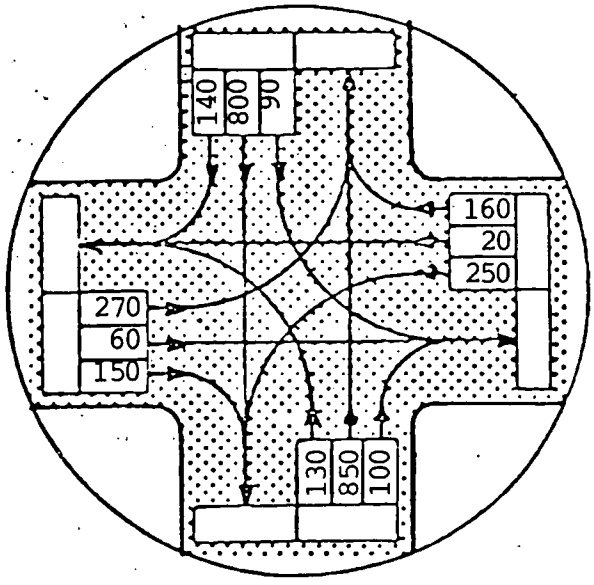
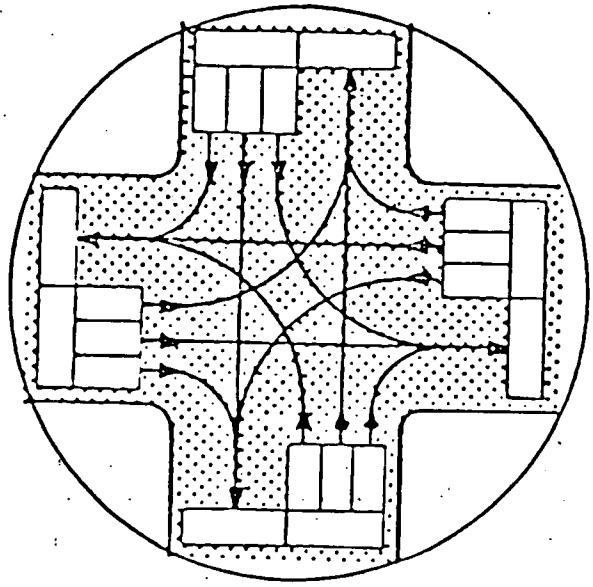




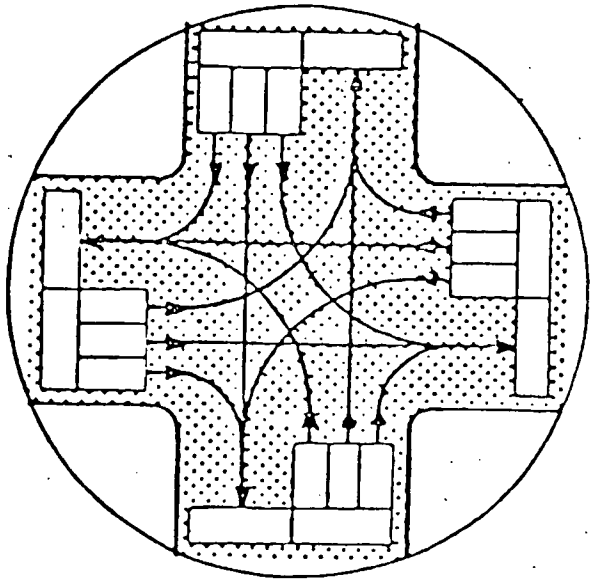
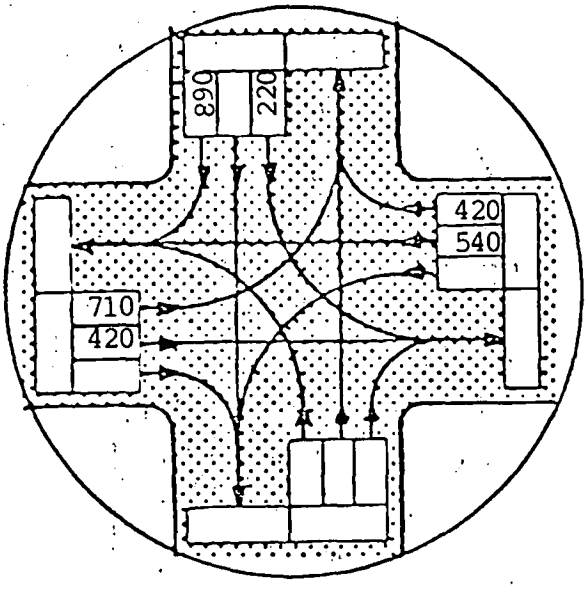


Exhibit II-7

Garden Highway/Truxel Intersection: P.M. Peak Hour

SNCP



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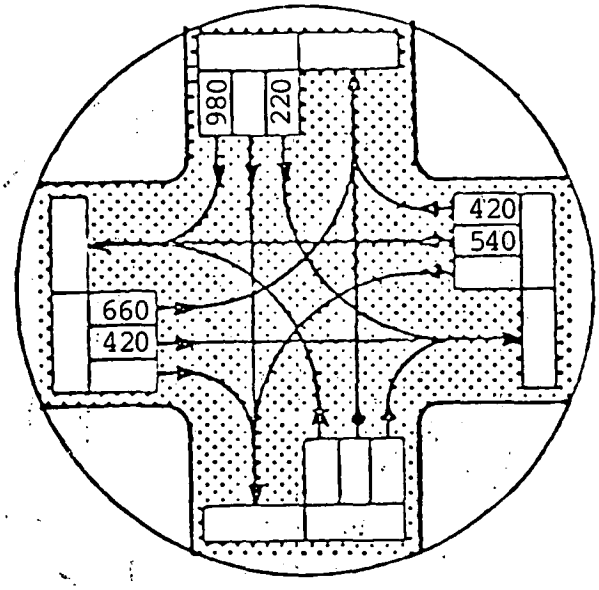
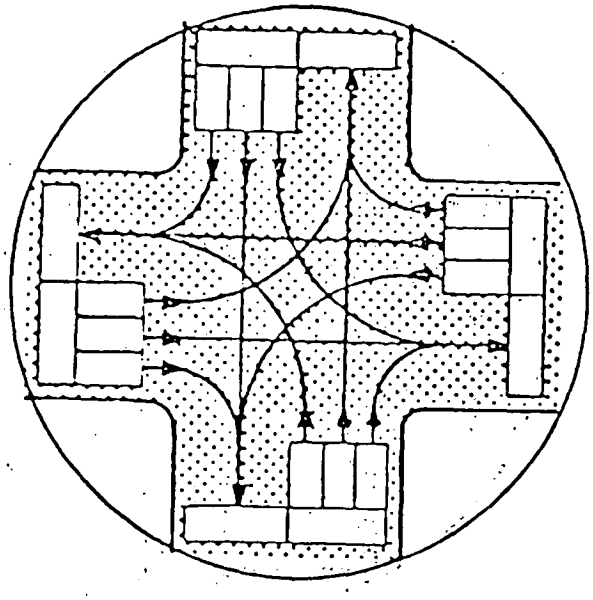




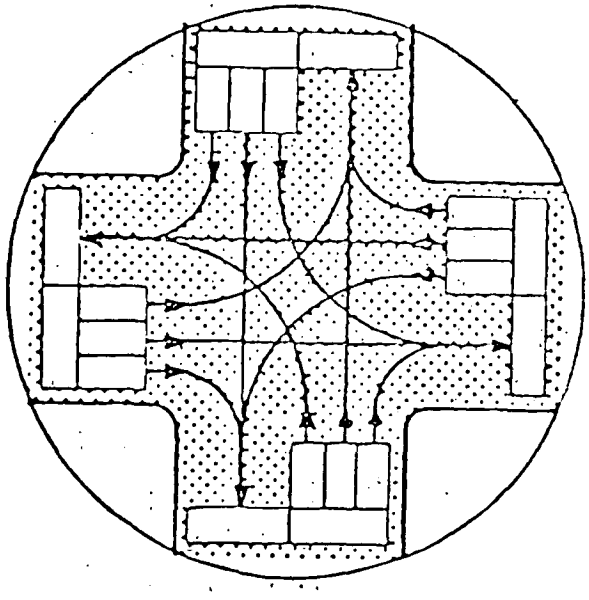
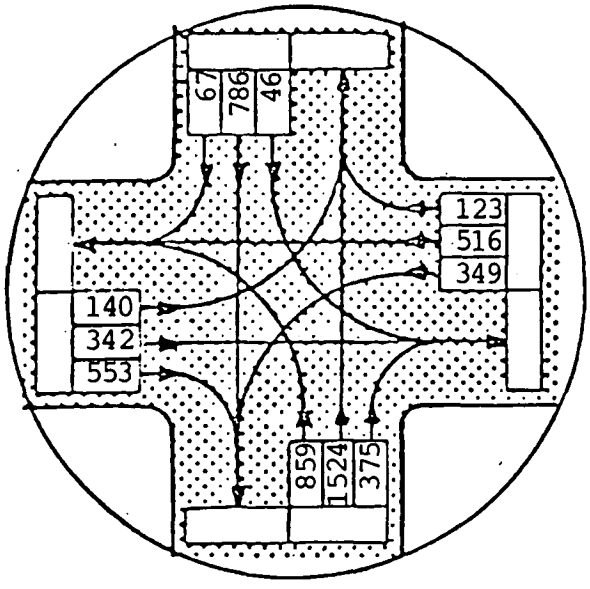


Exhibit II-8

Garden Highway/I-5 Interchange: P.M. Peak Hour

SNCP



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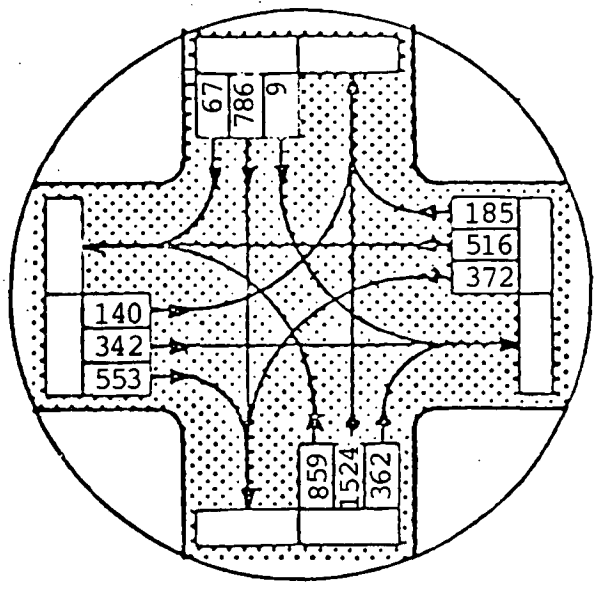
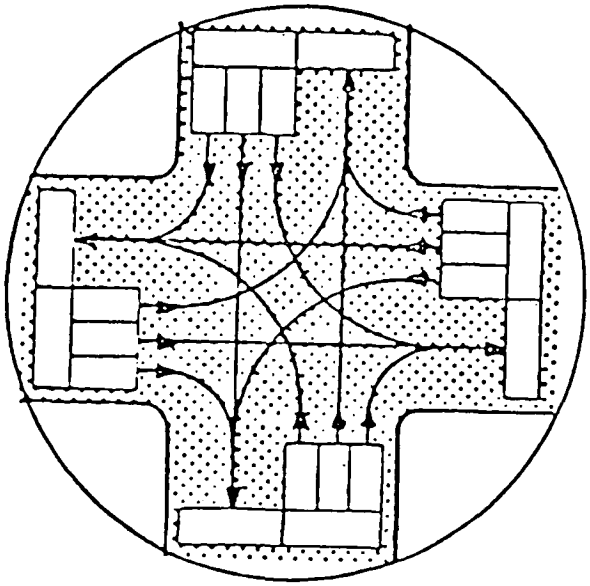
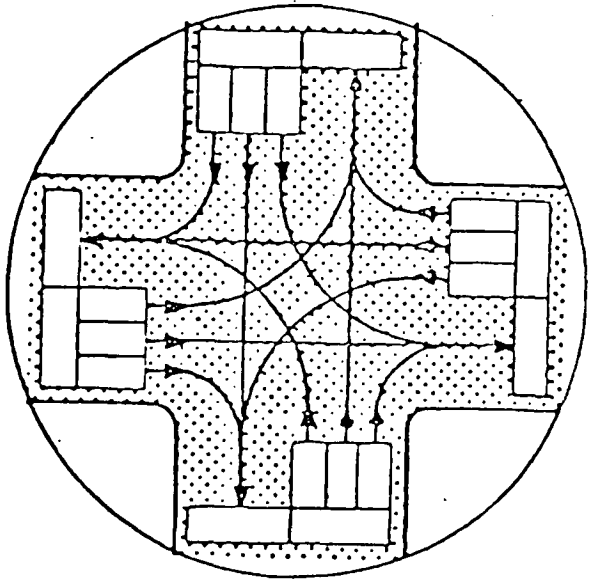






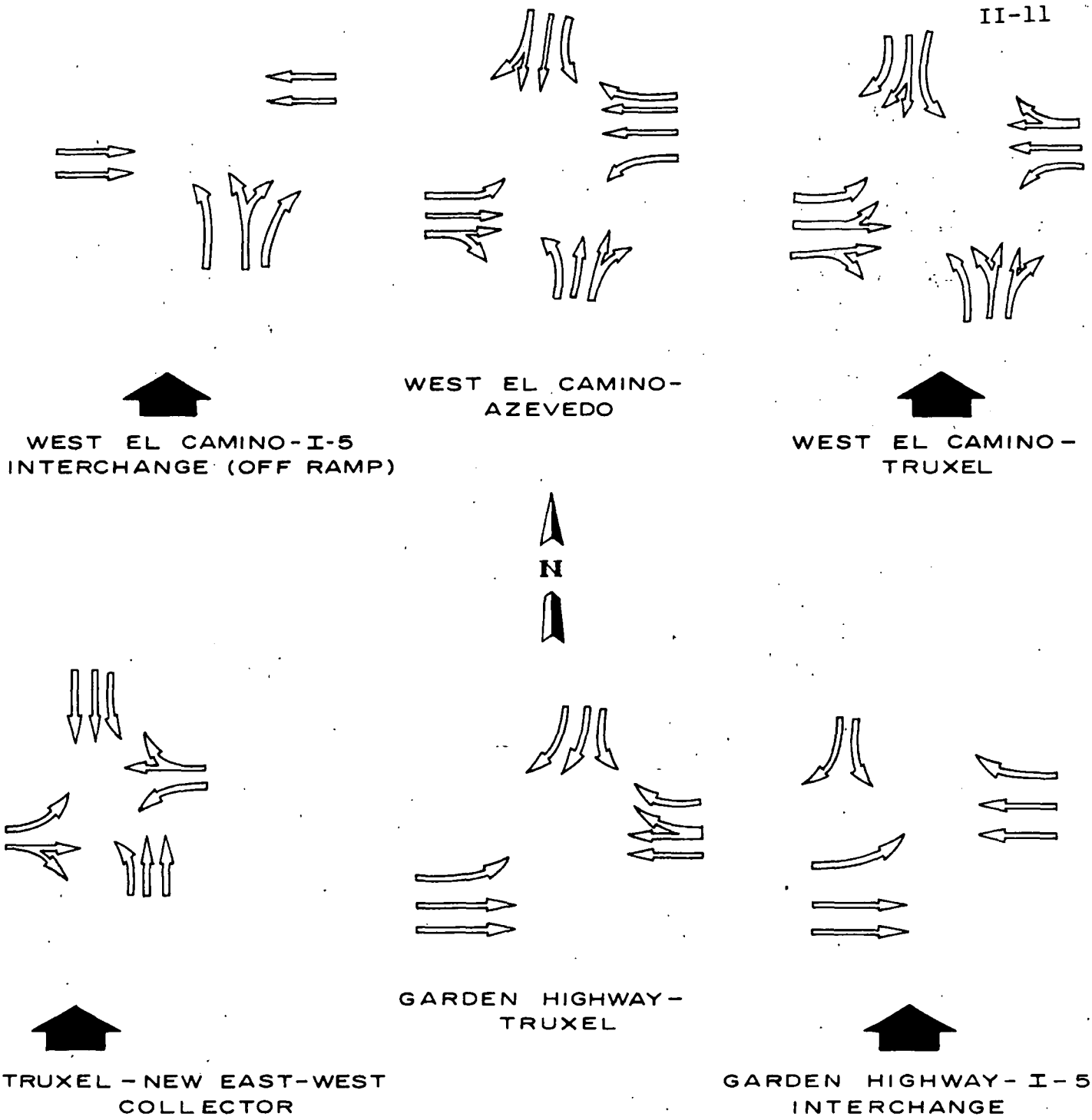


EXHIBIT II-9. ROADWAY GEOMETRICS ASSUMPTIONS FOR INTERSECTION ANALYSES

By changing assumptions, it was possible to vary the capacity percentages by as much as 20 percent. However, the incremental change in capacity never changed by more than 1 or 2 percentage points, and never exceeded a value of +2 or -2 percent.

From these analyses it was concluded that the project's impact on intersection capacity was 2 percent or less, sometimes beneficial, and sometimes adverse. It was further concluded that further refinement of the capacity calculations is unwarranted.

Appendix III

AIR QUALITY

Modeling Procedures

Air quality analyses performed for this EIR focused on potential carbon monoxide problems on or near the project site. A programmable calculator version of the CALINE 3 line source dispersion model (Benson 1979) was used for these analyses.

CALINE 3 is a gaussian dispersion model intended for analyzing pollution levels caused by highway traffic. The term gaussian dispersion refers to a general type of mathematical equation used to describe the horizontal and vertical dilution of pollutants as they are carried away from the pollution source. This dilution is the result of emissions being mixed with and thus dispersed into the surrounding air. The basic gaussian dispersion methodology was developed to evaluate discrete emission sources which could be treated as if they were a fixed point. In analyzing vehicle traffic on a roadway, CALINE 3 divides the highway into a series of short segments. Each roadway segment is then treated as a separate source producing a plume of pollutants. This plume spreads horizontally and vertically, with resultant dilution of pollutant concentrations, as it is carried downwind. Pollutant concentrations at any specific location are calculated as the total contribution from overlapping pollution plumes originating from the sequence of roadway segments.

When winds are essentially parallel to the roadway, pollution plumes from all roadway segments overlap, producing high pollution concentrations near the roadway, but low concentrations well away from the highway. When winds are at an angle to the highway, pollution plumes from distant roadway segments make essentially no contribution to the pollution concentration observed at a specific location. Under such cross-wind situations, pollutant concentrations near the roadway are usually lower, while pollutant concentrations away from the highway are generally greater than under parallel wind conditions.

The CALINE 3 model employs a "mixing cell" approach to estimating pollutant concentrations on the roadway itself.

The size of each mixing cell along a roadway is based on the width of the highway. As used in the CALINE 3 model, each mixing cell is 10 feet high with a square base. The size of the mixing cell base is equal to the width of the total traffic lanes on the highway plus 10 feet on either side. Parking lanes and road shoulders do not count as traffic lanes. Pollutants emitted along the roadway are treated as being well mixed within the mixing cell volume due to mechanical turbulence around the moving vehicles and convective mixing due to the temperature of the vehicle exhaust. Pollutant concentrations downwind of the mixing cell are determined by horizontal and vertical dispersion rates which are a function of various meteorological and ground surface features.

Exhibit III-1 presents a schematic diagram of the roadway system analyzed for this EIR. Also shown are the 5 receptor locations used for the analysis. The roadway coordinate system reflected in Exhibits III-1 and III-2 was developed by scaling distances and angles from a variety of maps and aerial photographs at different scales. A series of commercially available coordinate geometry surveying programs were then used to develop a consistent coordinate system for the roadway segments and receptor points.

Exhibits III-3 through III-10 identify the data input used to run the programmable calculator version of the CALINE 3 model. Meteorological conditions reflect a strong ground level temperature inversion and low wind speeds. Wind directions were selected on the basis of typical wind directions (Riggins, 1971) and general modeling considerations. Winds in the Sacramento area are primarily from the south or west; the lowest average wind speeds, however, are associated with infrequent northeast winds. Wind directions of 160° and 270° were selected because of their relatively high frequency of occurrence and to provide parallel wind situations for Interstate 5 and West El Camino Avenue. Wind directions of 215° and 310° were selected to provide cross-wind analyses.

Wind direction input to the programmable calculator version of the model must be given as the angle (limited to a range of 0°-90°) between the highway link and the wind vector. These values are identified for each highway link in Exhibits III-6 through III-10.

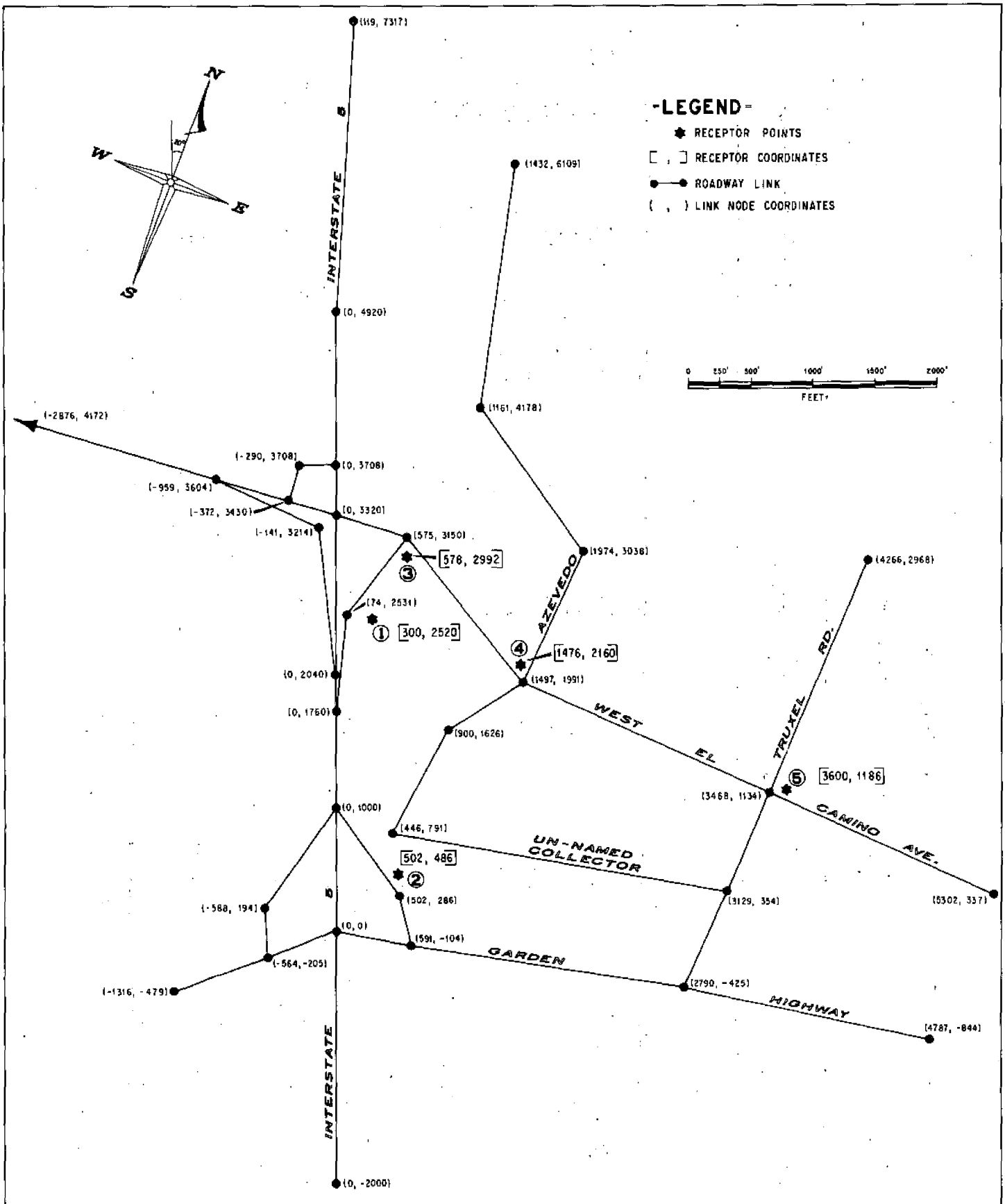


EXHIBIT III-1. SCHEMATIC DIAGRAM OF HIGHWAY NETWORK USED FOR AIR QUALITY MODELING

Exhibit III-2

Link Characteristics

Link Coordinates Node 1	Node 2	Length (M)	Map Azimuth °	'	"	True Azimuth °	'	"
Interstate 5 & Ramps								
(0, -2000)	(0, 0)	609.60	0	00	00	-20	00	00
(0, 0)	(0, 1000)	304.80	0	00	00	-20	00	00
(591, -104)	(502,286)	121.93	-12	51	18	-32	51	18
(502, 286)	(0, 1000)	266.03	-35	06	37	-55	06	37
(-564, -205)	(-588, 194)	121.84	-3	26	32	-23	26	32
(-588, 194)	(0, 1000)	304.10	36	06	43	16	06	43
(0, 1000)	(0, 1760)	231.65	0	00	00	-20	00	00
(0, 1760)	(0, 2040)	85.34	0	00	00	-20	00	00
(0, 2040)	(0, 3320)	390.14	0	00	00	-20	00	00
(0, 1760)	(74, 2531)	236.08	5	28	57	-14	31	03
(74, 2531)	(575, 3150)	242.73	38	59	08	18	59	08
(0, 2040)	(-141, 3214)	360.41	-6	50	55	-26	50	55
(-141, 3214)	(-959, 3604)	276.21	-64	30	34	-84	30	34
(0, 3320)	(0, 3708)	118.26	0	00	00	-20	00	00
(-372, 3430)	(-290, 3708)	88.34	16	26	03	-3	33	57
(-290, 3708)	(0, 3708)	88.39	90	00	00	70	00	00
(0,3708)	(0, 4920)	369.42	0	00	00	-20	00	00
(0, 4920)	(119, 7317)	731.51	2	50	32	-17	09	28
West El Camino								
(-2876, 4172)	(-959, 3604)	609.41	106	30	16	86	30	16
(-959, 3604)	(-372, 3430)	186.61	106	30	40	86	30	40
(-372, 3430)	(575, 3150)	301.00	106	28	17	86	28	17
(575, 3150)	(1497, 1991)	451.41	141	29	50	121	29	50
(1497, 1991)	(3468, 1134)	655.09	113	29	59	93	29	59
(3468, 1134)	(5302, 337)	609.51	113	29	18	93	29	18

Exhibit III-2 (cont'd.)

Link Coordinates Node 1	Node 2	Length (M)	Map Azimuth °	'	"	True Azimuth °	'	"
Azevedo								
(446, 791)	(900, 1626)	289.69	28	32	01	8	32	01
(900, 1626)	(1497, 1991)	213.28	58	33	32	38	33	32
(1497, 1991)	(1974, 3038)	350.68	24	29	36	4	29	36
(1974, 3038)	(1161, 4178)	426.78	-35	29	42	-55	29	42
(1161, 4178)	(1432, 6109)	594.34	7	59	20	-12	00	40
Truxel								
(2790, -425)	(3129, 354)	258.95	23	31	03	3	31	03
(3129, 354)	(3468, 1134)	259.23	23	29	26	3	29	26
(3468, 1134)	(4266, 2968)	609.63	23	30	52	3	30	52
Collector								
(446, 791)	(3129, 354)	828.55	99	15	03	79	15	03
Garden Highway								
(-1316, -479)	(-564, -205)	243.95	69	58	49	49	58	49
(-564, -205)	(0, 0)	182.91	70	01	30	50	01	30
(0, 0)	(591, -104)	182.90	99	58	48	79	58	48
(591, -104)	(2790, -425)	677.36	98	18	18	78	18	18
(2790, -425)	(4787, -844)	621.94	101	50	59	81	50	59

Exhibit III-3. Parameter Values Used For All CALINE 3 Analyses

Parameter	Value
Wind speed	1 meter per second (2.237 miles per hour)
Surface roughness factor	175 centimeters (68.898 inches)
Averaging Time	60 minutes
Receptor height	1.524 meters (5 feet)
Atmospheric stability class	Class 6 (F class stability)
Wind directions*	160°, 215°, 270°, 310°

NOTES:

*Wind directions are specified as the compass bearing (relative to true north) from which the wind blows.

Exhibit III-4

Link Inputs for CALINE 3: No Project

Link Coordinates Node 1	Link Coordinates Node 2	Height (M)	Mixing Cell Width (M)	Average Volume	Average Speed	1987 Emission Rate (gm/mi)
Interstate 5 & Ramps						
(0, -2000)	(0, 0)	6.1	44.4	4,776	55	19.93
(0, 0)	(0, 1000)	6.1	51.7	4,776	55	19.93
(591, -104)	(502,286)	0	13.3	726	35	23.09
(502, 286)	(0, 1000)	0	13.3	726	45	19.76
(-564, -205)	(-588, 194)	0	13.3	1,013	35	23.09
(-588, 194)	(0, 1000)	0	13.3	1,013	45	19.76
(0, 1000)	(0, 1760)	0	51.7	4,624	55	19.93
(0, 1760)	(0, 2040)	0	51.7	3,527	55	19.93
(0, 2040)	(0, 3320)	0	44.4	3,313	55	19.93
(0, 1760)	(74, 2531)	0	9.7	1,097	37	22.09
(74, 2531)	(575, 3150)	0	9.7	1,097	24*	31.73
(0, 2040)	(-141, 3214)	0	9.7	214	45	19.76
(-141, 3214)	(-959, 3604)	0	9.7	214	35	23.09
(0, 3320)	(0, 3708)	0	44.4	3,313	55	19.93
(-372, 3430)	(-290, 3708)	6.1	9.7	478	35	23.09
(-290, 3708)	(0, 3708)	3.0	9.7	478	45	19.76
(0, 3708)	(0, 4920)	0	44.4	2,835	55	19.93
(0, 4920)	(119, 7317)	0	51.7	2,835	55	19.93
West El Camino						
(-2876, 4172)	(-959, 3604)	0	13.3	1,800	26	29.76
(-959, 3604)	(-372, 3430)	0	13.3	1,586	26	29.76
(-372, 3430)	(575, 3150)	6.1	13.3	2,064	14*	47.94
(575, 3150)	(1497, 1991)	0	13.3	2,239	17*	41.16
(1497, 1991)	(3468, 1134)	0	13.3	2,250	17*	41.16
(3468, 1134)	(5302, 337)	0	13.3	1,221	28	27.99

Exhibit III-4 (cont'd.)

Link Coordinates Node 1	Node 2	Height (M)	Mixing Cell Width (M)	Average Volume	Average Speed	1987 Emission Rate (gm/mi)
Azevedo						
(446, 791)	(900, 1626)	0	13.3	349	25	30.72
(900, 1626)	(1497, 1991)	0	13.3	349	25	30.72
(1497, 1991)	(1974, 3038)	0	13.3	461	25	30.72
(1974, 3038)	(1161, 4178)	0	13.3	394	25	30.72
(1161, 4178)	(1432, 6109)	0	13.3	225	25	30.72
Truxel						
(2790, -425)	(3129, 354)	0	13.3	1,260	29	27.16
(3129, 354)	(3468, 1134)	0	13.3	1,283	24*	31.73
(3468, 1134)	(4266, 2968)	0	13.3	1,479	23*	32.80
Collector						
(446, 791)	(3129, 354)	0	13.3	383	25	30.72
Garden Highway						
(-1316, -479)	(-564, -205)	0	13.3	1,558	41	20.59
(-564, -205)	(0, 0)	0	13.3	1,243	38*	21.65
(0, 0)	(591, -104)	0	13.3	1,243	38*	21.65
(591, -104)	(2790, -425)	0	13.3	1,440	42	20.33
(2790, -425)	(4787, -844)	0	13.3	900	44	19.92

NOTES:

* = Speeds reduced by 5 mph from calculated value to account for delays at intersections.

Emission rates (grams per vehicle mile) developed by the California Air Resources Board's EMFAC 6C computer program.

Exhibit III-5

Link Inputs for CALINE 3: With Project

Link Coordinates Node 1	Link Coordinates Node 2	Height (M)	Mixing Cell Width (M)	Average Volume	Average Speed	1987 Emission Rate (gm/mi)
Interstate 5 & Ramps						
(0, -2000)	(0, 0)	6.1	44.4	4,804	55	19.93
(0, 0)	(0, 1000)	6.1	51.7	4,804	55	19.93
(591, -104)	(502,286)	0	13.3	771	35	23.09
(502, 286)	(0, 1000)	0	13.3	771	45	19.76
(-564, -205)	(-588, 194)	0	13.3	1,114	34	23.66
(-588, 194)	(0, 1000)	0	13.3	1,114	44	19.92
(0, 1000)	(0, 1760)	0	51.7	4,652	55	19.93
(0, 1760)	(0, 2040)	0	51.7	3,628	55	19.93
(0, 2040)	(0, 3320)	0	44.4	3,392	55	19.93
(0, 1760)	(74, 2531)	0	9.7	1,024	39	21.25
(74, 2531)	(575, 3150)	0	9.7	1,024	25*	30.72
(0, 2040)	(-141, 3214)	0	9.7	236	45	19.76
(-141, 3214)	(-959, 3604)	0	9.7	236	35	23.09
(0, 3320)	(0, 3708)	0	44.4	3,392	55	19.93
(-372, 3430)	(-290, 3708)	6.1	9.7	546	35	23.09
(-290, 3708)	(0, 3708)	3.0	9.7	546	44	19.92
(0, 3708)	(0, 4920)	0	44.4	2,846	55	19.93
(0, 4920)	(119, 7317)	0	51.7	2,846	55	19.93
West El Camino						
(-2876, 4172)	(-959, 3604)	0	13.3	1,811	26	29.76
(-959, 3604)	(-372, 3430)	0	13.3	1,575	26	29.76
(-372, 3430)	(575, 3150)	6.1	13.3	2,121	13*	50.96
(575, 3150)	(1497, 1991)	0	13.3	2,256	17*	41.16
(1497, 1991)	(3468, 1134)	0	13.3	2,273	17*	41.16
(3468, 1134)	(5302, 337)	0	13.3	1,254	29	27.16

Exhibit III-5 (cont'd.)

Link Coordinates Node 1	Link Coordinates Node 2	Height (M)	Mixing Cell Width (M)	Average Volume	Average Speed	1987 Emission Rate (gm/mi)
Azevedo						
(446, 791)	(900, 1626)	0	13.3	405	25	30.72
(900, 1626)	(1497, 1991)	0	13.3	405	25	30.72
(1497, 1991)	(1974, 3038)	0	13.3	478	25	30.72
(1974, 3038)	(1161, 4178)	0	13.3	422	25	30.72
(1161, 4178)	(1432, 6109)	0	13.3	225	25	30.72
Truxel						
(2790, -425)	(3129, 354)	0	13.3	1,283	29	27.16
(3129, 354)	(3468, 1134)	0	13.3	1,316	24*	31.73
(3468, 1134)	(4266, 2968)	0	13.3	1,513	22*	33.93
Collector						
(446, 791)	(3129, 354)	0	13.3	439	25	30.72
Garden Highway						
(-1316, -479)	(-564, -205)	0	13.3	1,581	41	20.59
(-564, -205)	(0, 0)	0	13.3	1,232	38*	21.65
(0, 0)	(591, -104)	0	13.3	1,232	38*	21.65
(591, -104)	(2790, -425)	0	13.3	1,463	42	20.33
(2790, -425)	(4787, -844)	0	13.3	900	44	19.92

NOTES:

* = Speeds reduced by 5 mph from calculated value to account for delays at intersections.

Emission rates (grams per vehicle mile) developed by the California Air Resources Board's EMFAC 6C computer program.

Exhibit III-6

Link-Receptor Relationships For
Receptor #1 (300, 2520)

Link Coordinates		Relative Ø (°) For				Link Nodes (M)		Receptor Distance
Node 1	Node 2	160°	215°	270°	310°	L_1/L_2	L_2/L_1	D (M)
Interstate 5 & Ramps								
(0, -2000)	(0, 0)	0.0	55.0	70.0	30.0	+ 768.10	+1377.70	91.44
(0, 0)	(0, 1000)	0.0	55.0	70.0	30.0	+ 463.30	+ 768.10	91.44
(591, -104)	(502, 286)	12.9	67.9	57.1	17.1	+ 677.56	+ 799.48	91.47
(502, 286)	(0, 1000)	35.1	89.9	34.9	5.1	+ 326.41	+ 592.44	341.27
(-564, -205)	(-588, 194)	3.4	58.4	66.6	26.6	+ 691.43	+ 813.27	312.74
(-588, 194)	(0, 1000)	36.1	18.9	73.9	66.1	+ 428.17	+ 732.27	199.18
(0, 1000)	(0, 1760)	0.0	55.0	70.0	30.0	+ 231.65	+463.30	91.44
(0, 1760)	(0, 2040)	0.0	55.0	70.0	30.0	+ 146.30	+ 231.65	91.44
(0, 2040)	(0, 3320)	0.0	55.0	70.0	30.0	± 243.84	∓ 146.30	91.44
(0, 1760)	(74, 2531)	5.5	49.5	75.5	35.5	± 3.24	∓ 239.32	68.89
(74, 2531)	(575, 3150)	39.0	16.0	71.0	69.0	∓ 201.99	∓ 40.73	55.65
(0, 2040)	(-141, 3214)	6.8	61.8	63.2	23.2	∓ 226.05	± 134.36	108.23
(-141, 3214)	(-959, 3604)	64.5	60.5	5.5	34.5	+ 212.37	+ 488.58	133.09
(0, 3320)	(0, 3708)	0.0	55.0	70.0	30.0	+ 362.10	+ 243.84	91.44
(-372, 3430)	(-290, 3708)	16.4	38.6	86.4	46.4	+ 208.09	+ 296.43	274.93
(-290, 3708)	(0, 3708)	90.0	35.0	20.0	60.0	+ 91.44	+ 179.83	362.10
(0, 3708)	(0, 4920)	0.0	55.0	70.0	30.0	+ 731.52	+ 362.10	91.44
(0, 4920)	(119, 7317)	2.8	52.2	72.8	32.8	+ 726.09	+1457.59	127.60
West El Camino								
(-2876, 4172)	(-959, 3604)	73.5	51.5	3.5	43.5	+ 461.80	+1071.21	207.77
(-959, 3604)	(-372, 3430)	73.5	51.5	3.5	43.5	+ 275.21	+ 461.82	207.72
(-372, 3430)	(575, 3150)	73.5	51.5	3.5	43.5	- 25.93	+ 275.06	207.91
(575, 3150)	(1497, 1991)	38.5	86.5	31.5	8.5	- 353.31	+ 98.09	185.14
(1497, 1991)	(3468, 1134)	66.5	58.5	3.5	36.5	∓ 398.88	∓1053.97	2.39
(3468, 1134)	(5302, 337)	66.5	58.5	3.5	36.5	∓1053.97	∓1663.48	2.59
Azevedo								
(446, 791)	(900, 1626)	28.5	26.5	81.5	58.5	+ 152.04	+ 441.73	290.83
(900, 1626)	(1497, 1991)	58.6	3.6	51.4	88.6	- 227.17	- 13.89	327.88
(1497, 1991)	(1974, 3038)	24.5	30.5	85.5	54.5	- 355.22	- 4.53	398.86
(1974, 3038)	(1161, 4178)	35.5	89.5	34.5	5.5	± 167.71	∓ 259.07	507.09
(1161, 4178)	(1432, 6109)	8.0	47.0	78.0	38.0	∓ 536.93	∓1131.26	189.65
Truxel								
(2790, -425)	(3129, 354)	23.5	31.5	86.5	53.5	+ 261.29	+ 520.23	1054.09
(3129, 354)	(3468, 1134)	23.5	31.5	86.5	53.5	+ 2.55	+ 261.78	1053.97
(3468, 1134)	(4266, 2968)	23.5	31.5	86.5	53.5	- 607.51	+ 2.11	1053.97
Collector								
(446, 791)	(3129, 354)	80.7	44.3	10.7	50.7	+ 128.64	+ 957.20	512.99
Garden Highway								
(-1316, -479)	(-564, -205)	70.0	15.0	40.0	80.0	+ 531.78	+ 775.73	690.24
(-564, -205)	(0, 0)	70.0	15.0	40.0	80.0	+ 348.33	+ 531.24	690.65
(0, 0)	(591, -104)	80.0	45.0	10.0	50.0	- 225.96	- 43.06	772.32
(591, -104)	(2790, -425)	81.7	43.3	11.7	51.7	- 880.65	- 203.29	778.60
(2790, -425)	(4787, -844)	78.2	46.8	8.2	48.2	-1549.04	- 927.10	722.66

Exhibit III-6 (cont'd.)

NOTES:

Wind angles relative to the roadway (Ø) based on winds blowing from the south-southeast (160°), southwest (215°), west (270°), and northwest (310°).

Exhibit III-7

Link-Receptor Relationships For
Receptor #2 (502, 486)

Link Coordinates		Relative Ø (°) For				Link Nodes (M)		Receptor Distance
Node 1	Node 2	160°	215°	270°	310°	L_1/L_2	L_2/L_1	D (M)
Interstate 5 & Ramps								
(0, -2000)	(0, 0)	0.0	55.0	70.0	30.0	+ 148.13	+ 757.73	153.01
(0, 0)	(0, 1000)	0.0	55.0	70.0	30.0	- 156.67	+ 148.13	153.01
(591, -104)	(502, 286)	12.9	67.9	57.1	17.1	+ 59.43	+ 181.36	13.56
(502, 286)	(0, 1000)	35.1	89.9	34.9	5.1	- 216.16	+ 49.87	35.06
(-564, -205)	(-588, 194)	3.4	58.4	66.6	26.6	+ 68.89	+ 190.73	336.98
(-588, 194)	(0, 1000)	36.1	18.9	73.9	66.1	- 36.39	+ 267.71	215.94
(0, 1000)	(0, 1760)	0.0	55.0	70.0	30.0	+ 156.67	+ 388.32	153.01
(0, 1760)	(0, 2040)	0.0	55.0	70.0	30.0	+ 388.32	+ 473.66	153.01
(0, 2040)	(0, 3320)	0.0	55.0	70.0	30.0	+ 473.66	+ 863.80	153.01
(0, 1760)	(74, 2531)	5.5	49.5	75.5	35.5	+ 371.92	+ 608.00	189.41
(74, 2531)	(575, 3150)	39.0	16.0	71.0	69.0	+ 402.43	+ 645.16	493.55
(0, 2040)	(-141, 3214)	6.8	61.8	63.2	23.2	+ 488.53	+ 848.93	95.44
(-141, 3214)	(-959, 3604)	64.5	60.5	5.5	34.5	+ 534.75	+ 810.97	666.21
(0, 3320)	(0, 3708)	0.0	55.0	70.0	30.0	+ 863.80	+ 982.07	153.01
(-372, 3430)	(-290, 3708)	16.4	38.6	86.4	46.4	+ 785.30	+ 873.65	509.38
(-290, 3708)	(0, 3708)	90.0	35.0	20.0	60.0	+ 153.01	+ 241.40	982.07
(0, 3708)	(0, 4920)	0.0	55.0	70.0	30.0	+ 982.01	+1351.48	153.01
(0, 4920)	(119, 7317	2.8	52.2	72.8	32.8	+1342.23	+2073.74	219.84
West El Camino								
(-2876, 4172)	(-959, 3604)	73.5	51.5	3.5	43.5	+ 696.95	+1306.36	784.70
(-959, 3604)	(-372, 3430)	73.5	51.5	3.5	43.5	+ 510.43	+697.05	784.62
(-372, 3430)	(575, 3150)	73.5	51.5	3.5	43.5	+ 208.89	+ 509.89	784.97
(575, 3150)	(1497, 1991)	38.5	86.5	31.5	8.5	+ 170.18	+ 621.59	522.92
(1497, 1991)	(3468, 1134)	66.5	58.5	3.5	36.5	- 750.30	- 95.21	541.61
(3468, 1134)	(5302, 337)	66.5	58.5	3.5	36.5	-1359.92	- 750.41	541.46
Azevedo								
(446, 791)	(900, 1626)	28.5	26.5	81.5	58.5	+ 22.41	+ 363.21	59.40
(900, 1626)	(1497, 1991)	58.6	3.6	51.4	88.6	+ 284.75	+498.03	233.18
(1497, 1991)	(1974, 3038)	24.5	30.5	85.5	54.5	+ 543.18	+893.76	85.80
(1974, 3038)	(1161, 4178)	35.5	89.5	34.5	5.5	+ 372.79	+ 799.57	816.93
(1161, 4178)	(1432, 6109)	8.0	47.0	78.0	38.0	+1142.32	+1736.65	42.52
Truxel								
(2790, -425)	(3129, 354)	23.5	31.5	86.5	53.5	- 282.61	- 23.67	750.26
(3129, 354)	(3468, 1134)	23.5	31.5	86.5	53.5	- 541.49	- 282.26	750.39
(3468, 1134)	(4266, 2968)	23.5	31.5	86.5	53.5	-1151.43	- 541.80	750.16
Collector								
(446, 791)	(3129, 354)	80.7	44.3	10.7	50.7	- 796.76	+ 13.79	89.01
Garden Highway								
(-1316, -479)	(-564, -205)	70.0	15.0	40.0	80.0	+ 377.39	+ 620.19	86.66
(-564, -205)	(0, 0)	70.0	15.0	40.0	80.0	+ 194.41	+ 377.32	86.95
(0, 0)	(591, -104)	80.0	45.0	10.0	50.0	∓ 57.88	± 125.02	172.41
(591, -104)	(2790, -425)	81.7	43.3	11.7	51.7	- 730.18	- 52.82	174.03
(2790, -425)	(4787, -844)	78.2	46.8	8.2	48.2	-1361.48	- 739.54	128.55

Exhibit III-7 (cont'd.)

NOTES:

Wind angles relative to the roadway (Ø) based on winds blowing from the south-southeast (160°), southwest (215°), west (270°), and northwest (310°).

Exhibit III-8

Link-Receptor Relationships For
Receptor #3 (578, 2992)

Link Coordinates		Relative Ø (°) For				Link Nodes (M)		Receptor Distance
Node 1	Node 2	160°	215°	270°	310°	L_1/L_2	L_2/L_1	D (M)
Interstate 5 & Ramps								
(0, -2000)	(0, 0)	0.0	55.0	70.0	30.0	± 911.96	±1521.56	176.17
(0, 0)	(0, 1000)	0.0	55.0	70.0	30.0	± 607.16	± 911.96	176.17
(591, -104)	(502, 286)	12.9	67.9	57.1	17.1	± 798.96	± 920.89	206.07
(502, 286)	(0, 1000)	35.1	89.9	34.9	5.1	± 395.36	± 661.39	493.33
(-564, -205)	(-588, 194)	3.4	58.4	66.6	26.6	± 829.95	± 951.79	405.96
(-588, 194)	(0, 1000)	36.1	18.9	73.9	66.1	± 594.34	± 898.43	215.51
(0, 1000)	(0, 1760)	0.0	55.0	70.0	30.0	± 375.51	± 607.16	176.17
(0, 1760)	(0, 2040)	0.0	55.0	70.0	30.0	± 290.17	± 375.51	176.17
(0, 2040)	(0, 3320)	0.0	55.0	70.0	30.0	∓ 99.97	± 290.17	176.17
(0, 1760)	(74, 2531)	5.5	49.5	75.5	35.5	± 154.55	± 390.63	139.49
(74, 2531)	(575, 3150)	39.0	16.0	71.0	69.0	∓ 36.86	± 205.87	31.01
(0, 2040)	(-141, 3214)	6.8	61.8	63.2	23.2	∓ 93.32	± 267.09	209.52
(-141, 3214)	(-959, 3604)	64.5	60.5	5.5	34.5	± 226.94	± 503.15	33.24
(0, 3320)	(0, 3708)	0.0	55.0	70.0	30.0	± 99.97	± 218.24	176.17
(-372, 3430)	(-290, 3708)	16.4	38.6	86.4	46.4	± 46.13	± 134.47	315.50
(-290, 3708)	(0, 3708)	90.0	35.0	20.0	60.0	+ 176.17	+ 264.57	218.24
(0, 3708)	(0, 4920)	0.0	55.0	70.0	30.0	± 218.24	± 587.65	176.17
(0, 4920)	(119, 7317)	2.8	52.2	72.8	32.8	± 578.20	±1309.70	205.10
West El Camino								
(-2876, 4172)	(-959, 3604)	73.5	51.5	3.5	43.5	± 502.17	±1111.58	45.76
(-959, 3604)	(-372, 3430)	73.5	51.5	3.5	43.5	± 315.56	± 502.17	45.70
(-372, 3430)	(575, 3150)	73.5	51.5	3.5	43.5	± 14.53	± 315.53	45.92
(575, 3150)	(1497, 1991)	38.5	86.5	31.5	8.5	∓ 413.15	± 38.26	29.27
(1497, 1991)	(3468, 1134)	66.5	58.5	3.5	36.5	±1033.63	∓ 378.54	168.11
(3468, 1134)	(5302, 337)	66.5	58.5	3.5	36.5	∓1643.10	∓1033.60	168.31
Azevedo								
(446, 791)	(900, 1626)	28.5	26.5	81.5	58.5	± 318.90	± 608.60	285.11
(900, 1626)	(1497, 1991)	58.6	3.6	51.4	88.6	∓ 79.84	± 133.45	406.42
(1497, 1991)	(1974, 3038)	24.5	30.5	85.5	54.5	∓ 189.17	± 161.52	381.40
(1974, 3038)	(1161, 4178)	35.5	89.5	34.5	5.5	∓ 191.14	± 235.64	354.57
(1161, 4178)	(1432, 6109)	8.0	47.0	78.0	38.0	± 382.68	± 977.02	125.73
Truxel								
(2790, -425)	(3129, 354)	23.5	31.5	86.5	53.5	± 427.01	± 685.96	1033.81
(3129, 354)	(3468, 1134)	23.5	31.5	86.5	53.5	± 168.27	± 427.50	1033.60
(3468, 1134)	(4266, 2968)	23.5	31.5	86.5	53.5	∓ 441.79	± 167.84	1033.67
Collector								
(446, 791)	(3129, 354)	80.7	44.3	10.7	50.7	± 68.14	± 896.69	668.61
Garden Highway								
(-1316, -479)	(-564, -205)	70.0	15.0	40.0	80.0	± 660.64	± 904.59	796.40
(-564, -205)	(0, 0)	70.0	15.0	40.0	80.0	± 477.11	± 660.02	796.92
(0, 0)	(591, -104)	80.0	45.0	10.0	50.0	∓ 15.46	± 167.44	928.69
(591, -104)	(2790, -425)	81.7	43.3	11.7	51.7	± 140.23	± 817.58	933.19
(2790, -425)	(4787, -844)	78.2	46.8	8.2	48.2	± 873.72	±1495.66	880.86

Exhibit III-8 (cont'd.)

NOTES:

Wind angles relative to the roadway (Ø) based on winds blowing from the south-southeast (160°), southwest (215°), west (270°), and northwest (310°).

Exhibit III-9

Link-Receptor Relationships For
Receptor #4 (1476, 2160)

Link Coordinates Node 1	Node 2	Relative Ø (°) For 160°	215°	270°	310°	Link Nodes (M) L_1/L_2	L_2/L_1	Receptor Distance D (M)
Interstate 5 & Ramps								
(0, -2000)	(0, 0)	0.0	55.0	70.0	30.0	± 658.37	±1267.97	449.88
(0, 0)	(0, 1000)	0.0	55.0	70.0	30.0	± 353.57	± 658.37	449.88
(591, -104)	(502, 286)	12.9	67.9	57.1	17.1	± 490.83	± 612.76	416.52
(502, 286)	(0, 1000)	35.1	89.9	34.9	5.1	± 30.49	± 296.52	571.38
(-564, -205)	(-588, 194)	3.4	58.4	66.6	26.6	± 560.38	± 682.22	663.95
(-588, 194)	(0, 1000)	36.1	18.9	73.9	66.1	± 550.78	± 854.88	155.07
(0, 1000)	(0, 1760)	0.0	55.0	70.0	30.0	± 121.92	± 353.57	449.88
(0, 1760)	(0, 2040)	0.0	55.0	70.0	30.0	± 36.58	± 121.92	449.88
(0, 2040)	(0, 3320)	0.0	55.0	70.0	30.0	∓ 36.58	± 353.57	449.88
(0, 1760)	(74, 2531)	5.5	49.5	75.5	35.5	∓ 71.74	± 164.35	436.18
(74, 2531)	(575, 3150)	39.0	16.0	71.0	69.0	∓ 61.78	± 180.95	403.31
(0, 2040)	(-141, 3214)	6.8	61.8	63.2	23.2	± 17.33	± 377.74	451.04
(-141, 3214)	(-959, 3604)	64.5	60.5	5.5	34.5	± 583.14	± 859.36	77.88
(0, 3320)	(0, 3708)	0.0	55.0	70.0	30.0	± 353.57	± 471.83	449.88
(-372, 3430)	(-290, 3708)	16.4	38.6	86.4	46.4	± 211.92	± 300.27	649.77
(-290, 3708)	(0, 3708)	90.0	35.0	20.0	60.0	+ 449.88	+ 538.28	471.83
(0, 3708)	(0, 4920)	0.0	55.0	70.0	30.0	± 471.83	± 841.25	449.88
(0, 4920)	(119, 7317)	2.8	52.2	72.8	32.8	± 817.91	±1549.41	491.05
West El Camino								
(-2876, 4172)	(-959, 3604)	73.5	51.5	3.5	43.5	± 836.64	±1446.06	211.15
(-959, 3604)	(-372, 3430)	73.5	51.5	3.5	43.5	± 650.06	± 836.67	211.05
(-372, 3430)	(575, 3150)	73.5	51.5	3.5	43.5	± 348.91	± 649.91	211.50
(575, 3150)	(1497, 1991)	38.5	86.5	31.5	8.5	∓ 44.30	± 407.11	27.06
(1497, 1991)	(3468, 1134)	66.5	58.5	3.5	36.5	± 26.41	± 681.50	44.69
(3468, 1134)	(5302, 337)	66.5	58.5	3.5	36.5	± 681.49	±1291.00	44.82
Azevedo								
(446, 791)	(900, 1626)	28.5	26.5	81.5	58.5	± 226.86	± 516.55	76.49
(900, 1626)	(1497, 1991)	58.6	3.6	51.4	88.6	± 21.41	± 234.69	47.29
(1497, 1991)	(1974, 3038)	24.5	30.5	85.5	54.5	∓ 306.46	± 44.22	27.18
(1974, 3038)	(1161, 4178)	35.5	89.5	34.5	5.5	± 129.75	± 556.53	278.97
(1161, 4178)	(1432, 6109)	8.0	47.0	78.0	38.0	± 595.77	±1190.11	180.57
Truxel								
(2790, -425)	(3129, 354)	23.5	31.5	86.5	53.5	± 303.70	± 562.65	681.64
(3129, 354)	(3468, 1134)	23.5	31.5	86.5	53.5	± 44.79	± 304.02	681.50
(3468, 1134)	(4266, 2968)	23.5	31.5	86.5	53.5	∓ 565.12	± 44.51	681.51
Collector								
(446, 791)	(3129, 354)	80.7	44.3	10.7	50.7	± 242.78	∓ 585.77	462.31
Garden Highway								
(-1316, -479)	(-564, -205)	70.0	15.0	40.0	80.0	+ 831.00	+1074.95	464.43
(-564, -205)	(0, 0)	70.0	15.0	40.0	80.0	+ 647.73	+ 830.64	465.08
(0, 0)	(591, -104)	80.0	45.0	10.0	50.0	∓ 328.98	∓ 146.07	726.37
(591, -104)	(2790, -425)	81.7	43.3	11.7	51.7	∓ 167.24	± 510.11	721.79
(2790, -425)	(4787, -844)	78.2	46.8	8.2	48.2	± 553.77	±1175.70	688.87

Exhibit III-9 (cont'd.)

NOTES:

Wind angles relative to the roadway (Ø) based on winds blowing from the south-southeast (160°), southwest (215°), west (270°), and northwest (310°).

Exhibit III-10

Link-Receptor Relationships For
Receptor #5 (3600, 1186)

Link Coordinates Node 1	Node 2	Relative Ø (°) For 160°	215°	270°	310°	Link Nodes (M) L_1/L_2	L_2/L_1	Receptor Distance D (M)
Interstate 5 & Ramps								
(0, -2000)	(0, 0)	0.0	55.0	70.0	30.0	± 361.49	± 971.09	1097.28
(0, 0)	(0, 1000)	0.0	55.0	70.0	30.0	± 56.69	± 361.49	1097.28
(591, -104)	(502, 286)	12.9	67.9	57.1	17.1	± 57.36	± 179.29	981.64
(502, 286)	(0, 1000)	35.1	89.9	34.9	5.1	± 584.73	± 318.69	930.23
(-564, -205)	(-588, 194)	3.4	58.4	66.6	26.6	± 225.17	± 347.01	1292.35
(-588, 194)	(0, 1000)	36.1	18.9	73.9	66.1	± 692.50	± 996.59	853.04
(0, 1000)	(0, 1760)	0.0	55.0	70.0	30.0	∓ 174.96	± 56.69	1097.28
(0, 1760)	(0, 2040)	0.0	55.0	70.0	30.0	± 260.30	± 174.96	1097.28
(0, 2040)	(0, 3320)	0.0	55.0	70.0	30.0	± 650.44	± 260.30	1097.28
(0, 1760)	(74, 2531)	5.5	49.5	75.5	35.5	± 305.40	± 69.32	1108.98
(74, 2531)	(575, 3150)	39.0	16.0	71.0	69.0	± 114.75	± 357.47	1093.30
(0, 2040)	(-141, 3214)	6.8	61.8	63.2	23.2	± 749.70	± 389.29	1058.41
(-141, 3214)	(-959, 3604)	64.5	60.5	5.5	34.5	±1571.50	±1295.28	67.24
(0, 3320)	(0, 3708)	0.0	55.0	70.0	30.0	± 768.71	± 650.44	1097.28
(-372, 3430)	(-290, 3708)	16.4	38.6	86.4	46.4	± 401.86	± 313.51	1354.71
(-290, 3708)	(0, 3708)	90.0	35.0	20.0	60.0	+1097.28	+1185.67	768.71
(0, 3708)	(0, 4920)	0.0	55.0	70.0	30.0	±1138.12	± 768.71	1097.28
(0, 4920)	(119, 7317)	2.8	52.2	72.8	32.8	±1813.82	±1082.31	1152.36
West El Camino								
(-2876, 4172)	(-959, 3604)	73.5	51.5	3.5	43.5	±1541.71	±2151.12	311.87
(-959, 3604)	(-372, 3430)	73.5	51.5	3.5	43.5	±1355.13	±1541.74	311.69
(-372, 3430)	(575, 3150)	73.5	51.5	3.5	43.5	±1053.91	±1354.91	312.63
(575, 3150)	(1497, 1991)	38.5	86.5	31.5	8.5	± 591.07	±1042.48	348.88
(1497, 1991)	(3468, 1134)	66.5	58.5	3.5	36.5	± 30.58	± 685.67	30.58
(3468, 1134)	(5302, 337)	66.5	58.5	3.5	36.5	∓ 578.92	± 30.58	30.57
Azevedo								
(446, 791)	(900, 1626)	28.5	26.5	81.5	58.5	± 275.28	± 564.98	787.06
(900, 1626)	(1497, 1991)	58.6	3.6	51.4	88.6	± 418.89	± 632.17	543.70
(1497, 1991)	(1974, 3038)	24.5	30.5	85.5	54.5	∓ 308.22	± 42.46	685.04
(1974, 3038)	(1161, 4178)	35.5	89.5	34.5	5.5	±1174.13	± 747.35	75.74
(1161, 4178)	(1432, 6109)	8.0	47.0	78.0	38.0	±1394.13	± 799.79	862.94
Truxel								
(2790, -425)	(3129, 354)	23.5	31.5	86.5	53.5	± 289.81	± 548.76	30.44
(3129, 354)	(3468, 1134)	23.5	31.5	86.5	53.5	± 30.57	± 289.80	30.58
(3468, 1134)	(4266, 2968)	23.5	31.5	86.5	53.5	∓ 579.04	± 30.59	30.57
Collector								
(446, 791)	(3129, 354)	80.7	44.3	10.7	50.7	± 100.93	± 929.48	273.37
Garden Highway								
(-1316, -479)	(-564, -205)	70.0	15.0	40.0	80.0	+1337.64	+1581.59	36.14
(-564, -205)	(0, 0)	70.0	15.0	40.0	80.0	+1154.76	+1337.67	35.10
(0, 0)	(591, -104)	80.0	45.0	10.0	50.0	± 835.12	±1018.03	546.19
(591, -104)	(2790, -425)	81.7	43.3	11.7	51.7	± 173.37	± 850.73	521.54
(2790, -425)	(4787, -844)	78.2	46.8	8.2	48.2	∓ 481.14	± 140.80	531.27

Exhibit III-10 (cont'd.)

NOTES:

Wind angles relative to the roadway (Ø) based on winds blowing from the south-southeast (160°), southwest (215°), west (270°) and northwest (310°).

Traffic Assumptions

Analyses presented in this EIR have focused on 1987 conditions, since that is the deadline for attainment of federal air quality standards. Traffic volumes presented in Section J of the text and in Appendix II represent "buildout" conditions. Traffic volume estimates for 1987 conditions (Exhibits III-4 and III-5) were developed by making the following assumptions:

- o 1987 ADT = 75% of Buildout ADT
- o Peak Hour Volumes = 10% of ADT
- o Peak 8-hour Volumes = 60% of ADT

These assumptions allowed calculation of 1987 average hourly traffic volumes during the peak 8-hour period. The volumes in Exhibits III-4 and III-5 are 56.25 percent of the peak hour, buildout condition volumes presented in Appendix IV.

Vehicle emission rates are sensitive to vehicle speed assumptions. Exhibit III-11 presents the formula used to calculate vehicle speeds from volume/capacity ratios. All surface streets were treated as urban/suburban arterials having a capacity of 1,600 vehicles per hour per lane (at level of service E). Freeway ramps and ramp entrance/exit lanes on the freeway were treated as rural highways with a capacity of 1,600 vehicles per hour per lane. Through lanes on Interstate 5 were treated as having hourly lane capacities of 2,000 vehicles per hour.

Vehicle Emission Rates

Carbon monoxide emission rates were developed from data provided by the California Air Resources Board's EMFAC 6C computer program. Key parameter assumptions are listed in Exhibit III-12. The temperature difference between freeway and surface street conditions reflects the availability of EMFAC 6C runs previously performed for Jones & Stokes Associates. Jones & Stokes Associates' staff concluded that it was not necessary to have new EMFAC 6C runs made solely for the purpose of adjusting the temperature parameter by 5°F.

Exhibit III-11. Volume/Capacity Ratio Adjustment to Free Flow Speeds for Various Highway Types[1]

Level of Service Used to Define Highway Capacity	Capacity Adjustment Factor (K) For Different Highway Types[2]					Controlling Speed Ratio ($S' \div S_O$) Values for Different Highway Types[3]				
	Freeways	Multilane Rural Highways	2-Lane Rural Highways	Urban/ Suburban Arterials	Downtown Streets	Freeways	Multilane Rural Highways	2-Lane Rural Highways	Urban/ Suburban Arterials	Downtown Streets
A	110.668	110.668	110.668	110.668	110.668	1.000	1.000	1.000	1.000	1.000
B	1.134	1.134	0.930	0.930	0.880	0.917	0.917	0.833	0.833	0.800
C	0.930	0.819	0.740	0.740	0.688	0.833	0.750	0.667	0.667	0.600
D	0.740	0.677	0.677	0.622	0.562	0.667	0.583	0.583	0.500	0.400
E	0.649	0.622	0.622	0.582	0.504	0.542	0.500	0.500	0.433	0.300

NOTES:

[1]Speed adustment equation:

$$S' = (S_o) \div (1.0 + [0.15]\ [K^{-4}]\ [(\frac{V}{C})^4])$$

Where: S' = adjusted average traffic speed
S_o = average traffic speed under free flow conditions
V = average traffic volume per lane
C = hourly lane capacity at a specified level of service
K = Level-of-service based capacity adjustment factor

Speed adjustment equation derived and generalized by Jones & Stokes Associates from travel time adjustment equation in Federal Highway Administration Traffic Assignment workbook (1973).

[2]Values of parameter K calculated from speed adjustment equation assuming V=C and appropriate controlling speed ratios; parameter K value for capacities defined at level of service A are calculated using a speed ratio of 0.999999999.

[3]Values derived from Tables 9.1, 10.1, 10.7, 10.13, and 10.14 of the 1965 Highway Capacity Manual (Highway Research Board 1965).

SOURCE: Jones & Stokes Associates.

Exhibit III-12. Parameter Values Used For Vehicle Emission Rate Calculations

Parameter		Freeway Traffic	Surface Street and Freeway Ramp Traffic
Calendar year		1987	1987
Air temperature[1]		35°F	40°F
VMT mix[2]:	Autos	68.3%	69.1%
	Light duty trucks	19.7%	22.5%
	Medium duty trucks	2.1%	2.3%
	Heavy duty gasoline trucks	4.3%	2.4%
	Heavy duty diesel vehicles	4.5%	2.6%
	Motorcycles	1.1%	1.1%
Operating Mode[3]:	Cold start	40.8%	40.8%
	Hot start	18.5%	18.5%
	Hot stabilized	40.7%	40.7%

NOTES:

[1]Temperature difference results from use of EMFAC 6C computer runs furnished to Jones & Stokes Associates at various times by the California Air Resources Board. The difference due to choice of 35° or 40° was judged to be minor.

[2]Based on Jones & Stokes Associates analysis of Sacramento area vehicle registration and annual mileage data (California Air Resources Board 1980); surface street mixed adjusted to reflect lower heavy duty truck volumes.

[3]Based on Jones & Stokes Associates analysis of Sacramento Area Traffic Study (SATS) origin/destination survey data (1968) and traffic model output of trip-type travel time patterns (1979 network run).

Modeling Results

Exhibits III-13 through III-17 present the results of the CALINE 3 analyses for each of the 5 receptor sites. The highest 8-hour average carbon monoxide concentration (3.7 ppm) was predicted for receptor site 3 (100 feet south of the West El Camino/Interstate 5 off-ramp intersection). This site is in the extreme northwest corner of the project site. As is apparent from the model results, there is very little difference between the proposed project and no-project conditions.

Modeling results presented in Exhibits III-13 through III-17 do not include any consideration of carbon monoxide contributions from sources other than the modeled roadways. Such other sources would include parking lots, local streets not modeled, and roadways beyond the ends of the modeled highway segments. Initial modeling results were also developed using a "buildout" roadway configuration that assumed widening of West El Camino Avenue, Truxel Road, and Garden Highway to 4 lanes. The vehicle emission rates used for the results presented here are based on a 2-lane configuration for these three arterials. It was not possible, however, to adjust the model results to reflect a 13.3 meter wide mixing cell rather than the 20.6 meter width used in the initial modeling. The 2-lane configuration would produce a higher mixing cell concentration, but would also be slightly further from the fixed receptor points.

Given the considerations noted above, total 8-hour average carbon monoxide concentrations at the various receptor sites should probably be estimated as 2-3 ppm higher than the values shown in Exhibits III-13 through III-17. The resulting 5-8 ppm carbon monoxide concentrations would still be lower than the federal 8-hour standard of 9 ppm.

Exhibit III-13. 1987 8-Hour Average Carbon Monoxide Levels (ppm) at Receptor #1

Contributing Highway Link		No Project Conditions For Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Interstate 5													
(0, -2000)	(0, 0)	0.48	-	-	-	0.48	-	-	-	0.00	-	-	-
(0, 0)	(0, 1000)	0.21	-	-	-	0.21	-	-	-	0.00	-	-	-
(0, 1000)	(0, 1760)	0.04	-	-	-	0.04	-	-	-	0.00	-	-	-
(0, 1760)	(0, 2040)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 2040)	(0, 3708)	-	0.83	0.81	1.01	-	0.85	0.83	1.03	-	+0.02	+0.02	+0.02
(0, 3708)	(0, 4920)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 4920)	(119, 7317)	-	-	-	-	-	-	-	-	-	-	-	-
Ramps at Garden Highway													
(-564, -205)	(-588, 194)	-	-	-	-	-	-	-	-	-	-	-	-
(-588, 194)	(0, 1000)	-	0.17	-	-	-	0.19	-	-	-	+0.02	-	-
(591, -104)	(502, 286)	0.02	-	-	-	0.02	-	-	-	0.00	-	-	-
(502, 286)	(0, 1000)	0.09	-	-	-	0.10	-	-	-	+0.01	-	-	-
Ramps at West El Camino													
(0, 2040)	(-141, 3214)	-	0.04	0.04	0.02	-	0.04	0.04	0.02	-	0.00	0.00	0.00
(-141, 3214)	(-959, 3604)	-	-	-	0.02	-	-	-	0.02	-	-	-	0.00
(-372, 3430)	(-290, 3708)	-	-	-	0.01	-	-	-	0.01	-	-	-	0.00
(-290, 3708)	(0, 3708)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 1760)	(74, 2531)	0.02	0.32	-	-	0.02	0.29	-	-	0.00	-0.03	-	-
(74, 2531)	(575, 3150)	-	-	0.46	0.46	-	-	0.42	0.42	-	-	-0.04	-0.04
West El Camino													
(-2876, 4172)	(-959, 3604)	-	-	0.05	-	-	-	0.05	-	-	-	0.00	-
(-959, 3604)	(-372, 3430)	-	-	-	0.05	-	-	-	0.05	-	-	-	0.00
(-372, 3430)	(575, 3150)	-	-	-	0.70	-	-	-	0.76	-	-	-	+0.06
(575, 3150)	(1497, 1991)	-	-	-	-	-	-	-	-	-	-	-	-
(1497, 1991)	(3468, 1134)	-	-	-	-	-	-	-	-	-	-	-	-
(3468, 1134)	(5302, 337)	-	-	-	-	-	-	-	-	-	-	-	-
Azevedo													
(446, 791)	(900, 1626)	0.02	-	-	-	0.02	-	-	-	0.00	-	-	-
(900, 1626)	(1497, 1991)	-	-	-	-	-	-	-	-	-	-	-	-
(1497, 1991)	(1974, 3038)	-	-	-	-	-	-	-	-	-	-	-	-
(1974, 3038)	(1161, 4178)	-	-	-	-	-	-	-	-	-	-	-	-
(1161, 4178)	(1432, 6109)	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit III-13. (cont'd.)

Contributing Highway Link		No Project Conditions For Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Truxel													
(2790, -425)	(3129, 354)	-	-	-	-	-	-	-	-	-	-	-	-
(3129, 354)	(3468, 1134)	-	-	-	-	-	-	-	-	-	-	-	-
(3468, 1134)	(4266, 2968)	-	-	-	-	-	-	-	-	-	-	-	-
Collector													
(446, 791)	(3129, 354)	0.01	-	-	-	0.01	-	-	-	0.00	-	-	-
Garden Highway													
(-1316, -479)	(-564, -205)	-	-	-	-	-	-	-	-	-	-	-	-
(-564, -205)	(0, 0)	0.01	-	-	-	0.01	-	-	-	0.00	-	-	-
(0, 0)	(591, -104)	0.08	-	-	-	0.08	-	-	-	0.00	-	-	-
(591, -104)	(2790, -425)	-	-	-	-	-	-	-	-	-	-	-	-
(2790, -425)	(4787, -844)	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		0.98	1.36	1.36	2.27	0.99	1.37	1.34	2.31	+0.01	+0.01	-0.02	+0.04

NOTES:

All modeling results based on programmable calculator version of CALINE 3 (Benson 1979). Parameter inputs are identified in Exhibits III-3 - III-10. See Exhibit III-1 for link/receptor schematic. Wind directions represent the compass direction (relative to true north) from which the wind blows; 0° = north, 90°= east, 180°= south, 270°= west. -= less than 0.005 ppm increment, or not analyzed since wind angle precludes any impact at receptor point.

Exhibit III-14. 1987 8-Hour Average Carbon Monoxide Levels (ppm) at Receptor #2

Contributing Highway Link		No Project Conditions for Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Interstate 5													
(0, -2000)	(0,0)	0.02	0.07	-	-	0.02	0.07	-	-	0.00	0.00	-	-
(0, 0)	(0, 1000)	-	0.80	0.78	0.01	-	0.80	0.78	0.01	-	0.0	0.00	0.00
(0, 1000)	(0, 1760)	-	-	-	0.99	-	-	-	1.00	-	-	-	+0.01
(0, 1760)	(0, 2040)	-	-	-	0.05	-	-	-	0.05	-	-	-	0.00
(0, 2040)	(0, 3708)	-	-	-	0.01	-	-	-	0.01	-	-	-	0.00
(0, 3708)	(0, 4920)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 4920)	(119, 7317)	-	-	-	-	-	-	-	-	-	-	-	-
Ramps at Garden Highway													
(-564, -205)	(-588, 194)	-	0.04	0.11	-	-	0.05	0.12	-	-	+0.01	+0.01	-
(-588, 194)	(0, 1000)	0.05	-	0.14	0.14	0.06	-	0.16	0.16	+0.01	-	+0.02	+0.02
(591, -104)	(502, 286)	0.45	-	-	0.02	0.48	-	-	0.02	+0.03	-	-	0.00
(502, 286)	(0, 1000)	0.19	0.25	0.19	-	0.20	0.27	0.20	-	+0.01	+0.02	+0.01	-
Ramps at West El Camino													
(0, 2040)	(-141, 3214)	-	-	-	-	-	-	-	-	-	-	-	-
(-141, 3214)	(-959, 3604)	-	-	-	-	-	-	-	-	-	-	-	-
(-372, 3430)	(-290, 3708)	-	-	-	-	-	-	-	-	-	-	-	-
(-290, 3708)	(0, 3708)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 1760)	(74, 2531)	-	-	-	0.01	-	-	-	0.01	-	-	-	0.00
(74, 2531)	(575, 3150)	-	-	-	-	-	-	-	-	-	-	-	-
West El Camino													
(-2876, 4172)	(-959, 3604)	-	-	-	-	-	-	-	-	-	-	-	-
(-959, 3604)	(-372, 3430)	-	-	-	0.02	-	-	-	0.02	-	-	-	0.0
(-372, 3430)	(575, 3150)	-	-	-	-	-	-	-	-	-	-	-	-
(575, 3150)	(1497, 1991)	-	-	-	-	-	-	-	-	-	-	-	-
(1497, 1991)	(3468, 1134)	-	-	-	-	-	-	-	-	-	-	-	-
(3468, 1134)	(5302, 337)	-	-	-	-	-	-	-	-	-	-	-	-
Azevedo													
(446, 791)	(900, 1626)	-	-	0.01	0.14	-	-	0.01	0.16	-	-	0.00	+0.02
(900, 1626)	(1497, 1991)	-	-	-	-	-	-	-	-	-	-	-	-
(1497, 1991)	(1974, 3038)	-	-	-	-	-	-	-	-	-	-	-	-
(1974, 3038)	(1161, 4178)	-	-	-	-	-	-	-	-	-	-	-	-
(1161, 4178)	(1432, 6109)	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit III-14. (cont'd.)

Contributing Highway Link		No Project Conditions For Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Truxel													
(2790, -425)	(3129, 354)	-	-	-	-	-	-	-	-	-	-	-	-
(3129, 354)	(3468, 1134)	-	-	-	-	-	-	-	-	-	-	-	-
(3468, 1134)	(4266, 2968)	-	-	-	-	-	-	-	-	-	-	-	-
Collector													
(446, 791)	(3129, 354)	-	-	-	-	-	-	-	-	-	-	-	-
Garden Highway													
(-1316, -479)	(-564, -205)	-	0.22	-	-	-	0.22	-	-	-	0.00	-	-
(-564, -205)	(0, 0)	-	0.34	-	-	-	0.34	-	-	-	0.00	-	-
(0, 0)	(591, -104)	0.21	-	-	-	0.21	-	-	-	0.00	-	-	-
(591, -104)	(2790, -425)	-	-	-	-	-	-	-	-	-	-	-	-
(2790, -425)	(4787, -844)	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		0.92	1.72	1.23	1.39	0.97	1.75	1.27	1.44	+0.05	+0.03	+0.04	+0.05

NOTES:

All modeling results based on programmable calculator version of CALINE 3 (Benson 1979). Parameter inputs are identified in Exhibits III-3 - III-10. See Exhibit III-1 for link/receptor schematic. Wind directions represent the compass direction (relative to true north) from which the wind blows; 0° = north, 90° = east, 180° - south, 270° = west. - = less than 0.005 ppm increment, or not analyzed since wind angle precludes any impact at receptor point.

Exhibit III-15. 1987 8-Hour Average Carbon Monoxide Levels (ppm) at Receptor #3

Contributing Highway Link		No Project Conditions for Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Interstate 5													
(0, -2000)	(0,0)	0.12	-	-	-	0.12	-	-	-	0.00	-	-	-
(0, 0)	(0, 1000)	0.02	-	-	-	0.02	-	-	-	0.00	-	-	-
(0, 1000)	(0, 1760)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 1760)	(0, 2040)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 2040)	(0, 3708)	-	0.60	0.51	0.08	-	0.61	0.52	0.08	-	+0.01	+0.01	0.00
(0, 3708)	(0, 4920)	-	-	-	0.60	-	-	-	0.60	-	0.00	-	-
(0, 4920)	(119, 7317)	-	-	-	-	-	-	-	-	-	-	-	-
Ramps at Garden Highway													
(-564, -205)	(-588, 194)	-	-	-	-	-	-	-	-	-	-	-	-
(-588, 194)	(0, 1000)	-	-	-	-	-	-	-	-	-	-	-	-
(591, -104)	(502, 286)	0.04	-	-	-	0.06	-	-	-	+0.02	-	-	-
(502, 286)	(0, 1000)	0.03	-	-	-	0.05	-	-	-	+0.02	-	-	-
Ramps at West El Camino													
(0, 2040)	(-141, 3214)	-	-	-	-	-	-	-	-	-	-	-	-
(-141, 3214)	(-959, 3604)	-	-	-	-	-	-	-	-	-	-	-	-
(-372, 3430)	(-290, 3708)	-	-	0.01	-	-	-	0.01	-	-	-	0.00	-
(-290, 3708)	(0, 3708)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 1760)	(74, 2531)	-	0.02	-	-	-	0.02	-	-	-	0.00	-	-
(74, 2531)	(575, 3150)	-	1.03	0.62	0.62	-	0.93	0.56	0.56	-	-0.10	-0.06	-0.06
West El Camino													
(-2876, 4172)	(-959, 3604)	-	-	0.77	-	-	-	0.77	-	-	-	0.00	-
(-959, 3604)	(-372, 3430)	-	-	0.46	-	-	-	0.46	-	-	-	0.00	-
(-372, 3430)	(575, 3150)	-	-	0.76	0.72	-	-	0.83	0.79	-	-	+0.07	+0.07
(575, 3150)	(1497, 1991)	1.49	1.13	0.59	-	1.50	1.14	0.59	-	+0.01	+0.01	0.00	-
(1497, 1991)	(3468, 1134)	-	-	-	-	-	-	-	-	-	-	-	-
(3468, 1134)	(5302, 337)	-	-	-	-	-	-	-	-	-	-	-	-
Azevedo													
(446, 791)	(900, 1626)	0.07	-	-	-	0.08	-	-	-	+0.01	-	-	-
(900, 1626)	(1497, 1991)	-	-	-	-	-	-	-	-	-	-	-	-
(1497, 1991)	(1974, 3038)	-	-	-	-	-	-	-	-	-	-	-	-
(1974, 3038)	(1161, 4178)	-	-	-	-	-	-	-	-	-	-	-	-
(1161, 4178)	(1432, 6109)	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit III-15. (cont'd.)

Contributing Highway Link		No Project Conditions for Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Truxel													
(2790, -425)	(3129, 354)	-	-	-	-	-	-	-	-	-	-	-	-
(3129, 354)	(3468, 1134)	-	-	-	-	-	-	-	-	-	-	-	-
(3468; 1134)	(4266, 2968)	-	-	-	-	-	-	-	-	-	-	-	-
Collector													
(446, 791)	(3129, 354)	-	-	-	-	-	-	-	-	-	-	-	-
Garden Highway													
(-1316, -479)	(-564, -205)	-	-	-	-	-	-	-	-	-	-	-	-
(-564, -205)	(0, 0)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 0)	(591, -104)	0.05	-	-	-	0.05	-	-	-	0.00	-	-	-
(591, -104)	(2790, -425)	0.05	-	-	-	0.05	-	-	-	0.00	-	-	-
(2790, -425)	(4787, -844)	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		1.87	2.78	3.72	2.02	1.93	2.70	3.74	2.03	+0.06	-0.08	+0.02	+0.01

NOTES:

All modeling results based on programmable calculator version of CALINE 3 (Benson 1979). Parameter inputs are identified in Exhibits III-3 - III-10. See Exhibit III-1 for link/receptor schematic. Wind directions represent the compass direction (relative to true north) from which the wind blows; 0° = north, 90° = east, 180° = south, 270° = west. - = less than 0.005 ppm increment, or not analyzed since wind angle precludes any impact at receptor point.

Exhibit III-16. 1987 8-Hour Average Carbon Monoxide Levels (ppm) at Receptor #4

Contributing Highway Link		No Project Conditions for Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Interstate 5													
(0, -2000)	(0,0)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 0)	(0, 1000)	-	0.14	-	-	-	0.14	-	-	-	0.00	-	-
(0, 1000)	(0, 1760)	-	0.23	-	-	-	0.23	-	-	-	0.00	-	-
(0, 1760)	(0, 2040)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 2040)	(0, 3708)	-	-	0.34	-	-	-	0.35	-	-	-	+0.01	-
(0, 3708)	(0, 4920)	-	-	-	0.24	-	-	-	0.24	-	-	-	0.00
(0, 4920)	(119, 7317)	-	-	-	-	-	-	-	-	-	-	-	-
Ramps at Garden Highway													
(-564, -205)	(-588, 194)	-	-	-	-	-	-	-	-	-	-	-	-
(-588, 194)	(0, 1000)	-	-	-	-	-	-	-	-	-	-	-	-
(591, -104)	(502, 286)	-	-	-	-	-	-	-	-	-	-	-	-
(502, 286)	(0, 1000)	-	0.04	-	-	-	0.04	-	-	-	0.00	-	-
Ramps at West El Camino													
(0, 2040)	(-141, 3214)	-	-	0.02	-	-	-	0.02	-	-	-		
(-141, 3214)	(-959, 3604)	-	-	0.03	-	-	-	0.03	-		-		
(-372, 3430)	(-290, 3708)	-	-	-	-	-	-	-	-	-		-	
(-290, 3708)	(0, 3708)	-	-	-	-	-	-	-	-			-	-
(0, 1760)	(74, 2531)	-	-	0.02	-	-	-	0.02	-	-	-	0.00	-
(74, 2531)	(575, 3150)	-	-	0.14	-	-	-	0.13	-	-	-	-0.01	-
West El Camino													
(-2876, 4172)	(-959, 3604)	-	-	-	-	-	-	-	-	-	-	-	-
(-959, 3604)	(-372, 3430)	-	-	-	-	-	-	-	-	-	-	-	-
(-372, 3430)	(575, 3150)	-	-	-	0.02	-	-	-	0.02	-	-	-	0.00
(575, 3150)	(1497, 1991)	1.77	1.90	2.69	-	1.78	1.91	2.71	-	+0.01	+0.01	+0.02	-
(1497, 1991)	(3468, 1134)	0.29	-	-	-	0.29	-	-	-	0.00	-	-	-
(3468, 1134)	(5302, 337)	-	-	-	-	-	-	-	-	-	-	-	-
Azevedo													
(446, 791)	(900, 1626)	-	0.02	-	-	-	0.02	-	-	-	0.00	-	-
(900, 1626)	(1497, 1991)	0.14	-	-	-	0.16	-	-	-	+0.02	-	-	-
(1497, 1991)	(1974, 3038)	0.05	0.13	0.27	-	0.05	0.13	0.28	-	0.00	0.00	+0.01	-
(1974, 3038)	(1161, 4178)	-	-	-	-	-	-	-	-	-	-	-	-
(1161, 4178)	(1432, 6109)	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit III-16. (cont'd.)

Contributing Highway Link		No Project Conditions for Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Truxel													
(2790, -425)	(3129, 354)	-	-	-	-	-	-	-	-	-	-	-	-
(3129, 354)	(3468, 1134)	-	-	-	-	-	-	-	-	-	-	-	-
(3468, 1134)	(4266, 2968)	-	-	-	-	-	-	-	-	-	-	-	-
Collector													
(446, 791)	(3129, 354)	0.07	-	-	-	0.08	-	-	-	+0.01	-	-	-
Garden Highway													
(-1316, -479)	(-564, -205)	-	0.01	-	-	-	0.01	-	-	-	0.00	-	-
(-564, -205)	(0, 0)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 0)	(591, -104)	-	-	-	-	-	-	-	-	-	-	-	-
(591, -104)	(2790, -425)	0.02	-	-	-	0.02	-	-	-	0.00	-	-	-
(2790, -425)	(4787, -844)	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		2.34	2.47	3.51	0.26	2.38	2.48	3.54	0.26	+0.04	+0.01	+0.03	0.00

NOTES:

All modeling results based on programmable calculator version of CALINE 3 (Benson 1979). Parameter inputs are identified in Exhibits III-3 - III-10. See Exhibit III-1 for link/receptor schematic. Wind directions represent the compass direction (relative to true north) from which the wind blows; 0° = north, 90° = east, 180° = south, 270° = west. - = less than 0.005 ppm increment, or not analyzed since wind angle precludes any impact at receptor point.

Exhibit III-17. 1987 8-Hour Average Carbon Monoxide Levels (ppm) at Receptor #5

Contributing Highway Link		No Project Conditions for Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Interstate 5													
(0, -2000)	(0,0)	-	0.29	-	-	-	0.29	-	-	-	0.00	-	-
(0, 0)	(0, 1000)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 1000)	(0, 1760)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 1760)	(0, 2040)	-	-	0.02	-	-	-	0.02	-	-	-	0.00	-
(0, 2040)	(0, 3708)	-	-	0.20	-	-	-	0.20	-	-	-	0.00	-
(0, 3708)	(0, 4920)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 4920)	(119, 7317)	-	-	-	0.12	-	-	-	0.12	-	-	-	0.00
Ramps at Garden Highway													
(-564, -205)	(-588, 194)	-	-	-	-	-	-	-	-	-	-	-	-
(-588, 194)	(0, 1000)	-	-	-	-	-	-	-	-	-	-	-	-
(591, -104)	(502, 286)	-	-	-	-	-	-	-	-	-	-	-	-
(502, 286)	(0, 1000)	-	-	-	-	-	-	-	-	-	-	-	-
Ramps at West El Camino													
(0, 2040)	(-141, 3214)	-	-	0.01	-	-	-	0.01	-	-	-	0.00	-
(-141, 3214)	(-959, 3604)	-	-	0.01	-	-	-	0.01	-	-	-	0.00	-
(-372, 3430)	(-290, 3708)	-	-	-	-	-	-	-	-	-	-	-	-
(-290, 3708)	(0, 3708)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 1760)	(74, 2531)	-	-	0.04	-	-	-	0.04	-	-	-	0.00	-
(74, 2531)	(575, 3150)	-	-	0.04	-	-	-	0.04	-	-	-	0.00	-
West El Camino													
(-2876, 4172)	(-959, 3604)	-	-	-	-	-	-	-	-	-	-	-	-
(-959, 3604)	(-372, 3430)	-	-	0.01	-	-	-	0.01	-	-	-	0.00	-
(-372, 3430)	(575, 3150)	-	-	0.01	-	-	-	0.01	-	-	-	0.00	-
(575, 3150)	(1497, 1991)	-	-	0.30	-	-	-	0.30	-	-	-	0.00	-
(1497, 1991)	(3468, 1134)	-	0.09	-	-	-	0.09	-	-	-	0.00	-	-
(3468, 1134)	(5302, 337)	0.66	0.59	-	-	0.66	0.59	-	-	0.00	0.00	-	-
Azevedo													
(446, 791)	(900, 1626)	-	-	-	-	-	-	-	-	-	-	-	-
(900, 1626)	(1497, 1991)	-	-	0.03	-	-	-	0.03	-	-	-	0.00	-
(1497, 1991)	(1974, 3038)	-	-	0.02	-	-	-	0.02	-	-	-	0.00	-
(1974, 3038)	(1161, 4178)	-	-	-	-	-	-	-	-	-	-	-	-
(1161, 4178)	(1432, 6109)	-	-	-	0.03	-	-	-	0.03	-	-	-	0.00

Exhibit III-17. (cont'd.)

Contributing Highway Link		No Project Conditions for Wind Direction of				Proposed Project Conditions For Wind Direction of				Difference Due to Proposed Project, Wind Direction of			
Node 1	Node 2	160°	215°	270°	310°	160°	215°	270°	310°	160°	215°	270°	310°
Truxel													
(2790, -425)	(3129, 354)	-	-	-	-	-	-	-	-	-	-	-	-
(3129, 354)	(3468, 1134)	-	0.99	-	-	-	1.02	-	-	-	+0.03	-	-
(3468, 1134)	(4266, 2968)	-	0.02	0.89	1.00	-	0.02	0.94	1.06	-	0.00	+0.05	+0.06
Collector													
(446, 791)	(3129, 354)	-	0.09	-	-	-	0.10	-	-	-	+0.01	-	-
Garden Highway													
(-1316, -479)	(-564, -205)	-	-	-	-	-	-	-	-	-	-	-	-
(-564, -205)	(0, 0)	-	-	-	-	-	-	-	-	-	-	-	-
(0, 0)	(591, -104)	-	-	-	-	-	-	-	-	-	-	-	-
(591, -104)	(2790, -425)	-	0.15	-	-	-	0.15	-	-	-	0.00	-	-
(2790, -425)	(4787, -844)	0.08	-	-	-	0.08	-	-	-	0.00	0.00	-	-
TOTAL		0.74	2.07	1.58	1.15	0.74	2.11	1.63	1.21	0.00	+0.04	+0.05	+0.06

NOTES:

All modeling results based on programmable calculator version of CALINE 3 (Benson 1979). Parameter inputs are identified in Exhibits III-3 - III-10. See Exhibit III-1 for link/receptor schematic. Wind directions represent the compass direction (relative to true north) from which the wind blows: 0° = north, 90° = east, 180° = south, 270° = west. - = less than 0.005 ppm increment, or not analyzed since wind angle precludes any impact at receptor point.

Appendix IV

NOISE

Modeling Approach

Noise modeling for the project and no project alternatives involved the Federal Highway Administration (FHWA) traffic noise prediction model (Barry and Reagan 1978). These analyses used the same basic roadway schematic developed for the air quality analyses (Appendix III; see Exhibit III-1). Noise modeling required use of an "equivalent traffic lane" approach rather than highway centerline coordinates. The "equivalent lane" location must be calculated separately for each receptor point being analyzed. The distance from the receptor to the equivalent traffic lane is calculated as a geometric mean of the distances from the receptor to the center lines of the near and far traffic lanes.

The FHWA model also requires computation of the angles subtended by each highway link/receptor combination. Receptor locations selected for use in noise modeling were described in Section L of the main text. As was done for the air quality modeling, all link/receptor geometry was analyzed using a set of a series of coordinate geometry/surveying programs designed for programmable calculators. Coordinates of receptor points were as follows:

Receptor #1: 175,1380
Receptor #2: 561,3033
Receptor #3: 1497,1868
Receptor #4: 3362,1078
Receptor #5: 2735,-350
Receptor #6: 605,330

Initial noise modeling for receptor point #1 provided important guidance as to which link/receptor combinations were of no significance for subsequent noise analyses. Thus, many highway links were deleted from the analyses made for receptor points 2,4 and 5.

The FHWA model utilizes two noise attenuation options. The "hard site" option involves a noise decrease of 3 decibels for each doubling of distance from the roadway. This value assumes nearly complete reflection of sound energy from the

ground surface. It is appropriate for paved areas, hard ground surfaces, elevated noise sources, etc. The "soft site" option uses a noise decrease of 4.5 decibels for each doubling of distance from the roadway. This value is appropriate for vegetated surfaces or areas having scattered buildings. The "soft site" option was used for all analyses.

Traffic Characteristics

Directional afternoon peak hour traffic volumes used for the noise modeling are presented in Exhibits IV-1 and IV-2. The total volumes and weighted average speeds were used in conjunction with the equivalent lane distances. The buildout traffic volumes presented here served as input for the traffic estimates used for air quality modeling.

The traffic volumes in Exhibit IV-1 and IV-2 are derived from several sources. Volumes on Interstate 5 and the western link of West El Camino are taken from Exhibits J-2 and J-5. Volumes on most surface street links are taken from the intersection analyses in Appendix II. Freeway ramp volumes were estimated separately, using the freeway link directional volumes and the connecting surface street total volumes as controlling factors. It proved impossible to precisely balance ramp volumes at Garden Highway.

Separation of auto and truck categories was based on the vehicle type fractions used for air quality modeling. The FHWA vehicle types are not the same as the vehicle types used by ARB. In the FHWA terminology, "heavy trucks" represent vehicles with 3 or more axles, typically having a gross weight of more than 5,450 pounds. "Medium trucks" are 2-axle, 6-wheel vehicles with a gross weight of 2,000-5,500 pounds. Thus, the FHWA heavy truck category is similar to the ARB heavy duty diesel category while the FHWA medium truck category is similar to the ARB heavy duty gasoline powered truck category. For noise analysis purposes, freeway traffic was estimated as 91.2 percent autos, 4.3 percent medium trucks, and 4.5 percent heavy trucks. Surface street and freeway ramp traffic was estimated as 95 percent autos, 3 percent medium trucks, and 2 percent heavy trucks.

Vehicle speed estimates were made using the procedure identified in Exhibit III-11. Surface streets, freeway ramps,

Exhibit IV-1

BUILDOUT P.M. PEAK HOUR TRAFFIC: NO-PROJECT CONDITIONS

Highway Centerline Coordinates		North/West Bound				South/East Bound				Total			
		Autos	Medium Trucks	Heavy Trucks	Speed	Autos	Medium Trucks	Heavy Trucks	Speed	Autos	Medium Trucks	Heavy Trucks	Speed
INTERSTATE 5													
(0,-2000)	(0 0)	4305	203	212	50	3438	162	170	53	7743	365	382	51
(0,0)	(0,1000)	4305	203	212	52	3438	162	170	54	7743	365	382	53
(0,1000)	(0,1760)	4168	197	206	53	3329	157	164	54	7497	353	370	53
(0,1760)	(0,2040)	2389	113	118	55	3329	157	164	54	5718	270	282	54
(0,2040)	(0,3708)	2389	113	118	54	2982	141	147	54	5372	253	265	54
(0,3708)	(0,4920)	2389	113	118	54	2207	104	109	55	4596	217	227	55
(0,4920)	(119,7317)	2389	113	118	55	2207	104	109	55	4596	217	227	55
RAMPS AT GARDEN HIGHWAY													
(-564,-205)	(-588,194)	912	29	19	31	798	25	17	33	1710	54	36	32
(-588,194)	(0,1000)	912	29	19	40	798	25	17	42	1710	54	36	41
(591,-104)	(502,286)	542	17	11	34	684	22	14	34	1226	39	26	34
(502,286)	(0,1000)	542	17	11	44	684	22	14	43	1226	39	26	44
RAMPS AT WEST EL CAMINO													
(0,2040)	(-141,3214)			NA		361	11	8	45	361	11	8	45
(-141,3214)	(-959,3604)			NA		361	11	8	35	361	11	8	35
(-372,3430)	(-290,3708)	808	26	17	32			NA		808	26	17	32
(-290,3708)	(0,3708)			NA		808	26	17	42	808	26	17	42
(0,1760)	(74,2531)	1853	59	39	14			NA		1853	59	39	14
(74,2531)	(575,3150)	1853	59	39	30			NA		1853	59	39	30
WEST EL CAMINO													
(-2876,4172)	(-959,3604)	1634	52	34	27	1406	44	30	28	3040	96	64	28
(-959,3604)	(-372,3430)	1729	55	36	26	950	30	20	30	2679	85	56	28
(-372,3430)	(575,3150)	2537	80	53	18	950	30	20	30	3487	110	73	21
(575,3150)	(1497,1991)	2128	67	45	23	1653	52	35	27	3781	119	80	25
(1497,1991)	(3468,1134)	2214	70	47	22	1587	50	33	27	3800	120	80	24
(3468,1134)	(5302,337)	1406	44	30	28	656	21	14	30	2062	65	43	29
AZEVEDO													
(446,791)	(900,1626)	209	7	4	25	380	12	8	25	589	19	12	25
(900,1626)	(1497,1991)	209	7	4	25	380	12	8	25	589	19	12	25
(1497,1991)	(1974,3038)	380	12	8	25	399	13	8	25	779	25	16	25
(1974,3038)	(1161,4178)	333	11	7	25	333	11	7	25	665	21	14	25
(1161,4178)	(1432,6109)	190	6	4	25	190	6	4	25	380	12	8	25
TRUXEL													
(2790,-425)	(3129,354)	1074	34	23	29	1055	33	22	29	2128	67	45	29
(3129,354)	(3468,1134)	1112	35	23	29	1055	33	22	29	2166	68	46	29
(3468,1134)	(4266,2968)	1416	45	30	28	1083	34	23	29	2499	79	53	29
COLLECTOR													
(446,791)	(3129,354)	428	14	9	25	219	7	5	25	646	20	14	25
GARDEN HIGHWAY													
(-1316,-479)	(-564,-205)	1511	48	32	42	1121	35	24	44	2632	83	55	43
(-564,-205)	(0,0)	1264	40	27	43	836	26	18	45	2100	66	44	44
(0,0)	(591,-104)	1264	40	27	43	836	26	18	45	2100	66	44	44
(591,-104)	(2790,-425)	1359	43	29	43	1074	34	23	44	2432	77	51	43
(2790,-425)	(4787,-844)	912	29	19	45	608	19	13	45	1520	48	32	45

Notes: Speeds (mph) calculated by formula in Exhibit III-11.

Exhibit IV-2

BUILDOUT P.M. PEAK HOUR TRAFFIC: PROPOSED PROJECT CONDITIONS

Highway Centerline Coordinates		North/West Bound				South/East Bound				Total			
		Autos	Medium Trucks	Heavy Trucks	Speed	Autos	Medium Trucks	Heavy Trucks	Speed	Autos	Medium Trucks	Heavy Trucks	Speed
INTERSTATE 5													
(0,-2000)	(0,0)	4241	200	209	50	3548	167	175	53	7788	367	384	51
(0,0)	(0,1000)	4241	200	209	53	3548	167	175	54	7788	367	384	53
(0,1000)	(0,1760)	4104	194	203	53	3438	162	170	54	7542	356	372	53
(0,1760)	(0,2040)	2444	115	121	55	3438	162	170	54	5882	277	290	54
(0,2040)	(0,3708)	2444	115	121	54	3055	144	151	54	5499	259	271	54
(0,3708)	(0,4920)	2444	115	121	54	2171	102	107	55	4615	218	228	55
(0,4920)	(119,7317)	2444	115	121	55	2171	102	107	55	4615	218	228	55
RAMPS AT GARDEN HIGHWAY													
(-564,-205)	(-588,194)	998	32	21	30	884	28	19	31	1881	59	40	30
(-588,194)	(0,1000)	998	32	21	38	884	28	19	40	1881	59	40	39
(591,-104)	(502,286)	580	18	12	34	722	23	15	33	1302	41	27	34
(502,286)	(0,1000)	580	18	12	44	722	23	15	43	1302	41	27	43
RAMPS AT WEST EL CAMINO													
(0,2040)	(-141,3214)			NA		399	13	8	45	399	13	8	45
(-141,3214)	(-959,3604)			NA		399	13	8	35	399	13	8	35
(-372,3430)	(-290,3708)	922	29	19	31			NA		922	29	19	31
(-290,3708)	(0,3708)			NA		922	29	19	40	922	29	19	40
(0,1760)	(74,2531)	1729	55	36	17			NA		1729	55	36	17
(74,2531)	(575,3150)	1729	55	36	31			NA		1729	55	36	31
WEST EL CAMINO													
(-2876,4172)	(-959,3604)	1663	53	35	27	1397	44	29	28	3059	97	64	28
(-959,3604)	(-372,3430)	1710	54	36	27	950	30	20	30	2660	84	56	28
(-372,3430)	(575,3150)	2632	83	55	17	950	30	20	30	3582	113	75	21
(575,3150)	(1497,1991)	2204	70	46	22	1606	51	34	27	3810	120	80	24
(1497,1991)	(3468,1134)	2128	67	45	23	1710	54	36	27	3838	121	81	24
(3468,1134)	(5302,337)	1311	41	28	29	808	26	17	30	2119	67	44	29
AZEVEDO													
(446,791)	(900,1626)	447	14	9	25	238	8	5	25	684	22	14	25
(900,1626)	(1497,1991)	447	14	9	25	238	8	5	25	684	22	14	25
(1497,1991)	(1974,3038)	418	13	9	25	390	12	8	25	808	26	17	25
(1974,3038)	(1161,4178)	371	12	8	25	342	11	7	25	713	23	15	25
(1161,4178)	(1432,6109)	190	6	4	25	190	6	4	25	380	12	8	25
TRUXEL													
(2790,-425)	(3129,354)	1026	32	22	29	1140	36	24	29	2166	68	46	29
(3129,354)	(3468,1134)	1264	40	27	29	960	30	20	30	2223	70	47	29
(3468,1134)	(4266,2968)	1568	50	33	27	988	31	21	30	2556	81	54	28
COLLECTOR													
(446,791)	(3129,354)	285	9	6	25	456	14	10	25	741	23	16	25
GARDEN HIGHWAY													
(-1316,-479)	(-564,-205)	1530	48	32	42	1140	36	24	44	2670	84	56	43
(-564,-205)	(0,0)	1321	42	28	43	760	24	16	45	2081	66	44	44
(0,0)	(591,-104)	1321	42	28	43	760	24	16	45	2081	66	44	44
(591,-104)	(2790,-425)	1444	46	30	42	1026	32	22	44	2470	78	52	43
(2790,-425)	(4787,-844)	912	29	19	45	608	19	13	45	1520	48	32	45

Notes: Speeds (mph) calculated by formula in Exhibit III-11.

and entrance/exit lanes on the freeway were treated as having capacities (level of service E) of 1,600 vehicles per hour. Through lanes on the freeway were assumed to have capacities of 2,000 vehicles per hour. The second leg of the off-ramp from Interstate 5 to West El Camino was treated (for speed estimation only) as a two-lane roadway. All surface streets were categorized as arterials for selecting the capacity adjustment factor on Exhibit III-11; freeway ramps and the entrance/exit lanes on Interstate 5 were treated as rural highways. West El Camino, Truxel, and Garden Highway were assumed to have been widened to four lanes.

Results of the noise modeling analyses are presented in Exhibit IV-3.

Exhibit IV-3

HIGHWAY LINK CONTRIBUTIONS TO PEAK HOUR NOISE LEVELS (dBA)

Highway Centerline Coordinates		Receptor #1		Receptor #2		Receptor #3		Receptor #4		Receptor #5		Receptor #6	
		No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project
INTERSTATE 5													
(0,-2000)	(0,0)	52.18	52.20	45.59	45.61	48.61	48.18	-	-	49.06	49.08	58.70	58.72
(0,0)	(0,1000)	61.20	61.22	47.65	47.68	50.23	50.25	-	-	46.34	46.36	62.18	62.20
(0,1000)	(0,1760)	72.70	72.72	50.68	50.70	51.48	51.50	-	-	43.72	43.74	54.81	54.83
(0,1760)	(0,2040)	58.07	58.19	48.67	48.80	46.73	46.86	-	-	37.34	37.47	45.47	45.60
(0,2040)	(0,3708)	56.44	56.54	62.67	62.77	52.28	52.38	-	-	-	-	48.78	48.88
(0,3708)	(0,4920)	45.32	45.34	54.03	54.05	45.44	45.46	-	-	-	-	41.65	41.67
(0,4920)	(119,7317)	43.29	43.31	48.42	48.43	43.73	43.75	-	-	-	-	40.80	40.82
RAMPS AT GARDEN HIGHWAY													
(-564,-205)	(-588,194)	35.74	35.58	-	-	-	-	-	-	27.48	27.32	38.33	38.17
(-588,194)	(0,1000)	50.15	50.10	-	-	-	-	-	-	34.33	34.28	47.32	47.27
(591,-104)	(502,286)	36.78	36.99	-	-	-	-	-	-	30.98	31.19	57.77	57.98
(502,286)	(0,1000)	50.27	50.27	-	-	-	-	-	-	34.99	34.99	60.41	60.41
RAMPS AT WEST EL CAMINO													
(0,2040)	(-141,3214)	40.78	41.11	44.57	44.90	35.86	36.19	-	-	-	-	32.66	32.99
(-141,3214)	(-959,3604)	30.05	30.34	37.54	37.83	-	-	-	-	-	-	25.40	25.69
(-372,3430)	(-290,3708)	27.25	27.48	35.50	35.73	-	-	-	-	-	-	22.68	22.91
(-290,3708)	(0,3708)	29.23	29.28	38.84	38.89	-	-	-	-	-	-	24.95	25.00
(0,1760)	(74,2531)	41.07	41.29	37.15	38.37	32.37	33.59	-	-	-	-	30.03	31.26
(74,2531)	(575,3150)	39.46	39.43	65.61	65.58	38.66	38.63	-	-	-	-	33.33	33.30
WEST EL CAMINO													
(-2876,4172)	(-959,3604)	36.37	36.39	39.33	39.35	34.25	34.27	-	-	-	-	-	-
(-959,3604)	(-372,3430)	34.14	34.12	40.64	40.62	32.34	32.32	-	-	-	-	-	-
(-372,3430)	(575,3150)	36.79	36.91	36.67	36.79	45.04	45.15	29.16	29.27	-	-	31.94	32.05
(575,3150)	(1497,1991)	43.05	42.71	64.99	64.65	58.09	57.75	36.87	36.53	-	-	38.71	38.37
(1497,1991)	(3468,1134)	40.66	40.71	40.46	40.51	61.81	61.85	58.30	58.34	41.67	41.72	40.09	40.13
(3468,1134)	(5302,337)	32.06	32.17	31.65	31.76	35.93	36.04	57.30	57.41	40.16	40.27	-	-
AZEVEDO													
(446,791)	(900,1626)	43.39	44.04	-	-	38.11	38.76	-	-	-	-	40.32	40.97
(900,1626)	(1497,1991)	35.66	36.32	-	-	54.64	55.30	-	-	-	-	31.22	31.88
(1497,1991)	(1974,3038)	32.77	32.99	-	-	50.82	51.04	-	-	-	-	30.02	30.24
(1974,3038)	(1161,4178)	29.18	29.24	-	-	34.20	33.26	-	-	-	-	-	-
(1161,4178)	(1432,6109)	24.24	24.24	-	-	26.39	26.39	-	-	-	-	-	-

Exhibit IV-3 (cont'd).

Highway Centerline Coordinates		Receptor #1		Receptor #2		Receptor #3		Receptor #4		Receptor #5		Receptor #6	
		No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project	No Project	Proposed Project
TRUXEL													
(2790,-425)	(3129,354)	31.54	31.63	-	-	34.44	34.53	42.95	43.04	63.56	63.65	34.48	34.57
(3129,354)	(3468,1134)	31.41	31.51	-	-	35.79	35.89	64.87	64.97	42.61	42.71	33.16	33.26
(3468,1134)	(4266,2968)	34.04	33.78	-	-	38.92	38.69	57.86	57.63	38.78	38.55	-	-
COLLECTOR													
(446,791)	(3129,354)	39.82	40.41	-	-	-	-	39.87	40.46	41.56	42.15	48.67	49.26
GARDEN HIGHWAY													
(-1316,-479)	(-564,-205)	40.60	40.76	-	-	-	-	-	-	-	-	42.89	43.05
(-564,-205)	(0,0)	41.53	41.51	-	-	-	-	-	-	-	-	47.03	47.01
(0,0)	(591,-104)	42.26	42.24	-	-	-	-	33.41	33.39	37.79	37.77	53.87	53.85
(591,-104)	(2790,-425)	44.29	44.37	-	-	-	-	44.48	44.55	69.73	69.81	54.50	54.58
(2790,-425)	(4787,-844)	35.33	35.33	-	-	-	-	44.05	44.05	61.56	61.56	37.99	37.99
TOTAL		73.4	73.4	69.7	69.6	65.1	65.1	67.0	67.0	71.2	71.3	67.3	67.3

Notes: - = link contribution not calculated; contribution expected to be insignificant based on contribution at other receptors.

Appendix V

BIOLOGICAL SETTING OF PROJECT SITE

Methods

Analysis of aerial photography and field surveys of the project site were used to prepare the following discussion of biological impacts. Aerial photography was 1:12,000 scale (1 inch = 1,000 feet), stereo black-and-white photos flown in April 1981 by Cartwright Aerial Surveys, Inc. The habitat type map (Exhibit Q-1) was based on an approximate 1:1,200 scale (1 inch = 100 feet) enlargement from the 1:12,000 scale photo coverage of the site.

Three types of vegetation occur on the 52-acre project site. Each vegetation type may be considered a habitat type for the purposes of inventorying and analyzing the site's biological resources.

Agricultural Habitat Type

Vegetation

Present or recent agricultural operations occupy approximately 45 acres of the project site. Currently a nonirrigated crop of safflower occupies about 39 acres, and a waste field of predominantly annual grasses and weeds occupies 6 acres.

Wildlife

Agricultural habitats are utilized for foraging by a number of species that also require adjacent shrub or woodland habitats for cover and nesting. Bird species observed using the agricultural fields include American kestrel, mourning dove, rock dove, scrub jay, and house finch. The California ground squirrel also was observed; it uses agricultural habitats for both foraging and nesting.

Fence Row Habitat Type

Vegetation

Approximately 2 acres of vegetation typical of fence rows and transmission line corridors are present on the project site. Fence row vegetation of shrubs, grasses, and weeds

occupies a narrow strip (less than 15 feet wide) along I-5 right-of-way at the southwestern edge of the site. Eight valley oaks and a number of large elderberry shrubs grow within the PG&E transmission line running east-west at the north edge of the site. Tall weeds and grasses also occur in this utility corridor.

Wildlife

Fence row habitats provide necessary resting and nesting cover for wildlife species that use adjacent agricultural fields and grasslands. Presence of trees, shrubs, tall grasses, and weeds in fence rows greatly enhances the number of species that can be supported by an area otherwise occupied by grasslands and agricultural fields. For example, fence row trees provide perching sites for American kestrels and red-tailed hawks. Ring-necked pheasants and black-tailed jackrabbits require tall weeds and grasses or shrubs for hiding cover and nesting sites. Other species, for example small mammals, reptiles, and amphibians, find all habitat requirements in strips of dense native vegetation.

Riparian Woodland Habitat Type and Bannon Slough

Bannon Slough

Riparian woodland habitat occupies approximately 5 acres of the project site along its eastern edge. The total area of woodland is about 9 acres, with 4 acres on the adjacent property to the east. This area is known as Bannon Slough, although the channel of the slough is difficult to identify.

At the southeast corner of the project site, the slough formerly entered what is now the Natomas East Main Drainage Canal. The natural decrease in the area's elevation causes the slough channel to be less defined than it is north of West El Camino Avenue. Dumping, filling, and grading also have made the former slough channel difficult to locate. The eastern boundary of the project site follows the center-line of what was formerly the channel of Bannon Slough.

The slough depression contained no standing water during visits to the project site on August 13 and 26, 1981. Evidence of standing water during winter and spring seasons also was not observed. Dense vegetation cover and plant species composition suggests, however, that the groundwater level is quite high at some times of the year.

In years when the nearby American and Sacramento Rivers reach flood stage, the water table rises substantially in the general area. At extreme high water, the water table may rise above the soil surface, flooding portions of the project site (Robinson pers. comm.).

Vegetation

Vegetation of the Bannon Slough area corresponds to Cheatham's and Haller's (1975) description of "Central Valley bottomland woodland", a type of riparian habitat. Although surface flooding may no longer occur, the influence of a high water table during portions of the year qualifies the area as riparian habitat.

The riparian woodland is dominated by a tree overstory of large mature valley oaks and several large cottonwoods. The site plan portrays the presence of more than 30 oak trees greater than 6 inches in diameter; the presence and sizes of these trees was verified during field visits. Most of the trees are located in a scattered row along the west side of the slough area. This row marks the historical edge of the tilled agricultural fields to the west.

Approximately ten of the larger oaks have achieved the form typical of mature valley oaks. The foliage crown is broader than high and the spreading limbs end in long drooping branches reaching nearly to the ground.

All of the oaks appear in vigorous condition with good form and color. Several of the older trees have dead limbs; some have rot in their trunks associated with previous fire damage. All of the mature oaks, however, are viable and can be expected to survive for a substantial period of time under present conditions.

Many of the larger oaks have extensive fire scars on their trunks, indicating the occurrence of fires through the Bannon Slough area. Ground fires were used commonly by farmers to clear crop residues from agricultural fields. Presumably this explains the low density of mature trees on the project site slough area compared to the high density of mature trees along Bannon Slough just north of West El Camino Avenue.

Throughout the slough area, abundant saplings and seedlings of valley oak are present. The abundant oak regeneration occurs in all sizes up to about 6 inches in diameter, indicating that these trees have seeded-in naturally since the cessation of burning, perhaps 40-50 years ago. Several large and dense thickets of oak saplings (to 15-20 feet tall) exist in the central portion of the slough area near the greatest concentration of mature oaks where seed fall from the mature oaks, and therefore seedling regeneration, would be greatest. In portions of the slough area more distant from the mature oaks, oak regeneration occurs as scattered saplings and abundant seedlings (less than 3 feet tall) within the grass and weed cover.

Other plants typical of riparian woodland are also present. Scattered Fremont cottonwoods occur along the slough channel. A few black walnuts and a clump of fig trees are present. Typical riparian shrubs include blue elderberry, buttonbush, and blackberry. Ground cover is primarily annual grasses and agricultural weeds; several clumps of heliotrope are also present.

The riparian woodland habitat can be described generally as a mosaic of valley oak age classes. Clusters of mature oaks are mixed with thickets of oak saplings and more open areas of herbaceous vegetation and oak seedlings. Given sufficent time without disturbance, the entire Bannon Slough area on the site could develop into a dense valley oak woodland.

Wildlife

The riparian woodland provides suitable habitat for numerous wildlife species. High suitability derives from the following habitat characteristics present in the slough area:

1. Diversity of tree ages (from mature to seedlings).
2. Diversity of plant forms (including trees, shrubs, and herbaceous vegetation).
3. Patches of dense understory cover of tree seedlings and shrubs.
4. Mature trees with dead limbs and rotted holes (for nesting and denning sites).
5. Down logs and boards (providing cover for small mammals, amphibians, and reptiles).
6. Habitat "edge" between thickets of different plant forms and age classes.
7. Acorn-producing trees and fruit-producing shrubs (blackberry, elderberry, and figs).

During two visits to the project site, bird species observed in the riparian woodland were mourning dove, scrub jay, western kingbird, ring-necked pheasant and American kestrel. Feathers of great horned owl were found. Other birds that may use the woodland habitat include white-tailed kit (nesting in dense oak canopies), California quail, screech owl, downy woodpecker, black phoebe, hermit thrush, rufous-sided towhee, and several species of warblers and sparrows.

The riparian woodland on the project site presumably functions as a travel corridor for wildlife between the large area of riparian habitat in Discovery Park (immediately south of Garden Highway) and Bannon Slough north of West El Camino Avenue. Many species that would move along this woodland corridor would not venture across a large area of open fields or urban development.

Rare, Threatened or Endangered Species

No rare, threatened, or endangered species were found on the site. It is unlikely any were present, but undetected.

The site is in the range of the peregrine falcon and the bald eagle, both of which are state and federally listed endangered species. The ranges of both these birds comprise the whole State of California. The project site does not, however, contain suitable falcon or eagle habitat.

The giant garter snake (Thamnophis couchi gigas) is a state listed rare species (California Department of Fish and Game 1978) reported present in the South Natomas community area. Staff of the California Department of Fish and Game have found giant garter snakes in Fisherman's Lake north of South Natomas and in the Natomas Main Drainage Canal (Sacramento City Planning Department 1977). No giant garter snakes have been found on or adjacent to the project site.

Giant garter snakes rarely wander far from open water, especially in the warmer months of the year (Brode pers. comm.). The habitat typical of the garter snake consists of open water bordered by grasses and forbs, but not trees. It is therefore unlikely that giant garter snakes are on or adjacent to the property.

Appendix VI

SOUTH NATOMAS COMMUNITY PLAN GOALS AND OBJECTIVES

Basic Community Plan Goals

- Provide urban development that is appropriately timed with construction of necessary public facilities and services.
- Protect the livability and usefulness of existing development.
- Assure that new development is healthy and of long lasting benefit to the community and City.
- Achieve harmony between the area's development and its physical setting.

From the generalized ideals of these goals, the following specific goals and objectives are derived. Each goal is a refinement of the broad goals for the area. Objectives are steps for achieving each of the specific goals.

Goal 1

Maximize the long term retention of openspace land north of Interstate 880 freeway for active agricultural production by establishing suitable planning parameters for urbanization in South Natomas.

- Establish residential density minimums which accommodate increased numbers of people and retard the need for urban expansion to the north.
- Design and phase utilities and streets to reduce the possibility of premature development outside the planning area.

Goal 2

Approve development that is coordinated with available community facilities and is compatible with the public ability to provide essential services and facilities such as schools, streets, etc.

- Assess the effect upon existing property owners of providing adequate levels of required public facilities and services to newly developed areas.
- Prohibit premature development which constitutes an undue economic burden on the general public for the premature extension of facilities or services, and

results in growth pressures in inappropriate areas.

Goal 3

Provide residential land uses that are balanced, functional and healthful.

- Encourage a mixture of housing types and densities that provide for a wide variety of family sizes, age groups and income levels, including those for low and moderate income households.

- Establish development criteria for all new residential uses.

- Encourage the use of planned unit developments as a means of providing healthy and attractive residential areas.

- Prohibit the intrusion of incompatible land uses and disruptive traffic into new and existing residential areas.

- Promote the improvement of marginal and substandard housing without causing displacement of residents, especially where these individuals own and live in their own homes.

- Encourage private sector use of programs or options which are intended to meet the housing needs of low and moderate income residents, including the elderly and handicapped.

Goal 4

Accommodate as many people as possible consistent with quality development and adequate open space.

- Recommend residential zoning and land use designations which encourage cluster developments, condominiums and garden apartments.

Goal 5

Provide commercial and office districts of a size and location to adequately serve existing and anticipated future population of the community, consistent with adequate circulation and transportation facilities.

- Limit commercial and office development to neighborhood and community services and retail sales. Do not permit regional scale developments, especially those which compete with the Central Business District of downtown Sacramento.

- Design all business areas to reduce the potential for conflict with adjacent residential areas.

- Discourage additional strip commercial and office development along Northgate Boulevard; and, limit all future development to concentrated locations shown on the community plan map.

- Establish broad design criteria for all new commercial and office areas.

- Limit highway commercial activities to concentrated locations that serve freeway users and are not in close proximity to other centers outside the community.

- Limit industrial development to the area presently zoned for this use; and ensure that the design reduces the potential for conflict with adjacent residential uses.

Goal 6

Provide open space for recreation and aesthetic appreciation, native plant and wildlife preservation.

- Enhance the natural appearance of required new drainage channels or altered existing canals.

- Encourage natural tree cover protection, and riparian habitat protection.

- Develop conveniently located large and small parks to meet the recreation needs of the population.

- Promote techniques of land development that enhance the landscape and increase private open space.

- Continue planting programs along transportation corridors.

Goal 7

Provide a balanced circulation system that serves local residents and through traffic with a minimum of congestion or conflict with residential neighborhoods, shopping areas and other land uses.

- Coordinate proposed streets with existing and planned streets of adjoining areas in the County.
- Promote and encourage the use of public transit that is fast and convenient through sound local land use planning.
- Reduce dependence on the automobile by constructing bicycle paths and hiking trails wherever possible to connect major activity areas and points of interest outside the community.
- Integrate bikeways, walkways and streets with residential developments in a manner which promotes convenient access to public transit facilities.

Goal 8

Make this a public transit oriented community.

- Promote and encourage the use of public transit that is fast and convenient through sound local land use planning.

Goal 9

Provide a high quality of public services and facilities for all residents and users of the community.

- Place schools, health centers, libraries, fire stations, etc., in locations to best serve present and expected future demands.
- Promote development of a system of outdoor recreation areas to meet the needs of all age groups.
- Encourage the use of existing and future public schools for civic and other multi-purpose functions of interest to neighborhoods and the community.

Goal 10

Support a high level of environmental quality within the community.

- Encorage physical development which promotes the conservation of fossil fuels and minimizes air, noise, and water pollution.

- Support those implementation measures which equitably distribute the costs, and which are consistent with overall City goals and present technology.

Appendix VII

CREEKSIDE SCHEMATIC PUD STAFF REPORT AND CITY COUNCIL RESOLUTION

CITY OF SACRAMENTO

CITY PLANNING DEPARTMENT
915 "I" STREET
CITY HALL - ROOM 303
SACRAMENTO, CALIF. 95814
TELEPHONE (916) 449-5604
ETHAN BROWNING, JR.
PLANNING DIRECTOR

January 3, 1980

City Council
Sacramento, California

Honorable Members in Session:

SUBJECT: 1. Request for PUD Designation and Schematic Plan approval

2. Amend the South Natomas Community Plan to reduce the overall density from 22 to 17 units per acre

3. Rezoning from A to R-3 (PUD), R-2B (PUD), R-2A (PUD)

4. Tentative Map (P-8717)

LOCATION: North quadrant of I-5 and Garden Highway

SUMMARY

This is a request for entitlements necessary to develop a 39± acre site into 404 apartments, 168 air space condominiums, and 100 townhouse-condominiums. The staff and Planning Commission recommended approval of the project subject to conditions. The Planning Commission also approved a Special Permit to allow development of the 168 air space condominium units.

BACKGROUND INFORMATION

The subject site contains 39± gross acres and it is surrounded by a PG&E easement to the north, Garden Highway to the south, I-5 freeway and vacant property to the west and First Bannon Slough to the east.

The project was originally presented to the Planning Commission on October 11, 1979. The staff and Planning Commission had concerns regarding the overall circulation and access to adjacent properties, preservation of existing trees, parking ratios and other minor site design problems. The Planning Commission continued the item to November 21, 1979, in order to allow the applicant to address the concerns and revise the project.

Subsequently, the applicant submitted a revised plan. The plan incorporated changes that satisfied most of staff's concerns. The only

remaining issue was regarding provisions for access to the adjacent property to the west for the existing land locked parcel. Staff believes that access to this adjacent parcel is essential in order to provide two points of access for future development of the site.

The applicant was in opposition to any requirement for access to the adjacent property to the west; however, the Planning Commission recommended approval of the project subject to conditions including provisions for access to the adjacent parcel. Subsequent to the Planning Commission's consideration, the applicant has indicated that they have worked out an agreement with the adjacent property owner to provide access in reference to the proposed Community Plan Amendment. The staff and Planning Commission felt that the Plan Amendment is warranted because the minimum density requirement of 22 units per net acre is very difficult to attain with the three housing type requirement. The two basic housing types which are needed to meet this density are apartments and condominiums which are being proposed by the applicant. In order to meet the third housing type, a patio home, duplex, half-plex, or townhouse-condominium would more than likely have to be used; however, these types of dwellings are lower density type units and would make it very difficult to meet the minimum density of 22 units per net acre. In this case the applicant is proposing to develop townhouses for the third housing type, however, it will bring the overall density to 17 units per acre. The Commission recognized that the minimum density is difficult to attain with the three housing type requirement and that the variety in housing types is more important than the minimum density in this case. The Commission therefore supports the plan amendment to allow a minimum average density of 17 units/acre.

VOTE OF COMMISSION

On November 21, 1979 the Planning Commission by a vote of 5 ayes, 1 no, 2 abstentions, 1 absent recommended approval of the project subject to conditions.

RECOMMENDATION

The staff and Planning Commission recommends:

1. Approval of the PUD designation and Schematic Plan subject to the design criteria specified on Exhibit "A" of the City Planning Commission staff report;
2. Approval of the South Natomas Community Plan amendment to allow 17 units per acre;
3. Approval of the rezoning from "A" to "R-3"(PUD); "R-2B"(PUD); "R-2A"(PUD);
4. Approval of the tentative map subject to the conditions specified on the tentative map resolution.

If the City Council concurs with the recommendation, the proper action would be to adopt the attached PUD resolution, plan amendment resolution, rezoning ordinance and tentative map resolution.

Respectfully submitted,

for Ethan Browning, Jr.,
Planning Director

FOR TRANSMITTAL TO CITY COUNCIL:

Walter J. Slape, City Manager

January 8, 1980
District No. 1

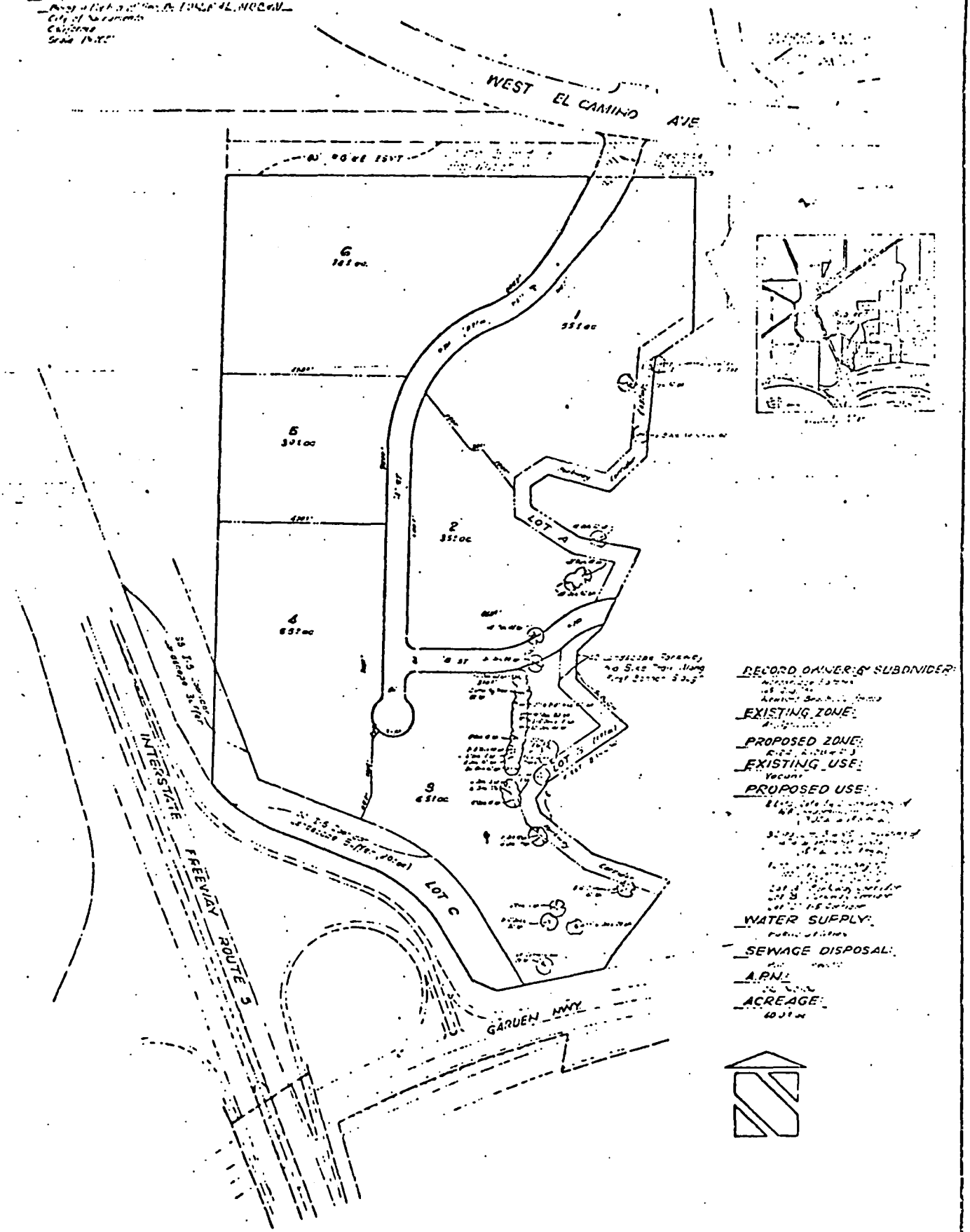
EBj:HY:bw

Attachments
P-8717

TENTATIVE MAP OF:

CREEK SIDE

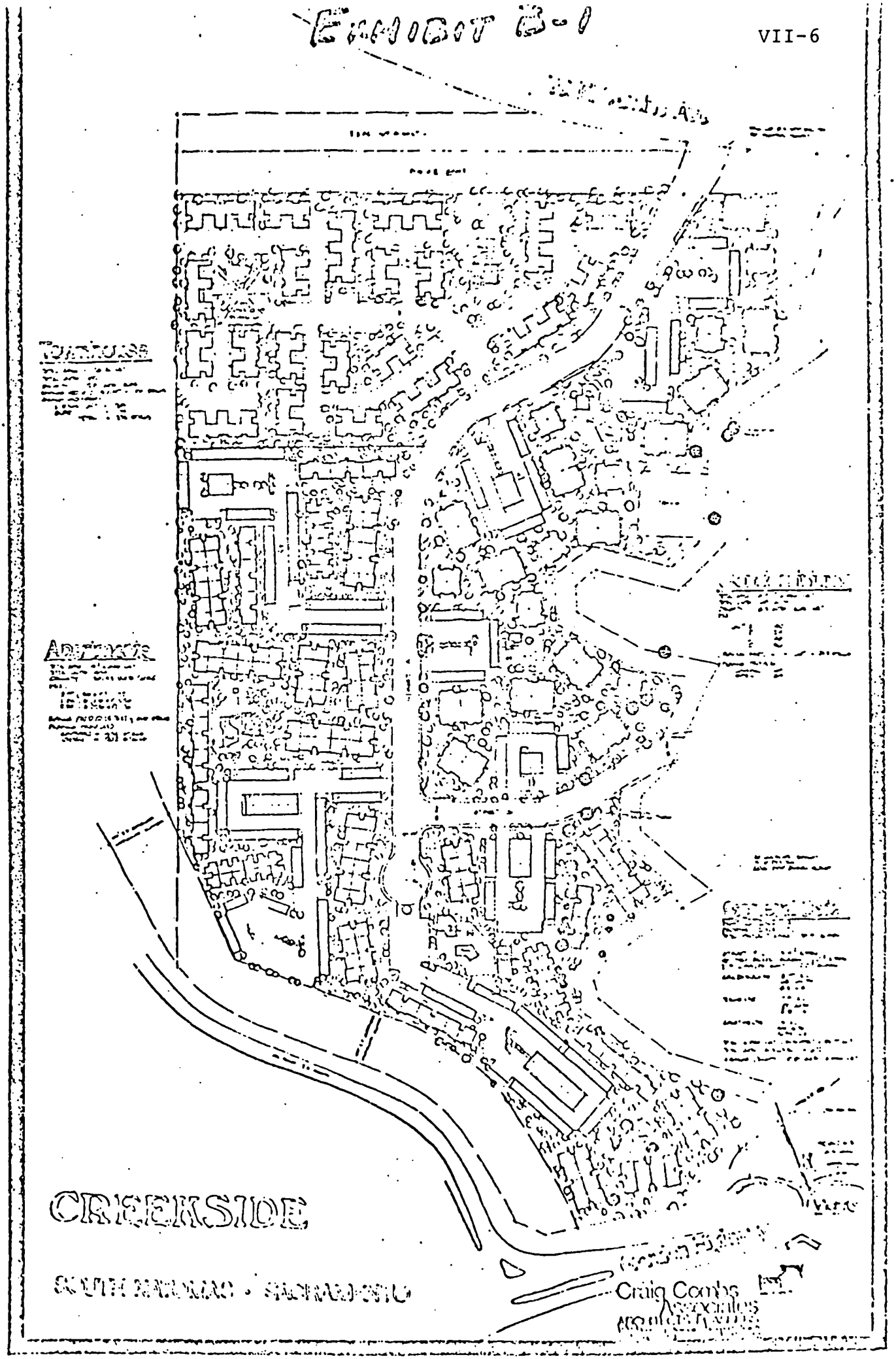
City of Sacramento
California



REVISED TENTATIVE MAP

APPROVALS

THE SPINK CORPORATION


CREEKSIDE
Craig Combs

RESOLUTION NO.

Adopted by The Sacramento City Council on date of

RESOLUTION DESIGNATING THAT CERTAIN AREA OF THE CITY OF SACRAMENTO AS HEREIN DESCRIBED AS A PLANNED UNIT DEVELOPMENT TO BE KNOWN AS CREEKSIDE (P-8717) (APN: 274-042-04)

WHEREAS, the City Council conducted a public hearing on January 8, 1979 concerning the conformance of the Planned Unit Development with the provisions of the adopted South Natomas Community Plan. Based on documents and oral evidence submitted at the public hearing, the City Council hereby finds as follows:

1. The proposed project is a residential planned unit development designed to provide residential uses in close proximity to, and in support of, the Central City.

2. The PUD conforms to the provisions of the South Natomas Community Plan.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Sacramento in accordance with Ordinance No. 2550, Fourth Series, as amended, the area described in the attached legal description of the Natomas Oaks PUD is hereby designated as a Planned Unit Development subject to the following conditions and stipulations:

A. Binding Effect of Resolution. This resolution is binding, without limitation as to time, upon the applicant and all owners, or persons having any interest in the property or any part thereof, and their heirs, successors and assigns in or to the property or any party therein.

B. Title Search. Any costs incurred by the City of Sacramento for a title search to determine that all such persons are so bound shall be borne by the applicant.

C. Overall Development Plan:

1. The PUD consists of the following:

   a. 404 apartments on 15 acres
   b. 168 air space condominiums on 8.97 acres
   c. 100 Townhouse Condominiums on 7.8 acres

   Density Range: 17 units/acre average minimum

2. The requirements of the South Natomas Community Plan, in its latest adopted version, are incorporated herein by reference.

3. The development of any portion of the PUD shall conform with the Schematic Plan (Exhibit B-1) and Residential Design criteria, Exhibit A, as approved by the City Planning Commission on November 21, 1979 and by the City Council on January 8, 1980.

4. A public street shall be extended to the adjacent property to the west and the width of the street shall be determined by the Traffic Engineer.

None of the preliminary approvals in the resolution shall be determined to preclude the discretion and function of the Planning Commission to evaluate all of the factors it may deem pertinent to its consideration of each application for a Special Permit for a Planned Unit Development within the area covered by this resolution.

None of the preliminary approvals in the resolution shall be determined to preclude the discretion and function of the Planning Commission to evaluate all of the factors it may deem pertinent to its consideration of each application for a Special Permit for a Planned Unit Development within the area covered by this resolution.

MAYOR

ATTEST:

CITY CLERK

bw

P-8717

CITY PLANNING COMMISSION

915 "I" STREET - SACRAMENTO, CALIFORNIA 95814

APPLICANT Spink Corporation - P.O. Box 2511, Sacramento, CA 95811

OWNER Northridge Estates - 1451 Quail Street, Newport Beach, CA

PLANS BY Spink Corporation - P.O. Box 2511, Sacramento, CA 95811

FILING DATE 7-20-79 50 DAY CPC ACTION DATE _____ REPORT BY: HY:sg

NEGATIVE DEC. 9-17-79 EIR _____ ASSESSOR'S PCL. NO. 274-042-04

SUBJECT:

1. Environmental Impact Determination
2. Rezoning from A to R-3
3. Request for PUD Designation and Schematic Plan approval
4. Special Permit to develop 168 condominium units
5. Tentative Map
6. Amend the South Natomas Community Plan to allow only two housing types and a public street to be located closer than 1000 feet to a freeway interchange (withdrawn)
7. Amend the South Natomas Community Plan to reduce the overall density from 22 to 17 units per acre (added)

LOCATION: Southeast quadrant of I-5 and West El Camino Avenue

STAFF EVALUATION: This item was continued from the October 11, 1979 Planning Commission meeting in order to allow the applicant time to redesign the project to address the issues discussed in the original staff report (report dated October 11, 1979). Staff's concerns were relative to circulation and access to adjacent properties, preservation of existing trees, parking ratios, and other minor site design problems. There was also discussion regarding housing types as it relates to density requirements of the South Natomas Plan. The Commission recognized the difficulty in obtaining the minimum density of 22 unit/acre and the three housing types; and, therefore, they indicated an intent to support a reduction in density in order to meet the three housing type requirement.

Subsequent to the October meeting the applicant submitted a revised schematic plan. The plan included changes in vehicular circulation, an increase in parking ratio to 1.5 spaces per unit, preservation of existing trees, a redesign of parking areas to locate parking closer to units, and it provides for a third housing type. The third housing type is a townhouse-condominium type unit with attached garages and a common recreational area. The townhouses are also adjacent to the P.G. & E. easement, and which could be used as additional open space and recreation area for this development in the future, if acquired.

The revised plan satisfies most of staff's concern, however, the issue regarding provisions for access to the west for the existing land-locked parcel was not addressed. Staff believes that access to this adjacent site is essential in order to provide two points of access for future development of the site. The adjacent site contains 8+ acres (excluding scenic corridor) and it could accommodate over 200 units.

(over)

Staff has one other minor comment with regard to the revised plan. A turn-a-round with textured pavement is shown near the northwest corner of the site. The turn-a-round is not necessary at this location nor is the amount of paved area needed. Staff suggests that this area be landscaped as much as possible. The textured pavement could be placed at the entry way or main driveway to the townhouse units.

The applicant has satisfaied most of staff's concerns with the exception of the westerly access to the adjacent property. Staff believes that a street could easily be provided between the townhouses and the apartments without any major redesign of the plan. Also, staff suggests that the design criteria (Exhibit A-1) mentioned in the previous report be utilized for specific site design consistency prior to issuance of any building permit.

RECOMMENDATION: Staff recommends:

1. The Negative Declaration be ratified.
2. Approval of the PUD Designation and Schematic Plans subject to providing access to the adjacent property on the west.
3. The area designated for apartments be rezoned to R-3(PUD); the area for condominiums be rezoned to R-2B(PUD); and the area for townhouses be rezoned to R-2A(PUD).
4. Approval of the Special Permit to develop 168 condominium units subject to conditions.
5. Approval of the Tentative Map subject to conditions.
6. Approval of the Plan Amendment to allow an overall average of 17 units per net acre.

Conditions for Special Permit

a. Review and approval of final building plans by staff prior to issuance of a building permit.

b. Review and approval of a detailed landscaping and irrigation plan by staff prior to issuance of building permits.

c. Final plans shall meet the requirements specified in the design critera (Exhibit A-1).

d. Access shall be provided to the adjacent property to the west as shown on Exhibit A-2.

e. Recreational facilities, including tennis courts, shall be provided as part of the first phase of the project.

f. Preserve all mature trees that are indicated on the applicant's tentative map except for the Cottonwoods.

g. Place a temporary fence around the drip line of the trees in areas of construction to prevent soil compaction resulting from stacked construction materials, parking equipment, and vehicles. This fencing shall be erected prior to issuance of building permit and shall stay installed until final landscaping commences.

h. Do not grade, trench, cut or fill within a tree's drip line.

i. Roadways and building foundations shall not extend into the tree's drip line.

j. Prohibit irrigation systems within the tree's drip line.

k. No pruning or cutting of the trees except for clearing dead wood.

l. If unusual amounts of bone, stone, or artifacts are uncovered, work should be halted and a qualified archeologist consulted to develop, if necessary, further mitigation measures to reduce any archeological impact to less than significant level.

Conditions for Tentative Map

a. Extend public street westward.

b. Dedicate right-of-way for widening of Garden Highway.

c. Dedicate and improve 60 foot half-section on West El Camino, including off-site improvements fronting P.G. & E. easement.

d. Sewer and drainage study required, subject to the review and approval of the City Engineer.

e. Dedicate the open space along First Bannon Slough.

f. Pay off all existing assessments.

g. Street lights are required as per the Ordinance (Sec. 40.811).

h. Preserve all mature trees that are indicated on the applicant's tentative map except for the Cottonwoods.

i. Place a temporary fence around the drip line of the trees in areas of construction to prevent soil compaction resulting from stacked construction materials, parking equipment, and vehicles. This fencing shall be erected prior to issuance of building permit and shall stay installed until final landscaping commences.

j. Do not grade, trench, cut or fill within a tree's drip line.

k. Roadways and building foundations shall not extend into the tree's drip line.

l. Prohibit irrigation systems within the tree's drip line.

m. No pruning or cutting of the trees except for clearing dead wood.

n. If unusual amounts of bone, stone, or artifacts are uncovered, work should be halted and a qualified archeologist consulted to develop, if necessary, further mitigation measures to reduce any archeological impact to less than significant level.

o. Applicant shall provide a street crossing over First Bannon Slough to the satisfaction of the City Engineer.

p. Provide standard subdivision improvements as specified in Section 40.811 of the Subdivision Ordinance.

q. The tentative map shall be revised to reflect the changes in the revised site plan prior to transmittal to the City Council.

Findings of Fact for Special Permit

a. The project is based on sound principles of land use in that:

   1. A minimum 1.5 parking ratio is provided.

   2. A significant amount of open space and recreation facilities are being provided.

   3. Parking spaces are located in close proximity to dwelling units.

b. The proposal will not be injurious to surrounding properties in that:

   1. The project is compatible to surrounding land uses.

   2. The project is designed with a significant amount of landscaping to provide adequate buffering to adjacent properties.

   3. Adequate parking is provided.

c. The project is consistent with the South Natomas Community Plan and 1974 General Plan in that both plans designate the site for residential use.

CITY PLANNING COMMISSION

915 "I" STREET - SACRAMENTO, CALIFORNIA 95814

APPLICANT Spink Corporation, P. O. Box 2511, Sacramento, Ca 95811
OWNER Northridge Estates, 1451 Quail Street, Newport Beach, Ca
PLANS BY Spink Corporation, P. O. Box 2511, Sacramento, Ca 95811
FILING DATE 7-20-79 50 DAY CPC ACTION DATE REPORT BY: DP:HY:(
NEGATIVE DEC. 9-17-79 EIR ASSESSOR'S PCL. NO. 274-042-04

APPLICATION:

1. Environmental Impact Determination.
2. Rezone from "A" Agricultural to R-3 Multiple-Family Residential.
3. Request PUD Designation & Schematic Plan Approval.
4. Special Permit to develop 272 Condominium units,
5. Tentative Map.
6. Amend the South Natomas Community Plan to allow only two housing types and a public street to be located closer than 1000 feet to a freeway interchange.

LOCATION: Southeast quadrant of I-5 & West El Camino Avenue.

PROPOSAL: Applicant is requesting the necessary entitlements to divide 39± acres into 7 multiple family lots in order to develop 272 condominium units and 440 apartment units.

PROJECT INFORMATION:

General Plan Designation:	Residential		
South Natomas Community Plan Designation:	Residential 11-29 dwellings/ acre; Min. ave. 22 units/acre.		
Existing Zoning of Site:	Agricultural.		
Existing Land Use of Site:	Vacant.		
Surrounding Land Use and Zoning			
North:	Vacant; Agricultural		
South:	Vacant; ARP-F		
East:	Vacant; Agricultural		
West:	Agricultural		
Parking Required:	712 spaces.	Parking Provided:	909 spaces.
Ratio Required:	1:1 spaces.	Ratio Provided:	1:3 spaces.

Property Dimensions: 38.5± acres.
Density of Development: 22.3± units/net acre.
Square Footage of Condominium Building:

Building 1:	610 sq. ft. per unit.	(8 units each)
Building 2:	825 sq. ft. per unit.	(8 units each)
Building 3:	1120 sq. ft. per unit.	(8 units each)
Building 4:	1130 sq. ft. per unit.	(8 units each)

Height of Structures: 35 feet.
Significant Features of Site: Oak Trees, First Bannon Slough.
Topography: Flat.

APPLC. NO. P-8717 MEETING DATE ~~October 11, 1979~~ 11-21-79 CPC ITEM NO. 28

PROJECT INFORMATION: (Continued):

Street Improvements: To be provided.
Existing Utilities: Available to site.
School District: Natomas School District.

The applicant is proposing to develop a total of 712 dwelling units, 272 condominiums and 440 apartments. The condominium units are located on the east side of the proposed north/south street and the apartments are on the west side. The condominium units consist of four different floor plans and elevations. Each complex consist of 8 units. Detail plans for the apartment have not been submitted.

SUBDIVISION REVIEW COMMITTEE RECOMMENDATION: On August 8, 1979, the Committee by a vote of 8 ayes, 1 abstaining, recommended denial of the tentati map. The Committee is con erned with the over all circulation of the propo project. There is no access provided to the adjacent properties to the e and west. Also, the north/south street should not intersect Garden Highway The Committee did, however, suggest that the map be redesigned with the following conditions:

1. Extend public street westward.
2. Redesign "A" Street to eliminate connection to Garden Highway; connect instead to parcel to east.
3. Dedicate right-of-way for widening of Garden Highway.
4. Dedicate and improve 60 foot half-section on West El Camino, including off-site improvements fronting PG&E easement.
5. Sewer and drainage study required, subject to the review and approval of the City Engineer.
6. Dedicate the open space along First Bannon Slough.
7. Pay off all existing assessments.
8. Street lights are required, as per the Ordinance (Sec. 40.811).

ENVIRONMENTAL ASSESSMENT:

The submitted tentative map indicates that 41 mature trees exist on four of the proposed lots. Of the 41 mature trees, 3 are within the proposed 40 foot parkway corridor. The majority of these trees are Oaks with 2 Cottonwoods, a Black Walnut, and two fruit trees. In addition there are numerou young trees that are not indicated on the submitted tentative map. A City De of Recreation and Parks Arborist determined that all of the mature trees were viable and should be retained with less emphasis on retaining the Cottonwoods.

The Environmental Coordinator on September 17, 1979, filed with the City Clerk a Negative Declaration with the following mitigation measures:

1. Preserve all mature trees that are indicated on the applicant's tentative map except for the Cottonwoods.

2. Place a temporary fence around the dripline of the trees in areas of construction to prevent soil compaction resulting from stacked construction materials, parking equipment, and vehicles. This fencing shall be erected prior to issuance of building permit and shall stay installed until final landscaping commences.

ENVIRONMENTAL ASSESSMENT: (Continued):

3. Do not grade, trench, cut or fill within a tree's drip-line.

4. Roadways and building foundations shall not extend into the tree's drip-line.

5. Prohibit irrigation systems within the tree's drip-line.

6. No prunning or cutting of the trees except for clearing dead wood.

7. If unusual amounts of bone, stone, or artifacts are uncovered, work should be halted and a qualified archeologist consulted to develop, if necessary, further mitigation measures to reduce any archeological impact to less than significant level.

STAFF EVALUATION:

Staff has the following comments regarding the proposal:

1. There are several concerns relative to overall vehicular circulation. They are as follows:

   a. The project was designed with no provisions for public access to to adjacent properties to the west and east across First Bannon Slough. The property to the west is presently land locked and development of this parcel will be dependent upon access from this site.

   b. The 54 foot North/South Street (A Street) is designed to intersect Garden Highway at the southerly portion of the site. There are basically two problems with this intersection. First, this design would allow a major/collector street to connect West El Camino Avenue and the Garden Highway; and therefore allow traffic from subdivisions on the north side of West El Camino to travel through this site in order to head north bound on Interstate 5. West El Camino Interchange is a commuter interchange and there is no on-ramp for north bound traffic.

      Second, the intersection with Garden Highway is contrary to the policies of the South Natomas Community Plan. The plan specifically states: "Prohibit the intersection of new streets with Garden Highway or West El Camino Avenue closer than 1,000 feet to the I-5 Freeway". The intent of this policy is to avoid creating any traffic conflict near the freeway interchange. In this case, the proposed north/south street is approximately 250 feet from the interchange.

   c. The proposed north/south major-collector street is designed with two "elbows" (90° turns). This type of street design could create a traffic hazard because it influences people to cut corners. A curvelinear street system would be more appropriate for this site.

   d. The proposed north/south street was designed without consideration of existing trees located at the southern portion of the site. The proposed road alignment will require the removal of at least five Oak trees.

2. The following are concerns relative to specific site plan design;

   a. The tentative map indicates that there are 41 trees located on easterly portion of the site. The trees are primarily Oak trees and the Recreation and Parks Department suggested that everyone of these trees be saved. It is apparent that the applicant did not take into consideration the location of the existing trees because there are structures and parking areas proposed where existing trees are located. Staff suggested that the project be redesigned to accommodate the trees.

   b. The applicant has indicated that 909 parking spaces will be provided for both apartments and condominiums. This amounts to a parking ratio of 1.3 spaces per unit. Staff suggests that a minimum ratio of 1.5 spaces per unit be provided. The additional spaces are needed for visitors, tenants, and owners with more than one vehicle, which is not uncommon, particulary in condominium developments.

   c. There are basically four areas where dwellings units are not close to parking areas. As shown on Exhibit "B", the circled areas represent units that are removed from on-site parking areas and parking stalls are not conveniently located for tenants and/or guests. These areas are designed to influence on street parking. Staff suggests that these areas be redesigned in order to encourage off street parking.

   d. Parking areas are distributed throughout the development and are located adjacent to street right of ways in many cases. Staff suggests that the parking areas that are visible from the public right-of-way be screened with a 3'-4' wall and/or berming. The berming should be a minimum of four feet in height. Berming should also be utilized throughout the development in order to create visual interest for the entire project.

   e. The apartment units are designed with row type structures. The structures along the westerly property line are placed in a row, one after another, and are paralled to the property line. Staff suggests that these structures be relocated to avoid a row type appearance. This can be accomplished by staggering of units.

   In order to satisfy staff's concerns relative to site design, staff suggests that the design criterias listed on Exhibit "A-1" be utilized for any redesign of the project.

3. The applicant is proposing only two housing types, condominiums and apartments; and therefore are requesting a community plan amendment from the three housing type requirement. It is apparent that the minimum density requirement of 22 units per net acre is very difficult to attain with the three housing type requirement. The two basic housing types, which are needed to meet this density are apartments and condominiums. The applicant is proposing apartments at a density of 26.6 units per net acre and condominiums at a density of 18 units per net acre. This is an average density of 22.3 units/acre. In order to meet the three housing type requirment, a patio home, duplex, etc. would more than likely have to be used, however, these types of dwellings are low density units and would make it very difficult to meet the minimum density of 22 units per net acre. Generally speaking the three housing

types are difficult to meet with the minimum density imposed for this site. In order to meet the density requirements, staff believes that a plan amendment is warranted.

An alternative would be to amend the plan to allow a lower density requirement in order to achieve the third housing type. This would allow the third housing type which could be a patio home, duplex, or some other similar type of unit.

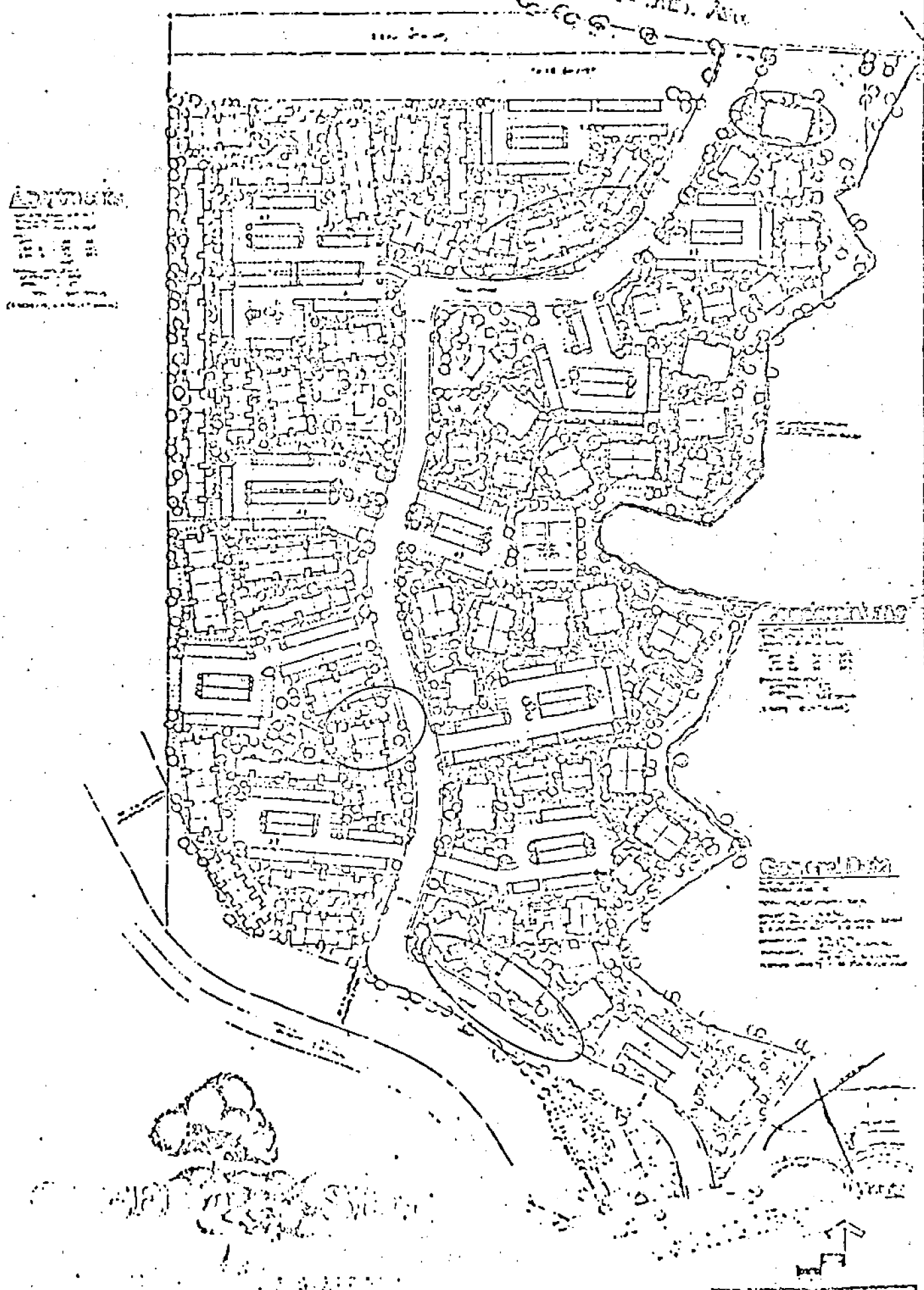
4. Elevations and floor plans were submitted, however, the plans do not indicate specifically the type of material or roof type that will be used. Staff suggests that the ARB review the project.

5. Regional Transit reviewed the project and indicated that a bus shelter should be provided on the south side of West El Camino Avenue, just east of the proposed north/south street. They also indicated that bus stops may be placed along the north/south street, however, there are no definit plans or locations at this time.

6. Staff wishes to point out that the comments regarding the circulation system were indicated to the applicant during the preliminary review process which was completed in April 1979. The applicant has not made any attempts to address these issues. In view of the circulation problems, and site design diffiiencies, staff suggests that the project be redesigned.

RECOMMENDATION:

Staff recommends that the project be continued in order to allow the applicant time to redesign the project based on the design criterias and comments that were made in the staff report.



Appendix VIII

CREEKSIDE OFFICE PARK
NOTICE OF PREPARATION AND INITIAL STUDY

CITY OF SACRAMENTO

CITY PLANNING DEPARTMENT
725 "J" STREET SACRAMENTO, CALIF. 95814
TELEPHONE (916) 449-5604

MARTY VAN DUYN
PLANNING DIRECTOR

June 9, 1981

Subject: Notice of Preparation for Creekside Office Park EIR

Dear

The Sacramento City Planning Department is preparing an outline of the impacts to be assessed in the Creekside Office Park EIR. The Department is interested in your agency's concerns with regard to the project. Any comments submitted would be pursuant to State EIR Guidelines, Section 15085b1. The City requires the EIR consultant to contact all responsible agencies, interested groups and individuals pursuant to Section 15066c. An EIR consultant has not been retained at this time.

The 1978 South Natomas Community Plan designates the site for residential land uses. Creekside, a tentatively approved 672 residence planned unit development, comprises the majority of the site. The remaining 13 acres are designated for residential land use at an average density of 22 units per net acre. The office park project proposes 614,000 square feet contained in one and two-story structures on the 52 acre site.

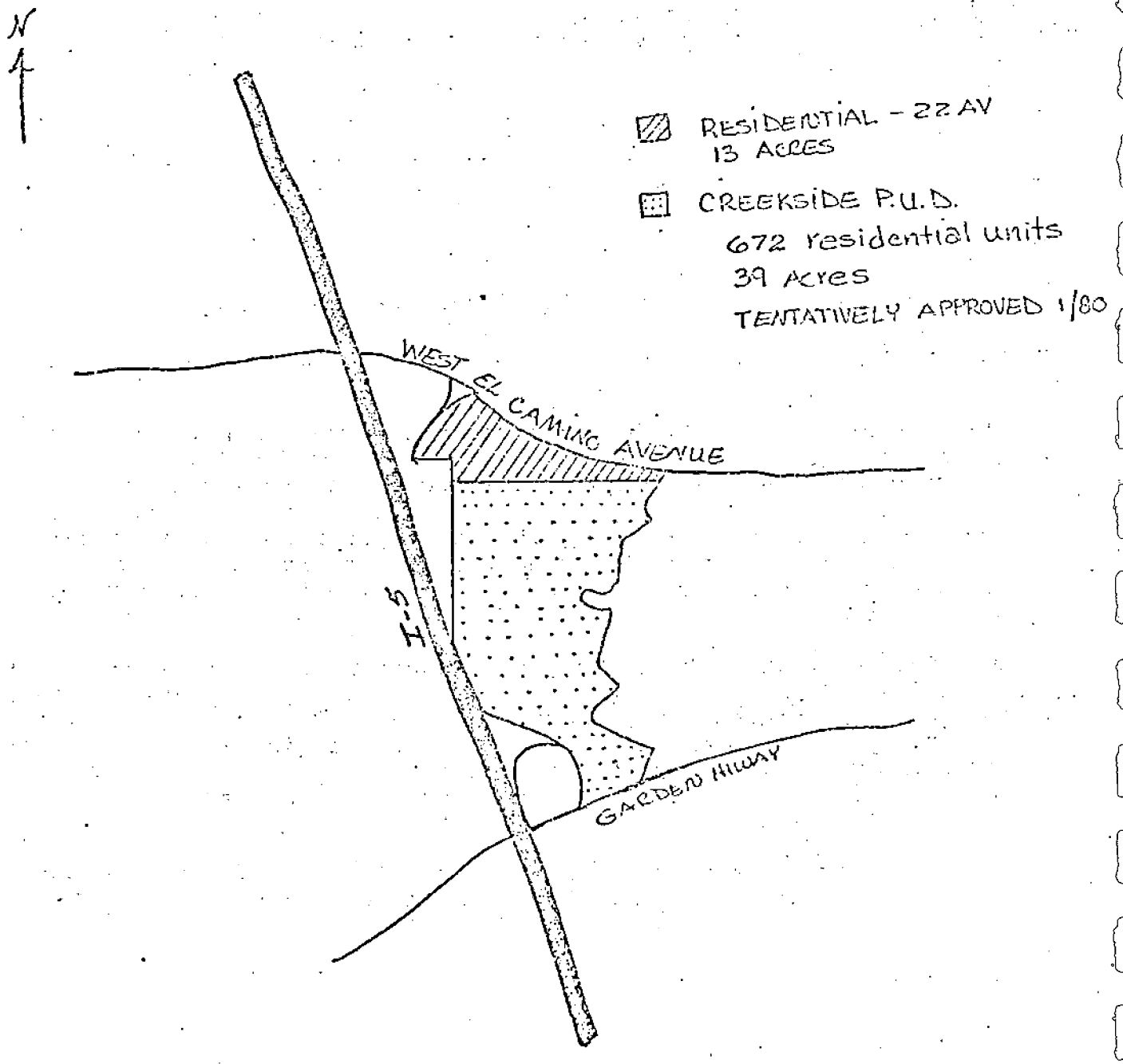
Please return your comments by July 27, 1981. Feel free to contact either Clif Carstens or myself if you have any questions regarding this matter.

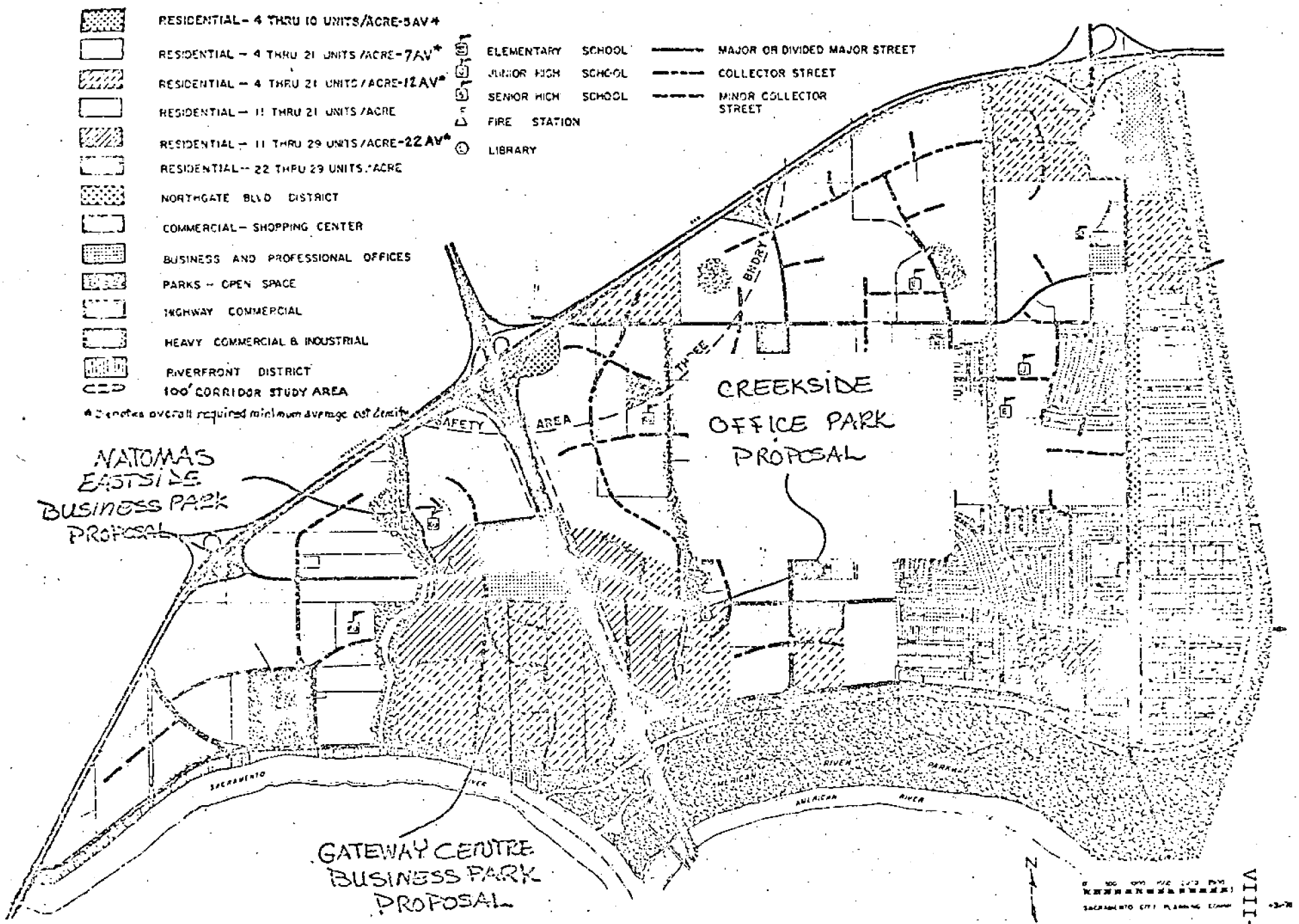
With regards,

Diana Parker

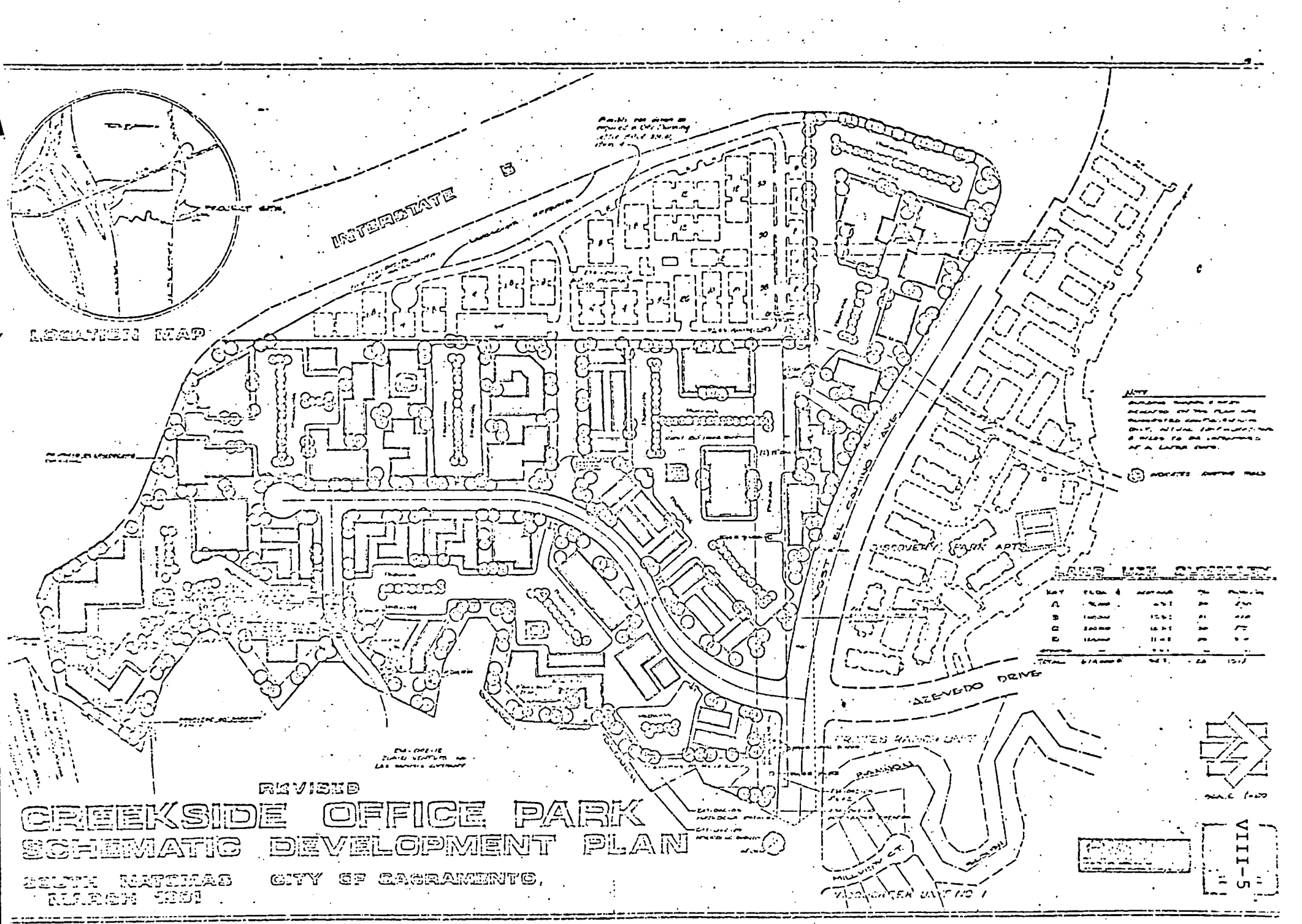
Diana Parker
Assistant Planner

DP:bw
Attachments


N
RESIDENTIAL - 22 AV
13 ACRES
CREEKSIDE P.U.D.
672 residential units
39 Acres
TENTATIVELY APPROVED 1/80
WEST EL CAMINO AVENUE
I-5
GARDEN HIGHWAY



SOUTH NATOMAS COMMUNITY PLAN



REVISED

CREEKSIDE OFFICE PARK

SCHEMATIC DEVELOPMENT PLAN

SOUTH NATOMAS CITY OF SACRAMENTO,
MARCH 1981

CITY OF SACRAMENTO

Planning Department
725 J Street
Sacramento, CA 95814
Tel. 916 - 449-5604

INITIAL STUDY

BACKGROUND

1. Name of Proponent NORTHRIDGE ESTATES
2. Address and Phone Number of Proponent:
   1451 Quail Street
   Newport Beach, CA
3. Date of Checklist Submitted April 7, 1981
4. Agency Requiring Checklist Sacramento City Plan. Dept.
5. Name of Proposal, if applicable Creekside Office Park (P-9317)

ENVIRONMENTAL IMPACTS
(Explanations of all "yes" and "maybe" are provided)

	YES	MAYBE	NO
1. Earth. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic substructures?			X
b. Disruptions, displacements, compaction or overcovering of the soil?			X
c. Change in topography or ground surface relief features?			X
d. The destruction, covering or modification of any unique geologic or physical features?		X	
e. Any increase in wind or water erosion of soils, either on or off the site?			X
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?			X
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?			X
2. Air. Will the proposal result in:			
a. Substantial air emissions or deterioration of ambient air quality?		X	
b. The creation of objectionable odors?			X
c. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?		X	
3. Water. Will the proposal result in:			
a. Changes in currents, or the course or direction movements, in either marine or fresh waters?			X
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	X		
c. Alterations to the course of flow of flood waters?			X
d. Change in the amount of surface water in any water body?			X
e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?		X	
f. Alteration of the direction or rate of flow of ground waters?			X
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?			X
h. Substantial reduction in the amount of water otherwise available for public water supplies?			X
i. Exposure of people or property to water related hazards such as flooding or tidal waves?			X
4. Plant Life. Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?		X	
b. Reduction of the numbers of any unique, rare or endangered species of plants?		X	
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?			X
d. Reduction in acreage of any agricultural crop?			X
5. Animal Life. Will the proposal result in:			
a. Change in the diversity of species, or number of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?		X	
b. Reduction of the numbers of any unique, rare or endangered species of animals?		X	

	YES	MAYBE	NO
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	___	___	X
d. Deterioration to existing fish or wildlife habitat?	___	X	___
6. Noise. Will the proposal result in:			
a. Increases in existing noise levels?	X	___	___
b. Exposure of people to severe noise levels?	___	X	___
7. Light and Glare. Will the proposal produce new light or glare?	X	___	___
8. Land Use. Will the proposal result in a substantial alteration of the present or planned land use of an area?	X	___	___
9. Natural Resources. Will the proposal result in:			
a. Increase in the rate of use of any natural resources?	___	___	X
b. Substantial depletion of any nonrenewable natural resource?	___	___	X
10. Risk of Upset. Does the proposal involve a risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	___	___	X
11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population?	X	___	___
12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?	X	___	___
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of substantial additional vehicular movement?	X	___	___
b. Effects on existing parking facilities, or demand for new parking?	___	___	X
c. Substantial impact upon existing transportation systems?	X	___	___
d. Alterations to present patterns of circulation or movement of people and/or goods?	___	X	___
e. Alterations to waterborne, rail or air traffic?	___	___	X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	___	X	___
14. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?	___	X	___
b. Police protection?	___	X	___
c. Schools?	___	X	___
d. Parks or other recreational facilities?	___	X	___
e. Maintenance of public facilities, including roads?	___	___	X
f. Other governmental services?	___	___	X
15. Energy. Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?	___	X	___
b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	___	X	___
16. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
a. Power or natural gas?	___	X	___
b. Communications systems?	___	X	___
c. Water?	___	X	___
d. Sewer or septic tanks?	___	X	___
e. Storm water drainage?	___	X	___
f. Solid waste and disposal?	___	X	___
17. Human Health. Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?	___	X	___
b. Exposure of people to potential health hazards?	___	___	X

	YES	MAYBE	NO
8. Aesthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?	—	X	—
9. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?	—	X	—
10. Archaeological/Historical. Will the proposal result in an alteration of a significant archaeological or historical site, structure, object or building?	—	X	—
11. Mandatory Findings of Significance.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	—	—	X
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	X	—	—
c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	X	—	—
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	—	X	—

DISCUSSION OF ENVIRONMENTAL EVALUATION

The applicant's Environmental Questionnaire is attached as supplemental information.

See Attachment A for:
Description of Project,
Evaluation,
Determination.

The applicant's Environmental Questionnaire is attached as supplemental information.

DETERMINATION

On the basis of this initial evaluation:

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

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION WILL BE PREPARED.

☒ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Date May 11, 1981

Diana Parker
(Signature)

Diana Parker

Rev. 8-79

DISCUSSION OF ENVIRONMENTAL EVALUATION (P-9317)

Description of Project

The proposed project, Creekside Office Park, is located in the northeast quadrant of I-5 and the Garden Highway. It is bounded by Bannon Slough to the east. The site contains 52 acres and lies vacant, with the exception of a number of Oak trees. A PG&E easement, 50± feet in width, traverses the site from east to west in the northerly portion of the property.

The applicant is proposing an office park containing 614,000 square feet in one and two-story structures.

In January 1980 the City Council approved a residential planned unit development for a portion of the project site (P-8717). The approved Creekside PUD Schematic Plan calls for 672 residential units, including apartments, airspace condominiums, and townhouses on 39± gross acres at an overall density of 17 units per acre. The remaining 13 acres are designated in the South Natomas Community Plan for residential land use at an average density of 22 units/net acre.

Proposed Creekside Office Park is not consistent with the 1974 General Plan nor the 1978 South Natomas Community Plan which call for residential land uses. The project would displace approximately 892 dwelling units which represents a four (4) percent reduction of the planned residential capacity for the community plan area.

The environmental evaluation assesses general land use issues and does not address specific construction oriented impacts. Specific construction impacts can and will be evaluated on an individual basis because development within a PUD requires a special permit.

Evaluation

1d. Potential modification of ecosystem of Bannon Slough.

2a. Potential significant increase in local and regional vehicular traffic generated by the project.

2c. Potential significant increase in ambient localized temperature from urban heat sink effect from substantial increase in paved parking areas beyond effects of planned residential land use.

3b. Potential significant increase in runoff from substantial increase in paved parking areas beyond planned residential effects.

3e. Potential significant impact on the water quality of the Sacramento River from washed oils, gas, grease from the paved parking areas and increased temperature of the river.

4a. Potential significant impact on the diversity of species or number of any species of plants along Bannon Slough and the American River as a result of surfaced area runoff and level of air quality. Potential impact on existing Oaks.

4b. Potential reduction of the number of any unique, rare or endangered species of plants along Bannon Slough and American River as a result of surfaced area runoff and level of air quality.

5a. Potential significant impact on the diversity of species, or number of any species of animals along Bannon Slough and the American River as a result of surfaced area runoff and level of air quality.

5b. Potential reduction of the number of any unique, rare or endangered species of animals along Bannon Slough and the American River as a result of surfaced area runoff and level of air quality.

5d. Potential deterioration to existing fish and wildlife habitat as a result of surfaced area runoff and level of air quality.

6a&b. Potential significant increase in ambient noise levels greater than those for planned land uses from additional vehicles generated by the project. Stationary noise generators must comply with the City's Noise Ordinance and, therefore, should not be a significant impact.

7. An undetermined amount of new light and glare will result from the proposed project, however, this should not be a significant impact.

8. The General and Community Plans, as well as the Creekside PUD, designate the subject property for approximately 892 residential units. The project proposes approximately 52 acres of office land use. The proposed project would significantly alter the planned land uses that were adopted.

11. The area is designated for residential land uses. The 892 residential units displaced by the project would result in a four percent reduction of the residential capacity of the South Natomas Community Plan. The project may generate a substantial amount of new employment. If the remaining planned residential areas cannot accommodate the housing demand, adjacent areas currently designated Agricultural/Urban Reserve may be pressured into additional residential development.

The project proposes approximately 614,000 square feet of office space which represents almost one-third of the amount of private office space in the Central Business District. The amount of proposed office space may significantly alter the location and distribution of the City population and the metropolitan population. The project may induce similar projects or other growth in the immediate area resulting in substantial growth inducing impacts.

12. The project will encourage more new housing in planned residential areas and possibly areas currently designated agriculture/urban reserve. The reduction of 892 dwelling units may stimulate demand for existing and planned residential dwellings, thereby increasing the cost of residential units.

13a. The Community Plan's residential land use (892 units) for the subject property would generate approximately 5352 VPD while the proposed project could generate 9210 VPD. This volume may exceed the area's existing and planned roadways' capacity.

13c. The volume of vehicles may significantly affect the local roadway, freeway and interchange capacities, therefore generating a substantial impact upon existing transporatation land systems (West El Camino, Truxel Road, Garden Highway and I-5.)

13d. The volume of vehicles coupled with the proposed internal circulation pattern may alter present patterns of circulation. The volume of vehicles as a result of the project utilizing the West El Camino Avenue, Truxel Road, Garden Highway route may exceed the volume anticipated with Creekside residential PUD. Shortcutting through future residential development immediately to the east may occur.

13f. The volume of traffic generated by the project may increase the number of traffic hazards to motor vehicles, bicyclists and pedestrians. West El Camino Avenue contains a designated bike lane.

14a. The project may increase the demand for fire protection and affect service levels of existing fire stations, human resources and equipment.

14b. Possible demand for additional service.

14c. The project proposed an unknown impact on the planned schools in the area.

14d. The project would negatively impact the acquisition and development of parks in the South Natomas area as parkland dedication is not acquired through non-residential development.

15a&b. The project may require substantial amounts of energy that may not be available either in the local network or generating source capacity.

16a,b, c,d,e, f. The area was planned for residential land uses; consequently, the proposed project may substantially affect the existing or planned infrastructure.

17a. The project may create a potential health hazard as a result of impacts on the level of air quality.

18. The proposed project incorporates the I-5 scenic corridor with regard to the landscaping buffer area. The proposal does not include a sound barrier which may be an aesthetic improvement or create an offensive view. The project and I-5 encircle adjacent property designated for residential land use. The combination of the I-5 sound wall and a wall separating land uses may negatively impact future residential development on the parcel that is located to the west of the subject site by creating a potential walled-in fortress.

19. The project may adversely impact the ability of local residents to use Bannon Slough as a result of the proposed office use and the resulting volume of traffic.

20. A 1978 archaeological survey found no significant surface artifacts, however, the site may yield subsurface artifacts. To mitigate the potential destruction of unknown subsurface artifacts to less than significant effect, the following measure shall be required: If unusual amounts of bone, stone or artifacts are uncovered, work within 50 meters of the area will cease immediately and consult a qualified archaeologist to develop, if necessary, further mitigation measures to reduce any archaeological impact to a less than significant effect before construction resumes.

21b. The project is being proposed within the designated urban area and could be considered consistent with short-term environmental goals. However, the project could displace a considerable number of planned residential dwellings that would provide low/moderate housing close to the CBD and reduce commute distances resulting in reduced vehicular emissions and consumption of energy. The high residential densities would also promote bus transit utilization to achieve reduced emissions and energy consumption.

21c. The project has a number of individual impacts: increasing vehicle trips and related secondary effects including increased emissions, fuel consumption and exceeding the capacity of roadways; generating additional runoff that may decrease the water quality of the American River and that may disturb the ecosystem of the Bannon Slough; altering existing and planned public services; adversely impacting the economic viability of the Central Business District, and providing growth inducing impacts of similar projects and additional residential development in areas currently designated agriculture/urban reserve.

While these impacts may be individually limited, the potential for cumulative impacts is significant.

21d. The project site lies adjacent to a landlocked parcel to the west. The parcel is designated for residential land use. The project may significantly impact the noise and air quality levels of the future adjacent residential developments to the west and east of the subject site.

Determination

Creekside Office Park is a specific project that may have many significant impacts as identified in the preceding evaluation. These impacts, combined with those of two other office park proposals in the South Natomas Community, may significantly impact the City of Sacramento.

The City has attempted in recent years to revitalize the Central Business District. Currently, the CBD is not built to its potential office capacity. The project proposes to provide almost one-third the amount of private office square footage in the downtown. Given that other areas in the City and the metropolitan area have large amounts of land for office use, the applicant has not demonstrated justification for the project.

The South Natomas Community Plan was designed to provide a residential neighborhood in close proximity to the CBD. The community plan calls for a limited amount of office acreage to serve the needs of the South Natomas residents. The proposed project would displace approximately four percent of the housing stock called for in the community plan. Coupled with the approximately eight percent of the housing stock that would be displaced as a result of two other office park proposals in the same community plan area, the project would significantly impact the availability and possibly the price of housing in the City of Sacramento.

The demand, marketability and feasibility for Creekside Office Park should be assessed to understand the economic implication of the project. Economic information is necessary in order to make a decision (CEQA, Section 15012) and should be included in the EIR for this project. The economic evaluation will provide an assessment regarding the short and long term impacts to the City's economic growth, CBD's viability, and the availability and cost of housing within the community plan area.

CITY OF SACRAMENTO

Planning Department
915 "I" St., Rm.308
Sacramento, CA 95814
Tel. 916 - 449-5604

ENVIRONMENTAL QUESTIONNAIRE

This document is part of an Initial Study that will facilitate environmental assessment by identifying potentially adverse environmental impacts and analyzing proposed mitigation measures that may reduce significant environmental impacts. More definitive and factual information will assist the Planning Department in evaluating the project's impacts. Additional information may be required to complete an Initial Study.

FOR OFFICE USE ONLY

CPC No. P-9317 Rec'd. by DP On 4/7/81 CPC Hearing Date _____

- ☐ Gen. Plan (Exist) _____ Amend to: _____
- ☒ Comm. Plan (Exist) _____ Amend to: _____
- ☒ Rezone To request to initiate
- ☐ Special Permit
- ☐ Variance
- ☐ Subdivision Modification
- ☐ Tentative Map
- ☒ Other PUD Schematic Plan Amend & Estab PUD

* PLEASE PRINT OR TYPE *

PROJECT PROPOSAL: Creek Side Office Park

PROJECT ADDRESS: South side of West El Camino Ave., at its intersection with Azevedo Drive

Assessor's Parcel No. 274-042-04, 03, 11, 10, 07 & 225-230-19

OWNER: Northridge Estates

Mailing Address: 1451 Quail Street, Newport Beach, CA (Telephone) (City) (Zip Code)

APPLICANT/AGENT: Carl Durling 383-9273 (Telephone)

Mailing Address: 7700 College Town Drive, Sacramento, CA 95826 (City) (Zip Code)

USE A SEPARATE SHEET, IF NECESSARY, TO EXPLAIN ANY OF THE FOLLOWING:

I. Existing Conditions:

A. Project Land Area (sq. ft. or acres) 52.65 ± Acres

B. Project Parcel: Present Zoning R-3-R Proposed OB

C. Project Site Land Use: Undeveloped (vacant) X Developed _____
If developed, briefly describe extent (type & use of structures: photograph acceptable) _____

D. Existing surrounding land uses & zoning within 300 feet (type, intensity, height, setback)

	Land Use	Zoning
North	Apts. and SFD	R-2-B and R-1-AR
South	Vacant	ARP-F and A
East	Vacant	A
West	Vacant and I-5	A

II. A. Slope of Property: *☒ Flat or Sloping ☐ Rolling ☐ Hilly ☐ Steep

*Submit contour map, or show contours on site plan.

B. Are there any natural or man-made drainage channels through or adjacent to the property: Yes. If yes, show on site plan and explain: Bannon Slough

C. Describe changes in site contours resulting from site grading plans: Streets and Building Pads

D. Type and amount of soil to be moved: Minimal
Location moved to or from:

III. A. Number, location and type of existing trees on project parcel (show on site plan) 48 trees as indicated on the site plan

B. Number, size, type, and location of trees being removed (show on site plan) (1) 8" - 14" cottonwood

IV. A. Number and type of structures to be removed as a result of the project:** N/A

B. Are any structures occupied? No. If yes, how many

C. If residential units are being removed, indicate number of dwelling units included: N/A.

** Show all structures on site plan by type, and whether occupied. Also indicate those to be removed.

V. A. Will the project require the extension of or new municipal services: i.e.,

Water	No X	Yes	City/County Health	No X	Yes
Sewer	No X	Yes	Police	No X	Yes
Drainage	No X	Yes	Fire	No X	Yes
Parks	No X	Yes	School	No X	Yes
			Waste Removal	No X	Yes

B. If any of the above are "yes", then submit report detailing how adequate capacity will be achieved. If "no", then submit clearance memo from appropriate agency/department (use copies of attached form)[1].

VI. Project Characteristics

A. Building size (in sq. ft.) 10,000 - 26,000 sq. ft.

B. Building height 1 - 2 story

C. Building site plan: (1) building coverage 28 %
(2) landscaped area 52 %
(3) surfaced area 20 %
Total..... 100%

D. Exterior Building colors[2] Earthtones

E. Exterior Building materials[2] To be determined

[1] If waiver form is signed, clearance(s) from agency/department is not necessary for "no" answers at this time.

[2] Must also be shown on submitted plans.

F. 1. Proposed construction starting date 1982
estimated completion date 1987

2. Construction phasing (if the project is a component of an overall larger project, describe the future phases or extension. Show all phases on site plan).
Approximately 90,000 sq. ft. per year for 5 years

G. Total number of parking spaces required 1535 Provided 1535

H. What type of exterior lighting is proposed for the project (height, intensity): Building area: Incandescent to UBC standards
Parking area: High sodium vapor, height to be determined

I. Estimate the total construction cost for the project $45,000,000 in 1980 dollars

VII. Residential Project - ONLY!

Total Dwelling Units _____

Total Lots _____

A. Number of dwelling units:
Single family _____ Two Family _____
Multiple family _____ Condominium _____

B. Number of dwelling units with:
One bedroom _____ Two bedrooms _____
Three bedbrooms _____ Four or More Bedrooms _____

C. Approximate price range of units: $_____ to $_____

D. Number of units for Sale _____ Rent _____

VIII. Commercial, Industrial, Institutional, or other project (if project is only residential, do not answer this section).

A. Type of use(s) Business, professional office
Oriented to: Regional X City X Neighborhood X

B. Hours of operation Work days (M-F) 8-5

C. If fixed seats involved, how many N/A

D. If assembly area without fixed seats, state designed capacity:
Sq. Ft. of sales area N/A
Describe loading facilities --

E. Total number of employees Unknown at this time

F. Anticipated number of employees per shift ---

G. Community benefits derived from the project
Civic Improvement

IX. A. Why is the project justified now rather than reserving the option for other alternatives in the future? (e.g. economic condition, community demand) Lack of available sites in vicinity of the core area of Sacramento.

B. Objectives of proposed project. To meet the demand for OB space in this area of the central city.

C. If this project is part of another project for which a Negative Declaration of EIR has been prepared, reference the document below (include date and project number if applicable).

EIR - South Natomas Community Plan

D. List any and all other public approvals required for this project. Specify type of permit or approval, agency/department, address, person to contact, and their telephone number.

Permit or Approval	Agency	Address	Contact Person	Phone No.
Rezoning and Community and General Plan Amendment	Planning	725 J Street	Marty Van Duyn	449-5604
Building Permit	Building	10th & J Street	Bill Zimmerman	449-5716
Improvement Plans	Engineering	City Hall	Ron Parker	449-5281

X. To the best of the applicant's knowledge, evaluate the project's impacts in regard to the following questions:

A. Will the Project:	No	Yes	If yes, discuss degree of effect
1. Be located in or near an environmental or critical concern area (i.e. American or Sacramento River; scenic corridor; gravel deposits or pits; drainage canal, slough or ditch; existing or planned parks, lakes, airports)?	X		
2. Directly or indirectly disrupt or alter an archaeological site over 200 years old; an historic site, building, object or structure?.....	X		
3. Displace, compact, or cover soils?.....		X	Normal Grading
4. Be developed upon fill or unstable soils?.	X		
5. Reduce "prime" agricultural acreage?.....	X		
6. Affect unique, rare or endrangered species of animal or plant?.....	X		
7. Interfere with the movement of any resident or migratory fish or wildlife species (e.g. birds, anadramous fish, etc.?.....	X		
8. Change the diversity of species, change the number of any species or reduce habitat of species (e.g. fish, wildlife or plants)?...	X		
9. Modify or destory any unique natural features (e.g. mature trees, riparian habitat)?	X		
10. Expose people or structures to geologic hazards (e.g. earthquakes, ground failures or similar hazards)?	X		
11. Alter air movement, moisture, temperature, or change elimate either locally or regionally?	X		
12. Cause flooding, erosion or siltation which may modify a river, stream or lake?	X		
13. Change surface water movement by altering the course or flow of flood waters?	X		
14. Alter existing drainage patterns, absorption rate or rate and amount of surface water runoff?		X	Due to paving and building coverage
15. Alter surface water quality (e.g. temperature, dissolved oxygen or turbidity)?	X		
16. Interfere with an aquifer by changing the direction, rate, or flow of groundwater? ..	X		

X. A. Will the Project: (contd.)

		No	Yes	If yes, discuss degree of effect
17.	Encourage activities which result in the increased consumption of water or use of water in a wasteful manner?	X		
18.	Contribute emissions that may violate existing or projected ambient air quality standards?	X		
19.	Expose sensitive receptors (children, elderly, schools, hospitals) to air or noise pollutants?	X		
20.	Increase the existing noise levels (traffic or mechanical) or adversely impact adjacent areas with noise?.....	X		
21.	Generate additional vehicular traffic beyond the existing street capacity thus creating a traffic hazard or congestion on the immediate street system, or alter present circulation patterns?	X		
22.	Increase traffic hazards to motor vehicles, bicyclists or pedestrians?.....	X		
23.	Affect existing parking facilities or generate demand for additional parking?....	X		
24.	Affect existing housing or generate a demand for additional housing?.....	X		
25.	Induce substantial growth or alter the location distribution, density or growth rate of the human population of an area?	X		
26.	Result in the dislocation of people?....	X		
27.	Result in a substantial alteration of the present or planned land use of an area?.	X		
28.	Increase demand for municipal services (police, fire, solid waste disposal, schools, parks, recreation, libraries, water, mass transit, communications, etc.	X		
29.	Require the extension or modification of water, storm drainage or sewer line/plant capacity to serve the project at adequate service levels?	X		
30.	Produce significant amounts of solid waste or litter?	X		
31.	Violate adopted national, state, or local standards relating to solid waste or litter control?	X		

X. A. Will the Project: (Contd).

	No	Yes	If yes, discuss degree of effect
32. Involve the use, storage or disposal of potentially hazardous material such as toxic, flammable, or explosive substances, pecticides, chemicals or radioactive materials?	X		
33. Encourage activities which result in the use of large amounts of fuel or energy, use fuel or energy in a wasteful manner, or substantially increase consumption (of electricity, oil, natural gas)?.....	X		
34. Increase the demand upon existing energy distribution network (SMUD, PG&E)?	X		
35. Obstruct a scenic view open to the public or create an aesthetically offensive site open to public view?	X		
36. Have substantially, demonstrable negative aesthetic effect?	X		
37. Disrupt or divide the physical arrangement of an established community?	X		
38. Have any significant impact upon the existing character of the immediate area(i.e. scale, patterns, impair integrity of neighborhoods, etc.	X		
39. Have any detrimental effect on adjoining areas or neighboring communities during an/or after construction?	X		
40. Generate dust, ash, smoke fumes, or create objectionable odors in the project's vicinity?	X		
41. Produce glare or direct light where it is not intended?	X		
42. Expose people to or create any health hazard or potential health hazard (excluding mental health)?	X		
43. Affect the use of or access to existing or proposed recreational area or navigable stream?	X		
44. Conflict with recorded public easements for access through or use of property with in this project?	X		
45. Result in an impact upon the quality or quanity of existing recreational opportunities?	X		
46. Conflict with established recreational, educational, religious or scientific uses of the area?	X		

X. A. Will the Project: (Contd)

	No	Yes	If yes, what degree of ...
47. Generate public controversy?	X		
48. Conflict with adopted plans and environmental goals of the City (i.e. general, specific, community plans or elements? .	X		
49. Have the potential to degrade the quality of the environment (i.e. land, air, water, plants, animals)?	X		
50. Achieve short-term environmental goals to the disadvantage of long-term environmental goals (e.g. leap-frog development or urban sprawl)?	X		
51. Have a cumulative impact on the environment when related to existing or future projects?	X		
52. Have environmental effects which will cause adverse effects on human beings, either directly or indirectly?	X		

B. List any and all mitigation measures proposed to reduce environmental impacts (as identified in the above questions) for the project.

Normal energy conservation measures

Use of landscaping, parkway and design location of parking areas, etc.

C. List proposed measures to limit or reduce consumption of energy.

Same as above

D. Are there alternatives to the project which would eliminate or reduce an adverse impact on the environment (lower density, change in land use, move building on site, no project, etc.)?

None, as this proposed project would satisfy a demand

NOTE: Yes or no answers do not necessarily imply that an EIR will be required for this project.

I hereby state that, to the best of my knowledge, the above answers and statements are true and complete.

DATE

SIGNATURE

LAW OFFICES OF
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OF COUNSEL
WILLIAM M. GALLAGHER

May 13, 1982

City Council
Council Chamber
City Hall
Sacramento, CA 95814

Honorable Members in Session:

On behalf of our clients Tsakopoulos Land Development Company and Northridge Estates, we hereby agree to a waiver of time deadlines prescribed in Government Code Section 65920 et seq. for Council action on our South Natomas project until and including August 11, 1982. This waiver is submitted at the request of the City Council to facilitate the formulation and submittal to the Council of the specific conditions of approval of our South Natomas project.

Very truly yours,

HEFNER, STARK & MAROIS

By
ROBERT W. BELL

RWB:cb
cc: Angelo Tsakopoulos
Carl Durling
James P. Jackson, City Attorney
5/17/82 cc: Lorraine Magana