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**SUBURBAN SQUEEZE II:
RESPONSES TO SUBURBAN
EMPLOYMENT GROWTH**

BY

CYNTHIA A. KROLL

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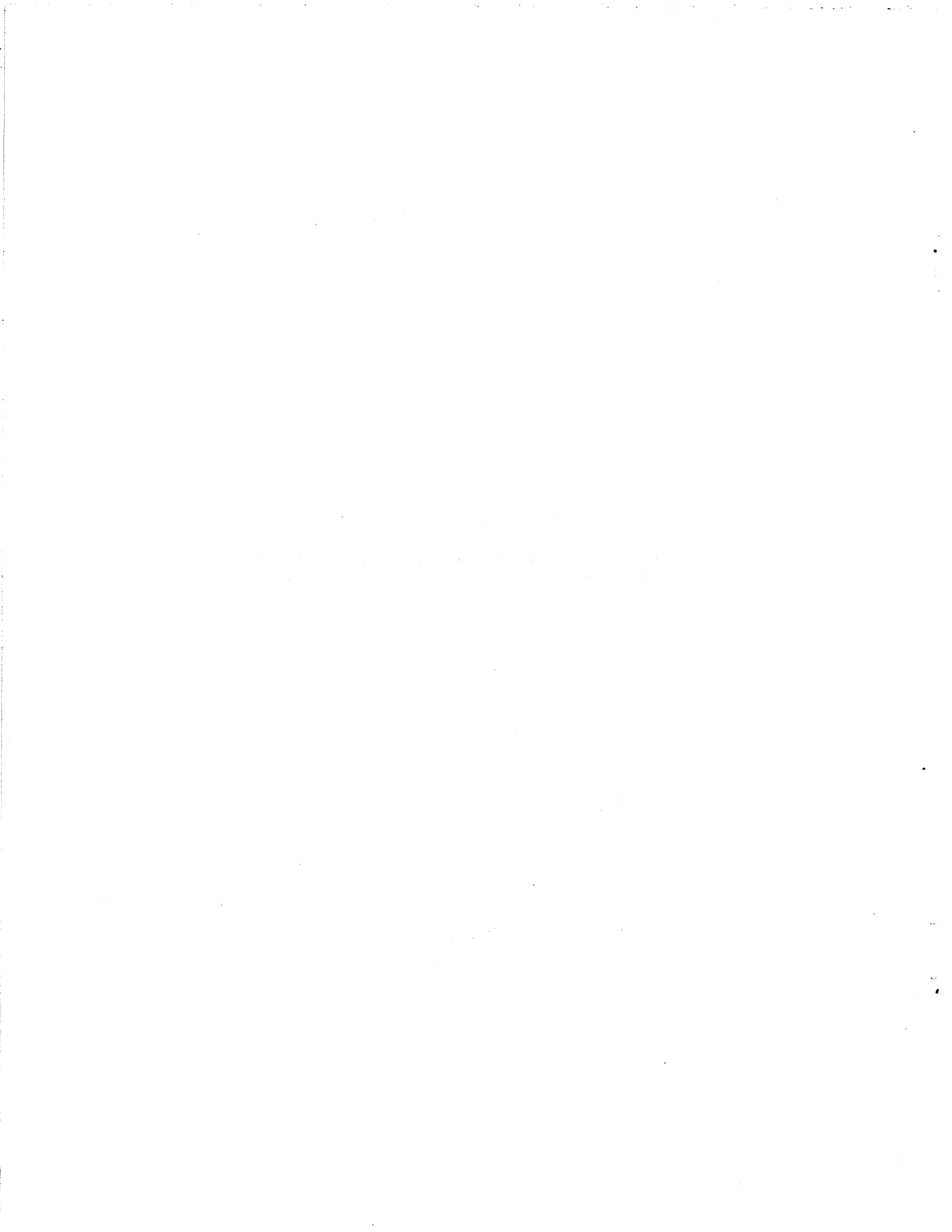
SUBURBAN SQUEEZE II: RESPONSES TO SUBURBAN EMPLOYMENT GROWTH

by

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SUBURBAN SQUEEZE II: RESPONSES TO SUBURBAN EMPLOYMENT GROWTH

ABSTRACT

This paper surveys suburban community growth management measures concerned with nonresidential development and examines both intended and actual effects of the measures. Nonresidential growth trends, perceived problems of growth, and measures to address growth impacts are summarized from the experience of two dozen communities in the San Francisco Bay Area. Three communities are analyzed in more detail. Major research questions addressed include what types of communities are acting to control the level and impacts of office and industrial development, what conditions lead communities to seek growth management measures of nonresidential projects, what growth control actions are being taken, and whether these measures have a significant effect on regional employment growth.

Comparing population growth, employment, housing values, and income in the communities most actively considering growth measures shows that a wide variety of places are concerned with recent levels of nonresidential building, but that the most stringent measures have been enacted in communities with relatively high incomes and low rates of unemployment. Traffic and the evolving urban character of the community are the major changes leading to measures addressing the level or impacts of growth.

An analysis of three communities in detail shows that the net impact of growth control measures on the office stock inventory and on employment growth have been small even under severe growth control measures because of very high vacancy levels in existing suburban office buildings and because builders may accelerate plans to get in "under the wire." In the longer run, if many more communities enact anticipatory growth controls (stopping significant levels of new building), job displacement would be greater, and significant impacts could occur on the location and mix of jobs within the region.

In addition, there appears to be a mismatch between the jurisdictional level at which growth control occurs and the scale of the problems. Local measures are often ineffective in dealing with the perceived problems of growth because they do not address impacts generated by growth in neighboring communities and because nonresidential buildings are not always the primary cause of growth impacts.

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SUBURBAN SQUEEZE II: RESPONSES TO SUBURBAN EMPLOYMENT GROWTH*

by Cynthia A. Kroll

I. Introduction¹

While not the first state to become famous for enacting local growth control measures California has rapidly become known for its communities' ambivalent attitude towards growth. Even before the passage of statewide initiatives in 1978 made residential growth fiscally unattractive,² communities such as Petaluma, 40 miles north of San Francisco, were attempting to control the pace of growth if not the ultimate size of the community. Since then growth management measures have become common among California cities, ranging from caps on building permits to very high development fees covering the service costs resulting from new growth.

Until quite recently most of these controls have been directed at housing growth. Nonresidential growth often was welcomed where new homes were discouraged, as communities in California and elsewhere became eager to attract or retain employers and to boost revenues resulting from sales taxes. Cities and counties were more likely to grant special privileges to nonresidential builders than to impose restrictions on office, industrial, or major retail projects.

* Nancey Leigh-Preston, a doctoral student in the Department of City and Regional Planning at the University of California, Berkeley, designed and carried out the survey of cities described in this paper and gathered much of the other data used in the study. She also provided helpful comments and insights on the study design and on drafts of this paper.

Since 1980 some changes have occurred in this picture. Despite a recession that had local jurisdictions and state agencies actively seeking job and revenue growth, growth management measures concerning nonresidential construction have surged. Citizens, city councils, and boards of supervisors in the San Francisco Bay Area have taken a wide range of actions that include:

- 1) yearly caps on office space construction
- 2) downzoning of height limits, especially in downtown areas
- 3) requiring city-wide votes on future construction
- 4) temporary moratoria on all new projects
- 5) rejection of specific projects through referenda.

In addition to submitting to measures controlling how much will be built and when building will occur, nonresidential developers are also being asked to take more responsibility for new housing construction, child care services, and transportation costs that accompany increased office and industrial employment. These requirements are not entirely new in scope, as they have been directed at residential builders for more than a decade in California and have also been tried in a few instances of nonresidential growth in the 1970s. However, many more nonresidential building projects are being included in the most recent round of growth management activities than were covered by earlier attempts to control community size.

A. Scope of the Study

In an era when state agencies in California, the Bay Area Council (a regionwide business organization), and many local jurisdictions are trying to erase California's image of having an

"anti-business" climate, growth management measures raise questions about effects on economic growth in the region and state. This paper examines the problems that lead to nonresidential growth controls in the suburbs, describes the types of measures used, and examines the ways in which such measures may affect the location and level of job growth in the future.

The first three sections of the paper are introductory, describing the problem in general, the research approach, and recent suburban building trends. Section IV describes the demographic and economic characteristics of two dozen Bay Area communities that have recently enacted or are considering the use of nonresidential growth controls. Section V presents a typology of growth management techniques, examining the types of problems addressed, the ways in which the measures are enacted, and the implementation of growth management techniques. Section VI describes in more detail growth management approaches in three suburban Bay Area communities and then analyzes the expected effects and observed performance of these growth controls. In particular, the analysis evaluates the effects of controls on the growth of office jobs. The final section of the paper discusses the regional and longer term implications of the findings for the case study communities.

B. Major Conclusions

The research reveals the complexity of the issues raised by local growth management. The impacts of growth management measures both on the problems initially addressed and on the

initial characteristics of the community, the community's location and recent growth history, the types of measures enacted, and regional market conditions. Despite these limitations several general conclusions can be made:

- 1) In the wake of an acceleration of nonresidential building in Bay Area suburbs, concern with the consequences of nonresidential growth is widespread, affecting many different types of suburban communities. Traffic congestion and the evolving urban character of the community are the major changes leading to measures to control either the level or the impacts of growth.
- 2) Despite a few severe growth control measures that virtually halt new nonresidential building, overall, responses in Bay Area suburbs are still quite moderate. This moderate level of response combined with a heavily overbuilt office and industrial market mean that the net impact of the present level of growth management activity on the regionwide growth of office jobs for the rest of this decade will be minor.
- 3) While the current measures do not place a "squeeze" on job growth at present, they often fail to address the underlying problems effectively. Traffic problems in particular are regional in scope and result as much from location of jobs and residences and the present transportation networks connecting the two as from the absolute level of employment or employment growth.
- 4) In the long run if the surplus of office space is absorbed, measures that address the level of building

(e.g. building moratoria and height controls) rather than the actual problems (that are related to a much broader mix of factors than new office buildings) may have important effects on the types, location and growth of new jobs in the region.

Some important limitations to the study should be noted. Because most recent measures have come out of the sharp increase in office construction in the suburbs, the detailed (case study) analysis focused only on the results of growth measures for office-related jobs. In a few cases growth controls affect major retail projects as well. Because retail space is less overbuilt currently than office space, the displacement of jobs and income may be greater for this sector, and the revenue effects are more significant for the individual cities. In addition, the study does not address the impacts of growth controls on the construction industry. Although clearly job loss is likely to be quite significant in the short run in this industry, in the longer run construction activity will be tied to the rate of job growth in more basic sectors of the economy.

II. Research Approach and Geographic Scope

This paper surveys suburban community growth management responses to rapid nonresidential development and describes some of the implications for employment growth and the location of jobs. The research techniques used include a literature review of nationwide activity, telephone and personal interviews of regionwide, county and city agencies, descriptive statistics of Bay Area growth control communities, and three more detailed case

studies of developing cities.

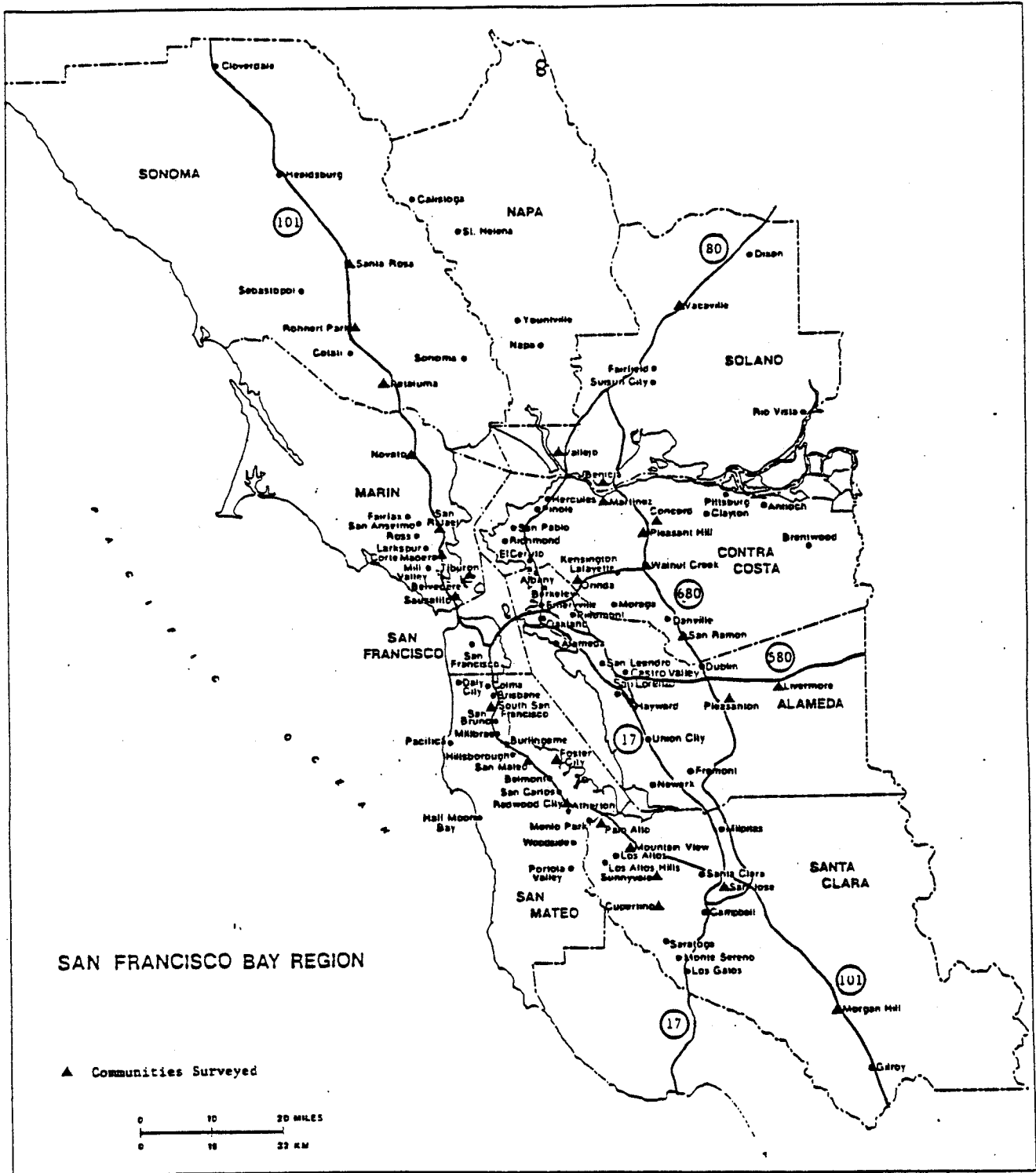
A library search and a review of major journals reporting land use controls, including Urban Land, Zoning News, and Land Use Law, indicated that California cities and counties have dominated the growth management scene for nonresidential activity. Within California the San Francisco Bay Area was selected as the focus in this study, with a concentration on suburban communities. An initial review indicated that Bay Area communities offer a wide range of growth experiences and management approaches, ranging from a highly industrial southern area whose major expansion occurred in the 1960s and 1970s to a very rapidly changing eastern area drawing office and research and development building activity. In addition, a recent study of initiative activity in California's cities and counties found that 90 percent of local land use ballot measures in the past decade occurred in Northern California.³

Some central cities in the Bay Area have been as active as suburbs in controlling where or how much new nonresidential development will occur. San Francisco, in particular, has been noted for a series of growth management responses to the extensive "Manhattanization" of its downtown area. The city has instituted height and bulk limits, in-lieu payments for housing, metering of future development (square footage caps per year), and childcare fees.⁴ This study, however, focusses only on suburban responses to growth.

While San Francisco growth has been spurred by specialization of the finance industry and corporate headquarter activity, suburban growth in the region has occurred because of regional

suburban population growth and as a result of the movement of firms from central city to suburbs in search of less expensive space that can be easily assembled. Because suburbs are seen as an important alternative for employers squeezed by central city limitations, the effects of growth controls in these areas may be quite different from central city effects, and the impetus for these controls may also vary from the San Francisco case. Central city limitations are likely to lead to a redistribution of activity within the region; while widespread suburban growth controls can lead firms to "leapfrog" out of the region entirely, causing much more severe consequences for employment growth. Therefore, an understanding of suburban responses and the impacts of these responses is important in itself, apart from a more general analysis that would include central cities as well.

Bay Area communities concerned with nonresidential growth management were identified through interviews with and publications from regional organizations, such as the San Francisco Bay Area Council, People for Open Space (a regional conservation organization), and the Association of Bay Area Governments (the region's council of governments). The list was expanded through conversations with county planning departments. Planning departments in the two dozen cities identified through this process were interviewed on the city's recent growth history, problems that were emerging as a result of growth, and any city or community-generated responses to the growth or resulting problems. The locations of these cities are shown in Figure 1.



ASSOCIATION OF BAY AREA GOVERNMENTS

FIGURE 1: BAY AREA COMMUNITIES SURVEYED ON GROWTH MANAGEMENT MEASURES

Source: Center for Real Estate and Urban Economics, using base map provided by the Association of Bay Area Governments, March 1986

Although all of the cities interviewed were initially identified as having significant nonresidential growth management activity, several did not indicate concerns with growth in the interviews. However, even these less active cities are reported here because they demonstrate some important geographic variations that are occurring in the San Francisco Bay Area. Three of the region's major new suburban office nodes, Walnut Creek, Concord and Pleasanton, are compared in more detail and are used to illustrate expected employment impacts and some of the revenue dilemmas of growth management techniques.

III. A Building Boom in Bay Area Suburbs

The building record for Bay Area suburbs indicates the extent to which suburban growth pressures have shifted from residential to employment related construction over the past decade. Nonresidential construction has been of increasing importance to the San Francisco Bay Area in the past ten years, accounting for 64 percent of regional building permit values in 1975 and for 70 percent in 1984, and the location of this growth has been shifting outwards. Nonresidential gains have been particularly strong in the east and south bay counties of Alameda, Contra Costa and Santa Clara (see Table 1). From 1975 to 1984 Alameda County's share of the region's nonresidential building permit activity increased from 12.5 to 20.2 percent, Contra Costa County's share grew from 9.3 to 13.5 percent, Santa Clara County's share grew from 28.0 to 36.1 percent, while the city of San Francisco's share dropped from 29.9 to 14.7 percent.

This shift to suburban building is part of a nationwide

TABLE 1: BAY AREA RESIDENTIAL AND NONRESIDENTIAL CONSTRUCTION ACTIVITY

Counties	Residential Valuation	Nonresidential Valuation	Nonresidential-Residential Ratio	Share of Regional Total	Residential	Nonres
1975						
Alameda	\$161,831	\$102,053	0.63	15.9%		12.5%
Contra Costa	\$158,873	\$75,799	0.48	15.6%		9.3%
Marin	\$58,735	\$20,233	0.34	5.8%		2.5%
Napa	\$25,758	\$12,099	0.47	2.5%		1.5%
San Francisco	\$63,395	\$243,713	3.84	6.2%		29.9%
San Mateo	\$110,273	\$70,413	0.64	10.8%		8.6%
Santa Clara	\$269,906	\$228,210	0.85	26.5%		28.0%
Solano	\$74,892	\$36,957	0.49	7.4%		4.5%
Sonoma	\$93,799	\$25,671	0.27	9.2%		3.1%
TOTAL	\$1,017,462	\$815,148	0.80			
1984						
Alameda	\$569,809	\$666,514	1.17	22.8%		20.2%
Contra Costa	\$408,562	\$445,002	1.09	16.4%		13.5%
Marin	\$104,594	\$84,947	0.81	4.2%		2.6%
Napa	\$60,173	\$62,659	1.04	2.4%		1.9%
San Francisco	\$188,297	\$486,084	2.58	7.5%		14.7%
San Mateo	\$216,814	\$193,441	0.89	8.7%		5.9%
Santa Clara	\$537,049	\$1,190,829	2.22	21.5%		36.1%
Solano	\$131,571	\$53,803	0.41	5.3%		1.6%
Sonoma	\$277,607	\$114,897	0.41	11.1%		3.5%
TOTAL	\$2,494,476	\$3,298,176	1.32			

SOURCE: Construction Trends, Security Pacific.

trend from Los Angeles to Dallas to Boston. In the San Francisco Bay Area, changing building permit activity is reflected strongly in the changing distribution of office square footage. In 1970 over 90 percent of all office space in the region was located in the central cities of San Francisco, Oakland and San Jose. These cities continued to attract more than half of all new building in the 1970s. Between 1980 and 1984, building shifted strongly to suburban areas, which experienced more than 60 percent of all new office construction. The total suburban share of office space in the Bay Area reached 40 percent by December 1984, from a level of under 10 percent in 1970 and 26 percent in 1980 (see Table 2).

An examination of the growth in the value of nonresidential building permits in the San Francisco Bay Area cities surveyed indicates that the greatest growth management activity is found in counties where nonresidential building has increased more quickly than the regionwide average and in cities within slower growing counties where local nonresidential building has grown very rapidly. Some of the most intense debates over nonresidential growth are occurring in Contra Costa County, where the value of nonresidential building permits filed countywide increased by 80 percent (in inflation-adjusted terms) in the 1980 through 1984 period, as compared to the 1975 through 1979 period (see Table 3). At the hub of this activity the city of Walnut Creek has seen the value of building permits in the first half of the 1980s reach two and one half times the 1975-79 level.

Other places in the Bay Area where the inflation adjusted value of nonresidential building more than doubled include

TABLE 2: SUBURBAN OFFICE ACTIVITY IN THE SAN FRANCISCO BAY AREA

LOCATION	TOTAL	SQUARE FEET	% ADDED	% OF REGIONAL ACTIVITY	
	SQUARE FEET 1984	ADDED SINCE 1980	SINCE 1980	TOTAL 1984	SINCE 1980
CENTRAL CITIES	66.8	16.2	24.3%	60.7%	38.6%
Oakland	10.5	3.2	30.5%	9.5%	7.6%
San Francisco	50.0	10.0	20.0%	45.5%	23.8%
San Jose	6.3	3.0	47.6%	5.7%	7.1%
SUBURBAN PLACES	43.2	25.8	59.7%	39.3%	61.4%
A. COUNTIES					
Contra Costa	9.2	4.2	45.7%	8.4%	10.0%
Suburban Alameda	8.4	4.9	58.3%	7.6%	11.7%
Marin	2.8	2.0	71.4%	2.5%	4.8%
San Mateo	11.4	4.4	38.6%	10.4%	10.5%
Suburban Santa Clara	8.9	6.3	70.8%	8.1%	15.0%
B. SUBCOUNTY AREAS AND TOWNS					
Central San Mateo*	6.1	1.4	23.0%	5.5%	3.3%
South San Mateo*	2.7	1.9	70.4%	2.5%	4.5%
Concord	1.5	0.8	53.3%	1.4%	1.9%
Walnut Creek	4.1	1.8	43.9%	3.7%	4.3%
Pleasanton/Dublin/ Livermore	2.2	1.8	81.8%	2.0%	4.3%
North Santa Clara#	2.0	1.0	50.0%	1.8%	2.4%
Mid Santa Clara#	2.9	2.0	69.0%	2.6%	4.8%
West Valley (Santa Clara)#	1.5	0.8	53.3%	1.4%	1.9%
San Francisco Bay Area	110.0	42.0	38.2%		

* Central San Mateo County includes Daly City, Brisbane, South San Francisco, and San Bruno; South San Mateo includes Millbrae, Burlingame, Redwood City, and Menlo Park.

North Santa Clara includes Palo Alto and Mountain View; Mid Santa Clara includes Sunnyvale and Santa Clara; West Valley includes Campbell, Cupertino and Los Gatos.

Source: Compiled by the Center for Real Estate and Urban Economics from office inventories provided by major commercial brokers in the region, including Coldwell Banker, Grubb and Ellis, and Cushman and Wakefield.

TABLE 3: NONRESIDENTIAL BUILDING PERMIT ACTIVITY IN COUNTIES AND SELECTED SUBURBAN PLACES,
SAN FRANCISCO BAY AREA, 1975 THROUGH 1984

COUNTY/CITY	NONRESIDENTIAL BUILDING PERMITS (THOUSANDS OF DOLLARS)										TOTAL IN 1984 \$S		INDEX: 805/705
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1975-79	1980-84	
ALAMEDA	102053	136529	184311	226744	346151	256341	356253	425735	478112	666514	1677398	2421094	1.44
Livermore	2600	11351	3524	4303	7820	4763	13625	11686	10256	31392	52023	78220	1.50
Pleasanton	4313	18715	3781	7139	39441	13905	32163	39662	48597	89454	120867	243005	2.01
CONTRA COSTA	75799	58642	101762	130012	127531	158804	205905	218496	762940	445002	850341	1534706	1.80
Concord	14923	7450	22881	37452	42200	58615	22659	35803	39345	205201	208362	391183	1.88
Martinez	1564	1415	3690	6143	2925	1788	2553	2391	10694	7332	26314	26870	1.02
Orinda	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pleasant Hill	1625	3418	4298	4173	5095	4319	6012	5666	4641	6761	31858	31004	0.97
San Ramon	NA	NA	NA	NA	NA	NA	NA	NA	NA	20437	NA	NA	NA
Walnut Creek	2603	9908	7322	23740	16639	12468	36223	29090	75133	74335	99832	247511	2.48
MARIN	20233	26096	29525	58345	48954	35884	67563	55365	57406	84947	310688	337240	1.09
Corte Madera	1313	1646	1211	3298	437	2508	3678	1569	1488	22063	14035	33156	2.36
Novato	3087	2420	8032	10714	9814	10485	22098	6266	10040	15982	57045	74310	1.30
San Rafael	6026	6647	7938	16235	20625	10856	10502	20221	23631	26038	95797	100814	1.05
Sausalito	495	414	1631	2216	1064	1945	10581	7923	3928	2492	9866	31001	3.14
Tiburon	371	172	512	871	2519	487	8872	2449	280	1323	7095	15812	2.23
NAPA	12099	14629	17119	32915	34178	26486	34762	42773	33139	62659	186931	222720	1.19
SAN FRANCISCO	243713	127714	290673	389058	438075	268834	545046	853880	825476	486084	2545468	3336494	1.31
SAN MATEO	70413	67757	83770	111511	147358	171889	229386	164242	186368	193441	823453	1079571	1.31
Foster City	2270	4661	7960	3636	3568	1516	13380	10214	11378	8015	39162	49871	1.27
Redwood City	7885	2589	6182	6963	15084	19368	13491	19972	28038	32532	65945	126467	1.92
San Mateo	25335	20688	8048	11545	13772	42736	67911	39839	29290	34754	146751	249013	1.70
South San Francisco	8213	4193	9603	12913	15718	26013	24044	29108	25512	20800	86294	143763	1.67
SANTA CLARA	228210	248069	374349	500943	590831	483556	843072	598662	986111	1190829	3295967	4570882	1.39
Cupertino	19721	15062	33514	24808	22107	17954	19699	30985	23033	36975	203108	143593	0.71
Morgan Hill	594	1394	3884	3433	2287	6439	3665	2713	17026	12423	19748	46498	2.35
Mountain View	8681	18952	17756	14449	30215	37233	26054	33161	29689	70682	154029	219695	1.43
Palo Alto	17415	19999	28413	28318	56584	46043	73283	83425	107878	78242	254278	436004	1.71
San Jose	93574	66031	115026	132116	199750	154852	317554	214202	395799	470374	1034780	1721410	1.66
Sunnyvale	33722	34017	58178	118262	119584	72275	87695	64520	117434	142774	604408	541365	0.90
SONOMA	25671	39124	58899	71843	101925	152139	75509	65718	120416	114897	498942	607141	1.22
Petaluma	3193	2273	3674	4261	8066	7356	5996	3053	11660	9549	36321	42308	1.16
Rohnert Park	1752	9977	5928	6338	7529	5746	4893	8155	21774	18238	54716	64059	1.17
Santa Rosa	11024	14495	26643	31831	56127	102176	34615	33858	42064	49361	231783	307378	1.33
SQLAND	36957	28433	45831	40659	63102	58876	42042	34707	48490	53803	372664	272310	0.73
Benicia	1955	1979	2352	8650	10508	15446	10926	4911	13043	11962	41266	64820	1.57
Vacaville	3648	12120	23948	9470	11365	9773	5221	2307	37	NA	105779	NA	NA
Vallejo	3139	7913	5153	6830	6283	11589	7017	4824	10159	11213	51253	51103	1.00
SAN FRANCISCO 9-COUNTY:	815148	746990	1185788	1562030	1898103	1612810	2399538	2459580	3098458	3298176	10561031	14382162	1.36

Source: Yearly figures from Security Pacific Construction Trends; 5-year totals calculated by CDFUE using construction indices derived from the Northern California Real Estate Research Council quarterly reports.

Pleasanton, Corte Madera, Sausalito, Tiburon, and Morgan Hill. The northern counties of Napa, Sonoma and Solano have had far less growth in nonresidential building activity than their southern neighbors. In Solano County 1980s building activity has been less than three fourths the level in the second half of the 1970s; whereas in Sonoma and Napa the value of permits increased by about 20 percent (as compared to a 36 percent increase regionwide). While these counties have experienced some significant movement towards urban containment and agricultural land preservation (generally directed at least as much at housing as at nonresidential growth), their cities have had far fewer successful growth control measures related to office, industrial or retail development than in other parts of the region.

IV. Characteristics of Suburban Growth Response Communities

New office and industrial space is going into many different types of suburban communities. Places vary in terms of rate of population growth, level and stability of income, share of the population in the labor force, labor force characteristics, and location relative to the major urban centers. However, the places that have responded most strongly to new nonresidential development tend to have greater than average incomes and housing values, and to have experienced an increasing focus on nonresidential growth in the past decade, often accompanied by a very large increase in employment.

A. Demographic and Economic Trends

Population growth rates vary substantially among the places considering or using nonresidential growth controls (see Table 4). Between 1970 and 1980, some peripheral places, such as Rohnert Park and Morgan Hill more than doubled or tripled in size, while older suburban cities such as Redwood City and San Mateo lost population.

Since 1980 residential growth has slowed considerably in many cities identified in this study. The greatest population increases experienced in the previous decade (among cities in this study) were 274 percent in Rohnert Park (or an annual rate of approximately 14.1 percent) and over 400 percent, or 18.5 percent annually in San Ramon (still unincorporated in 1970). Three other cities more than doubled in size. Between April 1980 and January 1985, the fastest growing city has increased by approximately one third, or an annual rate of 6.1 percent. This slowdown reflects the impacts of economic recession (slowing housing construction and purchases), tighter controls on residential growth, and the decreased availability of land for residential development. It contrasts with a slight increase in the annual rate of population growth for the region as a whole from the 1970s to the first half of the 1980s.

While population growth had slowed in the 1980s in many of the communities in this study, employment growth was strong in the great majority of cities identified as having nonresidential growth management concerns. Data on employment levels by city are available, in highly aggregated form, from the Association of Bay Area Government's Projections 85 (ABAG). The figures from

TABLE 4: POPULATION CHANGE IN SELECTED SUBURBS AND RELATED CENTRAL CITIES, SAN FRANCISCO BAY AREA

COUNTY/CITY	TOTAL POPULATION			POPULATION CHANGE (%)	
	1970	1980	1985	1970-80	1980-85
ALAMEDA	1073184	1105379	1174800	3.0%	6.3%
Livermore	37703	48349	52100	28.2%	7.8%
Pleasanton	18328	35160	40750	91.8%	15.9%
CONTRA COSTA	555805	656331	703400	18.1%	7.2%
Concord	85423	103763	105200	21.5%	1.4%
Martinez	16506	22582	27250	36.8%	20.7%
Orinda	6790	16843	17300	148.1%	2.7%
Pleasant Hill	24630	25547	27400	3.7%	7.3%
San Ramon	4084	22356	25100	447.4%	12.3%
Walnut Creek	39844	54062	58100	35.7%	7.5%
MARIN	206758	222568	223200	7.6%	0.3%
Corte Madera	8464	8074	8400	-4.6%	4.0%
Novato	31006	43916	44300	41.6%	0.9%
San Rafael	38977	44700	44150	14.7%	-1.2%
Sausalito	6158	7338	7525	19.2%	2.5%
Tiburon	6209	6685	7875	7.7%	17.8%
NAPA	79140	99199	102200	25.3%	3.0%
SAN FRANCISCO	715674	678974	719200	-5.1%	5.9%
SAN MATEO	556601	587329	606200	5.5%	3.2%
Foster City	NA	23287	24450	NA	5.0%
Redwood City	55686	54951	57300	-1.3%	4.3%
San Mateo	78991	77561	81900	-1.8%	5.6%
South San Francisco	46646	49393	51700	5.9%	4.7%
SANTA CLARA	1066421	1295071	1376900	21.4%	6.3%
Cupertino	18216	34015	37950	86.7%	11.6%
Morgan Hill	6485	17060	19700	163.1%	15.5%
Mountain View	54206	58655	61600	8.2%	5.0%
Palo Alto	56181	55225	56200	-1.7%	1.8%
San Jose	445779	629442	696000	41.2%	10.6%
Sunnyvale	95408	106618	111700	11.7%	4.8%
SOLANO	171815	235203	269100	36.9%	14.4%
Benicia	7349	15376	20700	109.2%	34.6%
Vacaville	21690	43367	49850	99.9%	14.9%
Vallejo	71710	80303	88800	12.0%	10.6%
SONOMA	204885	299681	330000	46.3%	10.1%
Petaluma	24870	33834	37300	36.0%	10.2%
Rohnert Park	6133	22965	28200	274.4%	22.8%
Santa Rosa	50006	83320	94600	66.6%	13.5%
SAN FRANCISCO SMSA	3108022	3250581	3426800	4.6%	5.4%
9-COUNTY REGION	4630283	5179735	5505000	11.9%	6.3%

Source: Except as otherwise noted, 1970 and 1980 figures are for April of that year, and are from the U.S. Census. Figures for 1985 are for January of that year, and come from the California Department of Finance.

this source for 1980 are derived from State of California employment records, while later years are projections. While these data have important limitations, they are the only city level data available on employment by place of work.⁶

The ABAG data estimate total employment growth in the region between 1980 and 1985 at 9.8 percent, growth in manufacturing employment at 12.7 percent, and growth in services employment at 11.5 percent. As shown in Table 5, total employment growth in the surveyed cities exceeded the regionwide average in two thirds of the study cities, with an employment growth low of 0.8 percent in Sausalito (Marin County) and a high of 83.9 percent in San Ramon (Contra Costa County). All but four of the cities had greater than average growth in either manufacturing or service employment.

B. Housing Value

High housing values dominate in the cities studied here, with the exception of places in Napa, Sonoma and Solano counties (see Table 6). In San Mateo and Santa Clara counties, restrictions on residential land development and rapid growth of employment in the 1960s and 1970s have made it one of the highest priced and tightest housing markets in the country. East Bay cities in Alameda and Contra Costa counties historically have had a broader range of affordable housing. However, housing prices have jumped in a number of central Contra Costa towns in the 1980s, reflecting both the competition brought about by an expanding employment base and a shift in the types of homes being built. Homes that valued below the metropolitan area median in

TABLE 5: EMPLOYMENT GROWTH IN REPRESENTATIVE BAY AREA COMMUNITIES, 1980 TO 1985

	TOTAL EMPLOYMENT			MANUFACTURING EMPLOYMENT*			SERVICES EMPLOYMENT			CHANGE INDEX PLACE/SCSA		
	1980	1985	% CHANGE 1980-85	1980	1985	% CHANGE 1980-85	1980	1985	% CHANGE 1980-85	TOTAL	MANUF	SERVICE
ALAMEDA	511077	549700	7.6%	118016	122550	3.8%	151675	166050	9.5%	0.77	0.30	0.83
Livermore	16726	19800	18.4%	2376	2580	8.6%	8552	10560	23.5%	1.88	0.68	2.05
Pleasanton	9090	13900	52.9%	1618	2530	56.4%	2220	3110	40.1%	5.42	4.45	3.49
CONTRA COSTA	204192	233200	14.2%	35072	40240	14.7%	60183	68470	13.8%	1.45	1.16	1.20
Concord	33370	39500	18.4%	4749	5170	8.9%	9342	11250	20.4%	1.88	0.70	1.78
Martinez	12348	14100	14.2%	3030	3220	6.3%	2260	2590	14.6%	1.45	0.49	1.27
Orinda	3184	3300	3.6%	263	310	17.9%	1234	1360	10.2%	0.37	1.41	0.89
Pleasant Hill	12067	15400	27.6%	1764	2190	24.1%	4223	5120	21.2%	2.83	1.90	1.85
San Ramon	5329	9800	83.9%	1411	1900	34.7%	1591	3270	105.5%	8.59	2.73	9.19
Walnut Creek	37513	42500	13.3%	3942	4580	16.2%	13254	14630	10.4%	1.36	1.28	0.90
MARIN	77622	87800	13.1%	7343	8290	12.9%	25487	29450	15.5%	1.34	1.02	1.35
Corte Madera	3143	3500	11.4%	405	460	13.6%	576	660	14.6%	1.16	1.07	1.27
Novato	12817	16100	25.6%	1864	2560	37.3%	4926	5960	21.0%	2.62	2.94	1.83
San Rafael	34736	40100	15.4%	3648	3750	2.8%	9239	11260	21.9%	1.58	0.22	1.91
Sausalito**	4069	4100	0.8%	481	500	4.0%	754	820	8.8%	0.08	0.31	0.76
Tiburon	2380	2400	0.8%	54	60	11.1%	778	860	10.5%	0.09	0.88	0.92
NAPA	35870	40200	12.1%	5166	5520	6.9%	14910	17280	15.9%	1.24	0.54	1.38
SAN FRANCISCO	552200	566800	2.6%	71517	67500	-5.6%	171895	184850	7.5%	0.27	-0.44	0.66
SAN MATEO	259795	275000	5.9%	59510	60020	0.9%	67822	72600	7.0%	0.60	0.07	0.61
Foster City	5424	6100	12.5%	1435	1530	6.6%	1412	1730	22.5%	1.28	0.52	1.96
Redwood City	31466	35400	12.5%	8905	8860	-0.5%	8491	9500	11.9%	1.28	-0.04	1.04
San Mateo	43260	45100	4.3%	4490	4470	-0.4%	18576	18860	1.5%	0.44	-0.04	0.13
South San Francisco	38129	40500	6.2%	12142	12350	1.7%	5268	6480	23.0%	0.64	0.14	2.00
SANTA CLARA	698270	811500	16.2%	286092	351460	22.8%	173972	201480	15.8%	1.66	1.80	1.38
Cupertino	35239	41100	16.6%	18592	22960	23.5%	6482	7730	19.3%	1.70	1.85	1.68
Morgan Hill	5572	7100	27.4%	977	1500	53.5%	1233	1580	28.1%	2.81	4.22	2.45
Mountain View	59279	63600	7.3%	23744	25220	6.2%	11455	12480	8.9%	0.75	0.49	0.78
Palo Alto	75757	80100	5.7%	28098	31370	11.6%	28840	30490	5.7%	0.59	0.92	0.50
San Jose	233267	276400	18.5%	59377	83590	40.8%	64995	76450	17.6%	1.89	3.22	1.54
Sunnyvale	116253	134000	15.3%	83094	94790	14.1%	15526	19520	25.7%	1.56	1.11	2.24
SOLOLAND	90683	98200	8.3%	7922	8180	3.3%	17618	19850	12.7%	0.85	0.26	1.10
Benicia	4656	6500	39.6%	1066	1620	52.0%	1041	1350	29.7%	4.05	4.10	2.59
Vacaville	11206	12100	8.0%	2229	2070	-7.1%	2210	2570	16.3%	0.82	-0.56	1.42
Vallejo	34875	38000	9.0%	1090	1410	29.4%	7672	8530	11.2%	0.92	2.32	0.97
SONOMA	103356	118100	14.3%	20879	25290	21.1%	26050	31030	19.1%	1.46	1.67	1.67
Petaluma	10499	12900	22.9%	2516	3400	35.1%	2105	2860	35.9%	2.34	2.77	3.12
Rohnert Park	5280	7300	38.3%	728	1740	139.0%	1969	2500	27.0%	3.92	10.96	2.35
Santa Rosa	55926	63300	13.2%	10741	12590	17.2%	13756	16030	16.5%	1.35	1.36	1.44
SAN FRANCISCO SMSA	1604886	1712500	6.7%	291458	298600	2.5%	477062	521420	9.3%	0.69	0.19	0.81
SF-DAK-SAN JOSE SCSA	2533065	2780500	9.8%	611517	689050	12.7%	709612	791060	11.5%			

* Includes wholesale as well as manufacturing employment

** Includes Marin City as well as Sausalito

TABLE 6: MEDIAN HOUSING VALUE IN SELECTED BAY AREA COMMUNITIES 1970-1980-1985

	1970	1980	1984E	INDEX		
				Local value 1970	Local value as % of 1980	SMSA value 1984
ALAMEDA	\$23,700	\$84,900	\$111,092	88.1%	85.8%	87.8%
Livermore	\$23,400	\$86,100	\$110,363	87.0%	87.0%	87.2%
Pleasanton	\$31,200	\$114,000	\$146,088	116.0%	115.2%	115.5%
CONTRA COSTA	\$25,700	\$94,300	\$123,392	95.5%	95.3%	97.5%
Concord	\$26,300	\$90,900	\$130,473	97.8%	91.8%	103.1%
Martinez	\$24,500	\$96,800	\$115,458	91.1%	97.8%	91.3%
Orinda	\$46,600	\$178,100	\$234,190	173.2%	179.9%	185.1%
Pleasant Hill	\$25,900	\$93,000	\$133,487	96.3%	93.9%	105.5%
San Ramon	\$30,800	\$123,400	\$177,122	114.5%	124.6%	140.0%
Walnut Creek	\$37,000	\$136,200	\$195,494	137.5%	137.6%	154.5%
MARIN	\$33,900	\$151,000	\$175,477	126.0%	152.5%	138.7%
Corte Madera	\$31,900	\$142,000	\$150,859	118.6%	143.4%	119.3%
Novato	\$28,800	\$130,200	\$151,376	107.1%	131.5%	119.7%
San Rafael	\$38,000	\$148,500	\$157,765	141.3%	150.0%	124.7%
Sausalito	\$48,300	\$200,000+	\$225,000+	179.6%	>200%	>175%
Tiburon	\$50,000+	\$200,000+	\$225,000+	>185%	>200%	>175%
NAPA	\$21,100	\$78,600	\$99,414	78.4%	79.4%	78.6%
SAN FRANCISCO	\$28,100	\$103,900	\$130,301	104.5%	104.9%	103.0%
SAN MATEO	\$30,400	\$121,300	\$146,135	113.0%	122.5%	115.5%
Foster City	\$40,900	\$178,900	\$215,528	152.0%	180.7%	170.4%
Redwood City	\$29,400	\$122,300	\$147,340	109.3%	123.5%	116.5%
San Mateo	\$31,100	\$123,000	\$148,183	115.6%	124.2%	117.1%
South San Francisco	\$26,100	\$98,400	\$115,491	97.0%	99.4%	91.3%
SANTA CLARA	\$27,300	\$107,700	\$159,364	101.5%	108.8%	126.0%
Cupertino	\$34,100	\$144,100	\$213,226	126.8%	145.6%	168.6%
Morgan Hill	\$23,200	\$119,500	\$161,565	86.2%	120.7%	127.7%
Mountain View	\$28,900	\$121,200	\$154,144	107.4%	122.4%	121.9%
Palo Alto	\$33,900	\$149,900	\$190,645	126.0%	151.4%	150.7%
San Jose	\$25,400	\$98,100	\$125,514	94.4%	99.1%	99.2%
Sunnyvale	\$29,200	\$120,700	\$160,568	108.6%	121.9%	126.9%
SONOMA	\$20,900	\$87,600	\$105,609	77.7%	88.5%	83.5%
Petaluma	\$20,600	\$89,600	\$108,020	76.6%	90.5%	85.4%
Rohnert Park	\$19,500	\$84,600	\$101,993	72.5%	85.5%	80.6%
Santa Rosa	\$22,200	\$87,000	\$104,886	82.5%	87.9%	82.9%
SOLANO	\$18,800	\$66,700	\$84,363	69.9%	67.4%	66.7%
Benicia	\$17,300	\$92,800	\$114,975	64.3%	93.7%	90.9%
Vacaville	\$19,300	\$69,300	\$87,651	71.7%	70.0%	69.3%
Vallejo	\$18,200	\$61,200	\$75,824	67.7%	61.8%	59.9%
SAN FRANCISCO SMSA	\$26,900	\$99,000	\$126,497			

SOURCE: 1970 Census of Housing, California, Vol. 1, part 6, Table 1;
 1980 Census, General Housing Characteristics, California, Table 1;
 Northern California Real Estate Report, Market Trend--October 1984,
 Real Estate Research Council of Northern California.

E 1984 estimates are made using housing appreciation indices derived from
 figures gathered by the Real Estate Research Council of Northern California.

1980 in places like Concord and Pleasant Hill had moved above the SMSA median by 1984.

C. Labor Force Characteristics

Earlier research has demonstrated that a major reason for the movement of firms to the suburbs is the perceived labor force advantage. In particular, firms are looking for greater labor force availability (either through reduced commutes or through capturing secondary earners in the family who will work only if jobs are close to home) and an educated workforce.⁷ The suburban communities studied here split into two types. In the longer-established suburbs (those showing the most concern about nonresidential growth) almost all communities show greater than average shares of high school graduates and many have very high levels of college graduates. The newer suburban counties (Napa, Solano and Sonoma) have close to or below average shares of highschool graduates and relatively few with postsecondary education.

Female labor force participation rates in the east and south Bay counties indicate one of the "hidden" problems that may be leading to very strong responses over nonresidential building. In 1970, many cities in Santa Clara and San Mateo counties already had female labor force participation rates substantially above the average for the San Francisco-Oakland SMSA, while the East Bay suburbs were perceived as having a female population that might work if jobs were closer. By 1980, the Contra Costa and Alameda County cities in this study had joined the South Bay with very high male and female participation rates, contrasting to relatively low rates in Napa, Solano and Sonoma County towns

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(see Table 7). As more women are absorbed into the labor force in this way, new employers must draw their workforce from a wider commuting range.

D. Income and Employment

These subregional variations also appear in income and unemployment figures. High incomes and low unemployment characterize the East and South Bay growth response communities, while the North Bay counties demonstrate higher than average unemployment and more moderate incomes (see Table 8). Marin County, which has had the strongest county-wide limitations on growth, had a median income level 20 percent above average in 1980, while the unemployment rate was only about two thirds the regionwide rate. Napa, Sonoma and Solano counties had median incomes ranging from 9 to 14 percent below the regionwide median and unemployment rates up to 58 percent above the regionwide average.

E. Distinguishing Among Growth Response Suburbs

The descriptive statistics presented here point to some general characteristics of suburban growth in the San Francisco Bay Area that appear to be relevant to where and how growth management responses are occurring. These include the stage of growth of the community, the amount of recent or anticipated nonresidential growth, accompanying changes in employment, and general socioeconomic conditions.

1. Stage of Growth--Three different types of suburbs can be distinguished within the San Francisco Bay Area. Older suburbs with a history of both residential and nonresidential growth had

TABLE 7: LABOR FORCE PARTICIPATION AND EDUCATIONAL ATTAINMENTS IN SELECTED BAY AREA COMMUNITIES

County/City	Labor Force Participation Rates						Educational Characteristics, 1980			
	Male			Female			% high school graduates	INDEX	% 4 yrs college or more	INDEX
	1970	1980	change in % points	1970	1980	change in % points				
ALAMEDA	77.3	64.7	-12.6	43.5	54.7	11.2	76.0	0.97	22.3	0.89
Livermore	85.9	71.1	-14.8	36.2	57.1	20.9	84.2	1.07	22.6	0.90
Pleasanton	87.7	72.8	-14.9	36.4	59.4	23.0	87.8	1.12	25.5	1.02
CONTRA COSTA	80.5	65.2	-15.3	40.0	52.9	12.9	81.7	1.04	25.5	1.02
Concord	86.2	82.6	-3.6	43.5	58.2	14.7	84.8	1.08	21.4	0.86
Martinez	74.5	78.9	4.4	40.4	58.4	18.0	84.3	1.07	20.5	0.82
Orinda	78.0	81.7	3.7	33.4	51.2	17.8	96.5	1.23	59.3	2.37
Pleasant Hill	84.1	83.3	-0.8	42.8	58.0	15.2	84.9	1.08	25.5	1.02
San Ramon	89.8	89.9	0.1	38.9	61.4	22.5	92.1	1.17	30.3	1.21
Walnut Creek	75.0	75.7	0.7	31.5	45.6	14.1	91.3	1.16	37.5	1.50
MARIN	77.7	79.0	1.3	42.6	59.0	16.4	89.9	1.14	38.3	1.53
Corte Madera	85.0	82.8	-2.2	44.9	59.9	15.0	89.0	1.13	34.7	1.39
Novato	87.1	83.3	-3.8	39.5	58.8	19.3	89.1	1.13	27.3	1.09
San Rafael	83.0	79.6	-3.4	42.7	58.4	15.7	88.2	1.12	33.2	1.33
Sausalito	85.0	86.0	1	62.4	72.9	10.5	96.0	1.22	55.8	2.23
Tiburon	84.8	86.0	1.2	40.3	50.1	9.8	94.6	1.20	57.0	2.28
NAPA	68.0	68.4	0.4	38.7	48.5	9.8	75.4	0.96	17.8	0.71
SAN FRANCISCO	73.1	71.5	-1.6	50.4	56.5	6.1	74.0	0.94	28.2	1.13
SAN MATEO	81.9	80.5	-1.4	46.4	59.3	12.9	81.6	1.04	25.5	1.02
Foster City	89.5	89.5	0	43.6	70.4	26.8	93.5	1.19	36.6	1.46
Redwood City	81.8	80.0	-1.8	49.0	59.9	10.9	76.8	0.98	18.6	0.74
San Mateo	81.6	80.3	-1.3	46.0	57.2	11.2	82.5	1.05	24.5	0.98
South San Francisco	84.2	81.1	-3.1	47.1	62.0	14.9	73.3	0.93	14.3	0.57
SANTA CLARA	80.9	82.2	1.3	43.5	59.7	16.2	79.5	1.01	26.4	1.06
Cupertino	87.2	85.2	-2	42.3	63.9	21.6	91.2	1.16	39.1	1.56
Morgan Hill	74.1	83.8	9.7	35.3	54.1	18.8	77.6	0.99	21.8	0.87
Mountain View	86.0	84.8	-1.2	58.3	65.9	7.6	83.7	1.06	31.0	1.24
Palo Alto	75.0	77.1	2.1	47.2	60.4	13.2	91.3	1.16	54.0	2.16
San Jose	81.0	82.6	1.6	41.6	60.1	18.5	76.4	0.97	21.1	0.84
Sunnyvale	86.1	85.2	-0.9	47.0	63.8	16.8	83.1	1.06	26.6	1.06
SONOMA	69.0	73.9	4.9	35.5	49.0	13.5	77.6	0.99	19.3	0.77
Petaluma	79.8	80.8	1	37.8	53.8	16.0	77.4	0.98	16.2	0.65
Rohnert Park	74.0	81.3	7.3	39.9	53.9	14.0	81.5	1.04	17.3	0.69
Santa Rosa	70.7	72.4	1.7	39.5	48.9	9.4	81.1	1.03	22.0	0.88
SOLOANO	79.7	77.5	-2.2	38.4	51.5	13.1	76.8	0.98	13.7	0.55
Benicia	84.6	82.4	-2.2	36.3	54.8	18.5	83.0	1.06	19.9	0.80
Vacaville	60.4	72.0	11.6	40.1	52.6	12.5	79.3	1.01	16.0	0.64
Vallejo	78.9	73.9	-5	39.7	51.1	11.4	72.9	0.93	12.5	0.50
SAN FRANCISCO SMSA	77.1	76.3	-0.8	45.1	55.9	10.8	78.6	1.00	26.0	1.04
SF-DAK-SAN JOSE SCSA	77.9	77.5	-0.4	44.0	56.1	12.1	78.6		25.0	

Source: U.S. Bureau of the Census, Census of Population, 1970 and 1980.

TABLE 8: MEDIAN INCOME AND UNEMPLOYMENT RATES, 1980
SELECTED BAY AREA COMMUNITIES

COUNTIES/Cities	MEDIAN INCOME, 1980 (Families)		UNEMPLOYMENT, 1980	
	Total	Ratio: Place/SCSA	Percent Unemployed	Ratio: Place/SCSA
ALAMEDA	\$22,863	0.92	6.9	1.25
Livermore	\$26,664	1.08	4.6	0.84
Pleasanton	\$30,830	1.25	3.7	0.67
CONTRA COSTA	\$26,510	1.07	5.8	1.05
Concord	\$25,648	1.04	5.3	0.96
Martinez	\$27,310	1.10	5.5	1.00
Orinda	\$41,481	1.68	3.1	0.56
Pleasant Hill	\$23,205	0.94	4.5	0.82
San Ramon	\$32,796	1.33	4.0	0.73
Walnut Creek	\$32,317	1.31	3.9	0.71
MARIN	\$29,721	1.20	3.9	0.71
Corte Madera	\$27,573	1.11	3.9	0.71
Novato	\$27,847	1.13	4.1	0.75
San Rafael	\$28,814	1.17	3.9	0.71
Sausalito	\$31,823	1.29	3.9	0.71
Tiburon	\$35,334	1.43	3.7	0.67
NAPA	\$22,426	0.91	5.5	1.00
SAN FRANCISCO	\$20,911	0.85	6.1	1.11
SAN MATEO	\$27,279	1.10	3.5	0.64
Foster City	\$33,353	1.35	2.3	0.42
Redwood City	\$24,794	1.00	3.0	0.55
San Mateo	\$26,850	1.09	2.9	0.53
South San Francisco	\$24,947	1.01	4.0	0.73
SANTA CLARA	\$26,659	1.08	4.5	0.82
Cupertino	\$33,249	1.34	2.4	0.44
Morgan Hill	\$26,200	1.06	4.4	0.80
Mountain View	\$23,324	0.94	3.1	0.56
Palo Alto	\$31,796	1.29	2.7	0.49
San Jose	\$25,598	1.04	5.3	0.96
Sunnyvale	\$27,270	1.10	3.5	0.64
SOLANO	\$21,606	0.87	8.7	1.58
Benicia	\$26,362	1.07	4.9	0.89
Vacaville	\$22,930	0.93	10.3	1.87
Vallejo	\$20,506	0.83	6.8	1.24
SONOMA	\$21,269	0.86	7.0	1.27
Petaluma	\$24,227	0.98	4.7	0.85
Rohnert Park	\$21,105	0.85	7.8	1.42
Santa Rosa	\$21,191	0.86	6.3	1.15
SAN FRANCISCO SMSA	\$24,648	1.00	5.6	1.02
SF-OAK-SAN JOSE SCSA	\$24,731		5.5	

Source: Computed from 1980 Census of Population, General Social and Economic Characteristics, California, Table 57.

fewer open spaces for expansion by 1980, and new construction had a smaller relative effect (in terms of percentage change in square footage). These older mixed-use suburbs, such as San Mateo and South San Francisco, were likely to encounter opposition over new directions of growth (i.e., upwards in redeveloping downtowns or outwards into previously preserved open space) rather than the amount of new growth. Established residential suburbs such as Concord and Pleasant Hill, with newly expanding employment bases, are a second type of Bay Area suburb, showing more recent population growth spurts than many of the established mixed-use suburbs. Employment growth in these areas is leading to a major shift in community style, including increases in the number of jobs per person, the development of new suburban employment centers, and increased traffic using residential streets as throughways to freeways and new job centers. As residents observe growing signs of urbanization, they are likely to seek ways of preserving the community's residential suburban atmosphere.

The youngest suburbs in the San Francisco Bay Area are the smaller towns in rural counties on the fringe of the metropolitan region that have been drawn into the commuting net of San Francisco and Oakland with recent residential development. Nonresidential development continues at a slow to moderate level in these places, and most growth concerns center on the conflicts between new residents and old or between residents and agricultural activity, rather than with office or industrial employers. However, unsuccessful battles against expanding industrial parks in Petaluma, Rohnert Park and Santa Rosa in the

early 1980s indicate an underlying concern with growth among a subset of the population that goes well beyond new residential developments.

2. The Level and Form of Nonresidential Growth--Not surprisingly, recent and anticipated nonresidential growth is a key factor distinguishing the communities described here. This of course in part reflects the initial selection bias (drawing from communities with large increases in nonresidential construction), but building data also illustrate the shift in focus from previous decades in these communities. It is not only the amount of new growth but the contrast between previous low rise, local serving developments and new multi-story regional facilities that draw many suburban residents into conflicts over the direction of community growth.

3. The Impacts--Changing Community Characteristics--A less universal but still important characteristic of communities wishing to manage nonresidential growth is the rapid increase of jobs, especially in office-related activities. In general, jobs are being spread more evenly throughout the metropolitan region. The contrast between a residential style of life and the demands of rapidly emerging job centers open up the question of to what extent suburban communities are willing to accomodate needs generated by regional job growth.

4. Socioeconomic Conditions--With some important exceptions (e.g. Solano County's urban containment measure) a healthy income and unemployment level are a common feature in communities considering strong growth control measures. Affluent communities

or communities close to full employment can afford to bypass the opportunities that may come with a new office or industrial park, while less affluent places continue to explore economic development measures to bring in further construction activity (e.g. some of the north county cities on this list and bay shore cities in Alameda and Contra Costa counties, not included in the study).

In addition to these four points, it is important to note that Northern California has a history of active environmental organizations supporting environmental protection beyond the boundaries of individual cities. Broad based movements have stopped county urban expansion in places where local interest groups have not emerged to oppose growth.

V. Shut the Door or Pay the Tab: A Typology of Responses

The preceding section hints at the range of community responses to nonresidential growth and the characteristics of communities considering strong or weak responses. This section describes these responses in much more detail, laying out a typology of nonresidential growth management measures that considers:

- o The problems that have led to growth management responses
- o The source of the response (community initiative v.s. some type of governmental action)
- o Types of measures proposed or instituted.

The responses are summarized in Table 9, which indicates how each of the communities surveyed fits in this broad typology.

TABLE 9: COMMUNITY RESPONSE TO NONRESIDENTIAL GROWTH IN SELECTED SUBURBAN AREAS

CITY	GROWTH PROBLEMS MENTIONED				HOW RESPONSE GENERATED				TYPES OF GROWTH MEASURES USED									
	traffic retail loss	jobs/housing balance	changing character	single project quality	not seen as problem	referenda/initiative	city council/sup bd	votes on development	preexisting measures	height/intensity	yearly cap on sq ft	moratorium/project halted	in-lieu housing payments	TSM	other environmental mitigation fees	re-zoning	retail protection	other
ALAMEDA																		
Livermore					x								x					
Pleasanton	x	x		x		x												
CONTRA COSTA						x13												
Concord	x	x				x10												
Martinez		x				x11												
Orinda		x				x12												
Pleasant Hill		x																
San Ramon				x														
Walnut Creek	x	x																
MARTIN																		
Corte Madera	x																	
Hovato	x																	
San Rafael	x				x													
Sausalito	x																	
Tiburon	x																	
SAN MATEO																		
Foster City	x																	
Redwood City	x																	
San Mateo	x																	
South San Francisco	x																	
SANTA CLARA																		
Cupertino	x																	
Morgan Hill	x																	
Mountain View	x																	
Palo Alto	x																	
San Jose	x																	
Sunnyvale	x																	
SOLANO																		
Petaluma																		
Robert Park																		
Santa Rosa	x																	
SOLANO																		
Penicita																		
Vacaville																		
Vallejo																		

1 Height control initiative did not qualify for the ballot.
 2 Unincorporated area incorporated as the city of Orinda in July 1985.
 3 Traffic studies.
 4 Single project halted through vote (temporarily in Redwood City).
 5 Growth studies.
 6 Citizen group trying to place initiative on ballot to halt project.
 7 Under consideration/being developed.
 8 Attempts at regional traffic planning.
 9 Incremental sewer expansions, plant siting ordinances.
 10 Failed in March 1986.
 11 6-month moratorium in 1980.
 12 Urban containment policy.
 13 Countywide planning measures being developed.

A. The Problem With Growth--Traffic, Views, and Other Changes

Communities that look towards nonresidential growth management are generally responding to the urbanization of a previously suburban residential environment. The strongest indications of this process are intensified traffic congestion and accompanying downtown parking problems. Virtually all of the older mixed-use suburbs and the established residential suburbs pointed to traffic as a major factor generating growth control responses. Of the younger suburban counties, only Santa Rosa (an established county seat) identified traffic as a growth related problem.

Closely connected with changing traffic patterns are visual signs of the changing character of the community. High rise development in an area that previously had only "garden office" buildings can cause a sharp response from voters even if previous low rise projects had caused similar levels of employment growth. The perception of high rises as a problem may result from the impression that the amount of employment growth is directly related to the number of stories (often not the case) or from the impacts on views and the city skyline. "Highrise" buildings (which are often only 6 to 10 stories) also can be seen as a symbol of urbanization and of the loss of a suburban quality of life. Even buildings of moderate height may become an issue in growth control battles when they obstruct views or affect recognized natural features.

Other issues receive less widespread attention among cities but are very important in a smaller number of cases. Where

questions of growth impacts and the pace of growth focus specifically on a downtown area, the effects on local retail businesses are often at issue. Downtown office development, rather than increasing retail activity, is sometimes perceived by local merchants or residents as displacing retail sales and firms, through office uses outbidding retailers for space and discouraging shoppers who cannot find a place to park. Tied to loss of retail activity is the loss of city sales-tax revenues.

Apart from retail sales-tax revenues, few communities mentioned the fiscal effects of growth as a concern. However, these effects were brought out in conversations with leaders of growth control organizations in Walnut Creek and Concord, who felt that the monetary costs imposed by new building were far greater than the expected revenues they would generate. In a Proposition 13 environment, the process for increasing revenues to pay for new infrastructure and service needs is cumbersome, and current residents are unlikely to vote for the new taxes or fees necessary to increase funding if they perceive these needs as resulting from outside development pressures.

The jobs/housing balance issue is of major concern from a regionwide perspective and is brought out by some of the communities concerned with managing the pace of growth. These communities generally have strong industrial bases and are concerned with the ability of housing to keep up with additional industrial and office growth. Nonresidential growth may be moderated temporarily to allow housing to catch up.

In some cases, it is not one or more worsening problems that

leads communities to seek a halt to building but rather a particular project that is perceived as being out of scale with current levels of building or as potentially changing the character of the area in the future. Communities that do not have a set of measures that pace and scale the amount of building may find a major project halted through the initiative process or through a "no" vote on a general plan amendment. In the past 18 months, Bay Area voters have defeated two general plan amendments that would have allowed new towns on the urban fringe--the Manzanita development in Solano County and the Las Positas development in Alameda County.

Finally, some cities are concerned with the shifting regional balance that is changing exclusive residential communities into regional employment centers. This was a major concern of voters and city officials in the city of Sausalito, a small tourism-based city in Marin County that receives visitors regionwide on weekends and holidays, but only recently has begun to experience incommuting of office workers during weekday commute hours. Similar concerns touched the town of Orinda, which incorporated in July 1985, seeking more control over the development process. While not expressed directly by other communities, growth spillover within the region is an issue for many suburban places. Traffic patterns for example, are often generated by regionwide pressure on the city's street system.

B. Who Responds--Citizens, Cities, and Developers

The most highly publicized cases of nonresidential growth management are citizen-sponsored ballot initiatives. In fact, there is a much wider variety of options available to a

community, and many growth management techniques currently in place have evolved through planning agency activity, city council responses to perceived problems or citizen petition, and negotiations between builders and planners over large-scale projects.

Citizen response initiatives tend to be single issue oriented. They may approach a single aspect of the perceived problems (e.g. high rises, measured traffic levels), and propose a blanket solution for an entire area (e.g. no building over 4 stories without a majority vote of residents). They generally evolve in an adversarial atmosphere, with little opportunity for negotiation on the expected outcomes of the measure. However, in cases where the initiative in question is a second or third effort to address growth issues, the authors may incorporate features that they feel will deflect some of their opponents' criticisms. For example, a Walnut Creek initiative passed in November 1985 used traffic levels to restrict all new buildings above 10,000 square feet, but exempts hospitals and other health, safety or general welfare facilities for the public as well as cultural and recreational facilities and some types of housing.

Citizen opposition to building trends can come to the attention of the city government long before an initiative is placed on the ballot. Concerns are likely to be voiced in planning commission hearings and council meetings, through petitions as well as individual speakers. In addition, the general planning process in many cities allows for substantial citizen involvement at several different stages.

Governing bodies may also actively seek citizen input before planning amendments are proposed. Board of supervisor members in Contra Costa County and the city councils of Walnut Creek and Concord have commissioned surveys on attitudes towards growth. These surveys focus on issues such as traffic levels, building heights, and willingness to pay for improved infrastructure.

Measures to regulate growth are frequently passed by councils or boards of supervisors to become planning department policy. Height limits, traffic management strategies, and various mitigation fees are most frequently put in place through regulating and governing bodies rather than through the initiative process. When building levels become more controversial, a city council may anticipate citizen action by enacting a temporary moratorium or square footage limit, although such action often comes too late to deflect a far more restrictive ballot measure.

A number of cities are using downtown plans as a focussed context for addressing some of the most pressing growth concerns. Walnut Creek's new plan, for example, decreases height limits from earlier levels in major portions of downtown.

On occasion, a city or county may put a measure on the ballot that becomes a growth issue. This happens, for example, when a major new project requires a general plan amendment, which must go to the voters. In 1984, Alameda County put a general plan amendment on the ballot to allow the construction of the "Las Positas" project near Livermore. The project, a new town with housing, office, industrial, and retail space, was defeated, demonstrating a countywide concern with the impacts of growth on

the urban fringe.

An additional trend that has emerged strongly in the past decade is the tendency for major developers to play an increasingly direct role in the planning process, in anticipation of growth-related issues. The builder's interaction with the planning department no longer centers only on applications for variances, ascertaining permitted uses, and planning commission hearings. Builders of mixed use projects often do their own planning studies on facilities needed, interaction among uses, and long-term growth in demand, and may include at least a part of required infrastructure in their building budget. In addition, in some cases several builders in a city have become jointly involved in planning for and construction of transportation facilities (e.g. joint funding of a freeway interchange in Pleasanton). Finally, because some cities use development agreements as a means of managing large-scale projects, some developers become involved in extensive planning and negotiation with the city as part of the permit approval process.

C. Growth Management Measures

The most frequently used growth control measures in suburban cities are height and building intensity controls (e.g. floor-area ratios), transportation system management programs, and mitigation fees. Building moratoria, rezoning to different uses, downzoning of existing densities, and zoning ordinance measures to protect retail have also occurred in several suburban Bay Area cities. Other cities have just begun studies or planning efforts on growth-related problems, and a few isolated cases involve

additional measures such as office "metering" and urban containment, which are worth some attention as strategies that may be used more widely in the future.

1. Height Controls

Most cities have downtown height controls, but many do not view these as growth management measures, because the envelope of growth described by the height limits is far above actual building activity. A 6-story height limit is typical for many suburban downtown areas, but as one city planner noted, "We haven't had anything built over 2 stories in a long time." In the suburban Bay Area, height limits have come into consideration as growth control measures in response to construction over 6 stories in places that are beginning to experience problems associated with urbanization, such as traffic congestion.

2. The Floor-Area Ratio and Parking Requirements

Floor-Area Ratios (FARs) and parking spaces per square foot are also used as means of controlling the intensity of use of a lot. Reduction of FARs is used to affect both total square footage and the perceived quality of the space built. Typically office space requires 3 to 4 parking spaces per 1000 square feet of space. Some consideration is being given to reducing the required spaces in exchange for developer-sponsored commuting programs. This approach has not been encouraged by many builders, however, because of concerns with its effect on their ability to obtain financing or to lease space.

3. Transportation System Management Programs

Under encouragement from the Metropolitan Transportation Commission, a regionwide transportation management organization,

a number of Bay Area suburbs are requiring transportation system management (TSM) programs as a way of reducing growth impacts. TSM programs are generally expected to reduce peak hour road use demand. The requirement is made of the developer or of major employers, often is written into the permit or development agreement, and may take the form of either a specific goal for total trips or the requirement to take certain steps that can be expected to reduce peak hour traffic flows. Builders have been responsive to TSMs as a means of dealing with the traffic issue in a way that will make the development more attractive to potential tenants, but show a preference for a flexible set of options rather than specific commuting goals. From a transportation planning perspective, some complications arise with this approach because it often places management responsibility on the building owner rather than on employers (who could more directly influence the outcome) and its effectiveness is still unproven.

4. Mitigation Fees

Since Proposition 13 severely curtailed the revenue generating power of property taxes, development fees have been a major source of funds to cover the costs of new growth. Sewer and drainage and community facility fees have been common for housing as well as nonresidential developments. However, the expansion of nonresidential building has led to a different mitigation shopping list in many communities. Traffic mitigation fees are the most frequently imposed fee directed towards nonresidential growth management. Fees vary widely in how they are imposed and

at what level. Some cities negotiate fees on a case-by-case basis, as part of a larger transportation management package, while others have a set percentage or dollar amount per square foot.

Less common, but gaining in importance are housing and childcare mitigation fees, in response to the lack of affordable housing close to some suburban employment nodes and to the increasing numbers of working mothers with young children. Following the lead of San Francisco, several suburban communities require or are considering some provision for low to moderate income housing as a part of development, either through land set-asides, construction, or in-lieu payments. Two of the communities in the survey are also experimenting with encouraging childcare facilities. Palo Alto has a housing mitigation fee that can be set aside if childcare facilities are provided by the builder, while Concord has instituted a 0.5 percent childcare mitigation fee (along with fees for TSM, off-site improvements, and public art).

Mitigation fees are among the most predictable forms of growth management faced by the builder. Interviews with Bay Area builders indicate that development fees are so common in California that they have not been of great importance in deciding where to build (at least within the state), except in cases where fees are viewed as exorbitantly high and far out of scale with costs in neighboring areas.

5. Moratoria

When instituted by city government building moratoria have generally been used as temporary measures to give the city or county a chance to catch up in a rapidly changing environment. When achieved through the initiative process, moratoria may be much further reaching, designed to halt growth on a longer term basis. The use of a moratorium can be a sign that a community is shifting its attitude towards growth, although frequently a brief building hiatus will be followed by continued granting of building permits, perhaps under more restrictive fees or land use controls. Concord and Sunnyvale are among the communities that have used moratoria temporarily, while specific planning problems or policies were under consideration. When a moratorium is in place more permanently, as appears to be the case for the city of Walnut Creek, clearly it stops the potential for future building and in many cases may raise the value of existing projects.

6. Retail Protection and Other Zoning Changes

Zoning changes can be used to shift the focus of building from office and industrial to retail and residential. A common example of this in communities that have experienced substantial office or industrial growth is the use of zoning to protect ground floor retail operations. The city of Mountain View, for example, requires that downtown buildings reserve the ground floor for "active" retail. Pressure for such measures may come either from downtown retail associations and chambers of commerce or from the city council (reflecting a concern with protecting sales tax revenues).

7. Office Metering

Office metering is another approach introduced to the Bay Area originally by the city of San Francisco. It involves setting a square footage limit per year on building permits. Similar strategies have been used for housing growth control measures regionally and nationwide. Within the suburban Bay Area only the city of Walnut Creek was considering such an approach during the study period, proposing what would have been a major change in the amount of square footage built yearly in its downtown (the moratorium mentioned above overrode the metering proposal). In general, metering is viewed with some trepidation by the development community because it greatly reduces flexibility in timing new construction to financing availability and market demand.

8. Urban Containment

Three Bay Area counties, Santa Clara, Marin and Solano, and the city of Vacaville have urban containment strategies that effect both residential and nonresidential building. Santa Clara County restricts new building to a single area bordering existing urban places. Marin County has downzoned county lands surrounding urban development, identifying an "urban corridor" within which future growth will be contained. Because of the amount of land currently available within the corridor, this is a measure that directs where growth occurs countywide, rather than the total level. The Solano County initiative that defeated the Manzanita new town also reestablished earlier general plan protections of agricultural areas. Vacaville's program is designed to minimize costs of urban service extensions by

restricting such services as sewer hookups to land parcels bordering existing urban development.

9. Plant Siting Controls

One other growth related measure relates to a concern over who are the beneficiaries of new growth. A Vacaville ordinance limits tax-exempt financing available within the redevelopment area to firms that agree to develop affirmative action plans, to give notice of the planned move to collective bargaining units, and to provide advance notice in the event of plant closure in the future. The measure was in direct response to the siting of a "runaway" plant from Oakland that did not offer transfer options to its unionized employees. The purpose of this type of ordinance is to ensure the stability of local jobs. This type of measure affects new employers rather than developers, but it may indirectly affect the amount of space built by affecting demand for space.

10. Emerging Regional Responses

In recent months some cities and counties have begun to look beyond their own jurisdictional boundaries to measures that would address intercity growth concerns or that would tie development in unincorporated areas more closely to regulations in neighboring cities. As a series of growth management measures are proposed for Contra Costa County cities, both citizen groups and the County Board of Supervisors are considering proposals that would tie new growth to service and infrastructure availability and would link building contiguous to incorporated cities more closely to city regulations. Both Contra Costa

and Santa Clara counties are also exploring multi-city traffic management measures.

D. Fitting the Solution to the Problem

Although a few recent growth control actions have been quite severe, the great majority of current nonresidential growth controls make quite modest changes from the amount of building that would have been possible based on regulations existing ten years ago. However, the problems that have been cited are widespread, and may presage greater growth control activity in the future. Therefore, it is useful in reviewing the range of growth measures currently in use to consider how effective they are in addressing perceived problems.

The major problems that appear to be generating growth management responses are traffic congestion, the loss of views, the changing image of the city (from residential suburb to employment center), and the regionalization of the city (jobs for people outside of City X). While each of these problems has a local manifestation, its sources are likely to include a major regional element as well.

Until recently the mechanisms used to combat these problems have been entirely local in focus. In addition, many measures are reactive rather than anticipatory, being imposed after major changes have already occurred. Height limits and moratoria can deal with an immediate problem of protecting views, but they cannot restore views already obscured by construction and cannot affect the policy of a neighboring municipality. Unless highly anticipatory these measures are likely to be largely ineffective in dealing with current traffic problems and may address only a

small percentage of future traffic problems.

The suburban traffic issue is regional in scope as studies of Walnut Creek traffic flow and Pleasanton commute patterns demonstrate.⁹ Streets in suburban downtowns frequently serve as thoroughfares for local residents or residents of neighboring communities travelling to and from freeway exchanges. In response to citizen initiatives city councils have argued that a restrictive height limit or moratorium may leave the city without the increased revenue sources needed for coping with an already serious problem.

TSM programs and impact fees tend to attack the problems such as traffic congestion and jobs/housing balance more directly. Funds are set aside and policies enacted to increase street and housing access and improve the flow of traffic. If well enough funded these measures can cope with the impacts of the regional problem as well, at least to some degree. For example, widening a major artery connecting neighboring housing developments to the freeway off- and on-ramp near downtown could divert the regional flow of traffic away from downtown streets. However, a city like Walnut Creek could find itself (and local developers) bearing the transportation cost burden for a much larger segment of the county, while local retailers might find that the freeway improvements divert potential shoppers as well as commuters to other parts of the region. Builders, although they have frequently agreed to contribute substantial amounts to street improvements, challenge the fairness of paying for new facilities that will be used by a much larger population.

Measures that take a multijurisdictional approach to growth management are only in the initial stages of development. They address only a subset of the growth concerns addressed here (primarily traffic and views) and do not yet address major regional concerns on potential locations for new job growth.

This discussion is intended to point to some of the complexities of the growth management process, particularly with respect to nonresidential growth, and the range of impacts that should be considered with these measures. Apart from the problem of coping with regional growth through local building controls, other concerns arise as individual localities begin to stop growth. There will be complex effects on public revenues and on employment growth, and individual property owners who will be unable to build planned projects may embark on lengthy legal battles with the city.

The remainder of this paper touches on some of these issues. A comparison of three cities in the suburban East Bay describes the range of problems, the regional transportation issues, and the range of measures used to address suburban growth problems in a more concrete context. The final section highlights the issue of employment growth in the region and the ways in which growth control measures may affect job increases.

10

VI. Three Communities Along the 680 Corridor

One of the major growth areas for new office development is the central part of Contra Costa County and the eastern part of Alameda County, connected by Highway 680, which runs from San Jose to Solano County. This area has 11 percent of the Bay

Area's office space and received 17 percent of construction between 1980 and 1985. Three of the most rapidly expanding employment centers, Walnut Creek and Concord in Contra Costa County, and Pleasanton in Alameda County, represent a range of different approaches to managing this growth, and illustrate possible future directions for growth management along the 680 corridor and in other suburban parts of the region.

Although all three communities are part of the recent boom in suburban office growth, their previous growth histories differ significantly. Concord, with over 100,000 people is the largest population center in Contra Costa County and experienced much of its population growth prior to 1970. Walnut Creek was also established as a population center in the 1950s and 1960s, but has received one third of its 60,000 people since 1970. Pleasanton, at 40,000 in 1985, is a much newer community, having more than doubled in size since 1970.

In addition to differing growth histories, the three communities vary considerably in age mix, occupational characteristics and income levels. Concord's population is relatively young, with a median age of 29.6 and only 13 percent in the 45 to 64 year old range. Walnut Creek has a median age of 39.3, with 22.5 percent between 45 and 64, and Pleasanton has a median age of 30.0, with 16 percent between 45 and 64. One fourth of Concord's workforce is in professional and managerial occupations, while Walnut Creek has over 40 percent of its workforce in professional and managerial categories, and Pleasanton has 31 percent in these occupations.

A. The Growth of Offices and Jobs

Earlier research looks in detail at the history of office growth along the 680 corridor.¹² In sum, office space along the 680 corridor grew from 0.8 million square feet in 1970 to about 5 million square feet in 1980 and 15.6 million square feet by fall of 1985. Office space has kept far ahead of demand, with vacancies jumping from 8.4 percent in 1980 to 21.6 percent in September 1985. Nevertheless, absorption is strong, averaging almost 1.5 million square feet per year, with over two million square feet absorbed in the first half of 1985. At an average of one job per 250 square feet, net occupancy increases indicate that approximately 6,000 jobs have located in the new office space since 1980, 20 percent of all new 680 corridor jobs.

Periods of office and job growth have varied considerably in the three case study communities described here. Walnut Creek expanded early as the financial center for central Contra Costa communities. The city's inventory of office space grew from 0.4 million square feet in 1970 to 2.3 million square feet in 1980 and 5.0 million square feet in 1985. Office buildings in downtown Walnut Creek have had heavy concentrations of tenants in the industry categories of finance, insurance, real estate, legal and business services, while a separate concentration of low rise buildings in the city (the Shadelands area) has attracted larger "back office" users, such as insurance claims processing offices.

Concord's commercial office growth began more slowly in the 1970s, with total square footage still below 1 million by 1980. Owner occupied space contributed significantly to Concord's early stages of office growth, with Chevron building about 700,000

square feet of space in Concord for its own staff between 1968 and 1982. Commercial office stock has increased to 2.0 million in 1985, with 0.7 million square feet of speculative space currently under construction in addition to 1 million square feet being added by the Bank of America, primarily for a computer center. Recent construction in Concord indicates not only the city's increasing share of the office market but also heralds a change in the tenant composition. As recently as January 1984 a survey of tenants in Concord buildings indicated that fully half of all tenants were in wholesale, retail and manufacturing operations, rather than the traditional "office-type" sectors. Buildings constructed since 1984 have been higher rise with more emphasis on quality of space, and office-type users have dominated the new tenant base (e.g. Wells Fargo Bank, Bank of America).

The Pleasanton/Dublin area is one of the youngest office nodes along the 680 Corridor. Office stock has grown from under half a million square feet in 1980 to over 3 million currently, with an additional 1.1 million under construction. Pleasanton space has been attractive particularly to back office users, such as AT&T, and to sales and training offices, although a portion of the space built has been intended more for "Class A" type users (i.e., smaller users with significant face-to-face contact with clients). Office growth in Pleasanton has been and will continue to be heavily influenced by one major development-the Hacienda Business Park. Co-developed by Prudential Development Group and Callahan Pentz Properties, the business park currently has 1.9

million square feet of office space and a small amount of R&D space. Total planned build out is 12 million square feet in 2005 (primarily office space).

B. Changing Environments: Jobs, Traffic and High Rises

ABAG estimates indicate that Walnut Creek has added 5,000 new jobs since 1980, Concord has added 6,000, and Pleasanton 4,800. Employment in all three places has grown much more rapidly than population. While regionwide the ratio of jobs to total population has stayed approximately stable over the past 5 years (at approximately 0.50), the jobs/population ratio has grown from 0.26 to 0.33 in Pleasanton, from 0.32 to 0.37 in Concord, and from 0.53 to 0.57 in Walnut Creek (see Table 10). Thus while Pleasanton and Concord are still primarily residential centers gaining employment, Walnut Creek's role as an employment node was already well established by 1980.

The 1980 census provides the most recent comprehensive data on commuting patterns in the Bay Area. The data are not current enough to capture the effects of new building on commuting in Pleasanton, but changing traffic trends are already clear for the Concord and Walnut Creek districts. Between 1970 and 1980, the total number of people working at jobs in the MTC traffic zone that includes Walnut Creek rose from about 26,000 to over 50,000 (see Table 11). In 1970, 45.4 percent of Walnut Creek zone workers were residents of that zone, while in 1980, this proportion had dropped to 39.5 percent. Not surprisingly, the largest increases in in-commuters came from neighboring suburban communities. The number of commuters from other 680 corridor communities into Walnut Creek more than doubled over the decade from 9,600 to

TABLE 10: RELATIVE EMPLOYMENT AND POPULATION IN SELECTED SUBURBAN PLACES, SAN FRANCISCO BAY AREA

COUNTY/CITY	POPULATION		EMPLOYMENT		INDEX (EMPLOYMENT/POPULATION)		INDEX DIFFERENCE (EP85-EP80)
	1980	1985	1980	1985	1980	1985	
ALAMEDA	1105379	1174800	511077	549700	0.46	0.47	0.01
Livermore	48349	52100	16726	19800	0.35	0.38	0.03
Pleasanton	35160	40750	9090	13900	0.26	0.34	0.08
CONTRA COSTA	656380	703400	204192	233200	0.31	0.33	0.02
Concord	103255	105200	33370	39500	0.32	0.38	0.05
Martinez	22582	27250	12348	14100	0.55	0.52	-0.03
Orinda*	17069	17300	3184	3300	0.19	0.19	.00
San Ramon	22356	25100	5329	9800	0.24	0.39	0.15
Walnut Creek	53643	58100	37513	42500	0.70	0.73	0.03
MARIN	222568	223200	77622	67800	0.35	0.39	0.04
Corte Madera	8074	8400	3143	3500	0.39	0.42	0.03
Novato	43916	44300	12817	16100	0.29	0.36	0.07
San Rafael	44700	44150	34736	40100	0.78	0.91	0.13
Sausalito	7338	7525	4069	4100	0.55	0.54	-0.01
NAPA	99199	102200	35870	40200	0.36	0.39	0.03
SAN FRANCISCO	678974	719200	552200	566800	0.81	0.79	-0.03
SAN MATEO	587329	606200	259795	275000	0.44	0.45	0.01
Foster City	23287	24450	5424	6100	0.23	0.25	0.02
Redwood City	54951	57300	31466	35400	0.57	0.62	0.05
San Mateo	77561	81900	43260	45100	0.56	0.55	-0.01
South San Francisco	49393	51700	38129	40500	0.77	0.78	0.01
SANTA CLARA	1295071	1376900	698270	811500	0.54	0.59	0.05
Cupertino	34015	37950	35239	41100	1.04	1.08	0.05
Morgan Hill	17060	19700	5572	7100	0.33	0.36	0.03
Mountain View	58655	61600	59279	63600	1.01	1.03	0.02
Palo Alto	55225	56200	75757	80100	1.37	1.43	0.05
San Jose	629442	696000	233267	276400	0.37	0.40	0.03
Sunnyvale	106618	111700	116253	134000	1.09	1.20	0.11
SQLAND	235203	269100	90683	98200	0.39	0.36	-0.02
Benicia	15376	20700	4656	6500	0.30	0.31	0.01
Vacaville	43367	49850	11206	12100	0.26	0.24	-0.02
Vallejo	80303	88900	34875	38000	0.43	0.43	-0.01
SONOMA	299681	330000	103356	118100	0.34	0.36	0.01
Petaluma	33834	37300	10499	12900	0.31	0.35	0.04
Rohnert Park	22965	28200	5280	7300	0.23	0.26	0.03
Santa Rosa	83320	94600	55926	63300	0.67	0.67	
SAN FRANCISCO SMSA	3250630	3426800	1604886	1712500	0.49	0.50	0.01

NOTE: Population figures differ here from other charts because ABAG data includes some unincorporated areas surrounding cities, if they are in the city's sphere of influence
 Source: Computed from data provided in ABAG, Projections 85.

TABLE 11: JOURNEY TO WORK PATTERNS FOR WALNUT CREEK, 1970 TO 1980

RESIDENCE DISTRICT	COMMUTERS		INCREASE	PERCENT INCREASE
	1970	1980	1970-80	

PERSONS EMPLOYED IN WALNUT CREEK DISTRICT				
San Francisco - 1	63	123	60	95.2%
San Francisco - 2	43	198	155	360.5%
San Francisco - 3	66	238	172	260.6%
San Francisco - 4	47	63	16	34.0%
North Peninsula	49	89	40	81.6%
Mid Peninsula	6	24	18	300.0%
South Peninsula	41	49	8	19.5%
Palo Alto/Los Altos	6	28	22	366.7%
Sunnyvale	9	14	5	55.6%
Saratoga/Los Gatos	34	39	5	14.7%
San Jose	19	13	-6	-31.6%
Milpetas	20	64	44	220.0%
Almaden	6	37	31	516.7%
Morgan Hill/Gilroy	8	14	6	75.0%
Pleasanton/Livermore	320	800	480	150.0%
Fremont	119	333	214	179.8%
Hayward/San Leandro	392	652	260	66.3%
Oakland	995	1713	718	72.2%
Berkeley	621	1059	438	70.5%
Richmond	669	1261	592	88.5%
Concord/P.H./Martinez	7877	14095	6218	78.9%
Walnut Creek	11869	20004	8135	68.5%
Danville/San Ramon	1077	3729	2652	246.2%
Antioch/East C. Costa	1142	4352	3210	281.1%
Vallejo/Benicia	312	876	564	180.8%
Fairfield/Vacaville	70	411	341	487.1%
Napa	73	93	20	27.4%
North Napa County	35	0	-35	-100.0%
Petaluma/Sonoma	13	136	123	946.2%
Sebastopol/Santa Rosa	11	0	-11	-100.0%
North Sonoma County	4	0	-4	-100.0%
Novato	22	33	11	50.0%
San Rafael/West Marin	33	35	2	6.1%
Mill Valley/S. Marin	49	42	-7	-14.3%
TOTAL	26120	50617	24497	93.8%
FROM OUTSIDE DISTRICT	14251	30613	16362	114.8%
% FROM OUTSIDE	54.6%	60.5%	66.8%	

PERSONS RESIDING IN WALNUT CREEK DISTRICT

ALL WORKING RESIDENTS	38981	61591	22610	58.0%
WORKING OUTSIDE DISTRICT	27112	41587	14475	53.4%
WORKING IN CONCORD	4918	7548	2630	53.5%
WORKING IN SAN FRANCISCO	5590	10667	5077	90.8%

Source: Computed from Metropolitan Transportation Commission, 1970 & 1980 Census Journey-To-Work, County-to-County & Superdistrict-to-Superdistrict Total Workers, Data Release #3, September 1984.

19,500, accounting for 60 percent of all work trips from outside of Walnut Creek. The census journey-to-work information indicates that commute trips through Walnut Creek from one suburban community to another also increased by about 150 percent in this period.

Between 1970 and 1980 people commuting to work places in the MTC Concord zone increased from about 45,000 to 65,000 (see Table 12). While in 1970 63.4 percent of Concord workers lived in Concord, by 1980 only 55.2 percent were Concord residents. Although the Concord commute district (which includes Martinez) still has a larger employment base than Walnut Creek, Walnut Creek received greater absolute and percent increases in commute trips into the city between 1970 and 1980.

With a tripling in the stock of office space between 1980 and 1985, and a total employment increase of 30,000, the shifts in commute patterns that can be observed for the 1970s have intensified. While peak hour traffic at the Caldecott Tunnel (the major route to San Francisco) increased by 20 percent between 1980 and 1984, peak traffic at many key I-680 corridor interchanges grew by over 50 percent. In downtown Walnut Creek, traffic congestion during peak commute hours has continued to increase, and a recent traffic study found that approximately one third of commute-hour vehicles passed through downtown without stopping, and that over one half of through trips are from people living outside the city limits.

For many citizens, the coinciding of increased traffic congestion with downtown highrises has made urbanization a major

TABLE 12: JOURNEY TO WORK PATTERNS FOR CONCORD--1970 to 1980

RESIDENCE DISTRICT	COMMUTING INTO CONCORD 1970	1980	INCREASE 1970-90	PERCENT INCREASE

PERSONS EMPLOYED IN CONCORD DISTRICT (INCLUDES PLEASANT HILL, MARTINEZ)				
San Francisco - 1	34	126	92	270.6%
San Francisco - 2	76	114	38	50.0%
San Francisco - 3	47	112	65	138.3%
San Francisco - 4	48	101	53	110.4%
North Peninsula	37	68	31	83.8%
Mid Peninsula	21	22	1	4.8%
South Peninsula	22	21	-1	-4.5%
Palo Alto/Los Altos	24	30	6	25.0%
Sunnyvale	45	27	-18	-40.0%
Saratoga/Los Gatos	21	13	-8	-38.1%
San Jose	41	16	-25	-61.0%
Milpetas	4	11	7	175.0%
Almaden	15	35	20	133.3%
Morgan Hill/Gilroy	0	0	0	NA
Pleasanton/Livermore	218	510	292	133.9%
Fremont	117	195	78	66.7%
Hayward/San Leandro	398	612	214	53.8%
Oakland	820	1101	281	34.3%
Berkeley	709	825	116	16.4%
Richmond	2005	2481	476	23.7%
Concord/P.H./Martinez	28724	36047	7323	25.5%
Walnut Creek	4918	7548	2630	53.5%
Danville/San Ramon	740	1907	1167	157.7%
Antioch/East C.Costa	4126	9160	5034	122.0%
Vallejo/Benicia	1449	2177	728	50.2%
Fairfield/Vacaville	213	1648	1435	673.7%
Napa	224	215	-9	-4.0%
North Napa County	109	27	-82	-75.2%
Petaluma/Sonoma	26	0	-26	-100.0%
Sebastopol/Santa Rosa	27	0	-27	-100.0%
North Sonoma County	7	0	-7	-100.0%
Novato	26	77	51	196.2%
San Rafael/West Marin	28	52	24	85.7%
Mill Valley/S. Marin	25	38	13	52.0%
TOTAL	45344	65316	19972	44.0%
FROM OUTSIDE DISTRICT	16620	29269	12649	76.1%
% FROM OUTSIDE	36.7%	44.8%	63.3%	

PERSONS RESIDING IN CONCORD DISTRICT				
TOTAL WORKING RESIDENTS	59906	85649	25743	43.0%
WORKING OUTSIDE CONCORD	31182	49602	18420	59.1%
WORK IN SAN FRANCISCO	5590	10667	5077	90.8%
WORK IN WALNUT CREEK	7877	14095	6218	78.9%

NA Not Applicable.

Source: Computed from Metropolitan Transportation Commission, 1970 & 1980 Census Journey-To-Work, County-to-County & Superdistrict-to-Superdistrict Total Workers, Data Release #3, September 1984.

issue. Communities that were previously perceived as residential and retail centers are visibly becoming employment nodes, and the problems of congestion and changing skylines are perceived much more readily than possible advantages of growth.

The three communities described here have experienced this growth in very different ways. Walnut Creek has the oldest and most intense building currently and is experiencing the most serious traffic congestion problems. Concord's growth, at least until the present, has generated fewer urban impacts because much of the new office growth has taken place in the redevelopment district, which intrudes less directly on existing residential and retail centers. Pleasanton's new office development has transformed the city from primarily a residential base to an important new employment node. One major development has dominated the city's office growth, with new buildings locating on the periphery of the city's residential and downtown areas, accompanied by major street and freeway improvements. This has changed the character of the town but has not yet led to the irritations due to changes in daily living patterns faced by Walnut Creek residents.

It is important to note that although incommuting has increased, a large number of employees in new office space come from the 680 corridor. Commuter surveys for the Hacienda Business Park in Pleasanton, the Shadelands Office Park in Walnut Creek, and the Concord Airport Plaza give evidence on where employees of 680 Corridor office tenants reside. Survey results indicate that the majority of employees are not from the local

city, but that 680 corridor jobs are largely filled by 680 corridor residents.

The Shadelands Office Park is the oldest of these three developments, having grown initially in the 1970s. Surveys were done of commuters in 1982 and 1984, with similar results for both years. Close to 60 percent of employees responding to the survey came from 680 corridor communities (between Martinez and Pleasanton), with about 14 percent from Walnut Creek. Northern Contra Costa County housed another ten percent of the commuters, and 20 percent came from North Bay and other East Bay towns.

Concord Airport Plaza is the most recently opened of the three projects, and its largest tenant, occupying more than half of the project's square footage, recently relocated from San Francisco. Not surprisingly, about 35 percent of commuters came from Bay Shore cities in the East Bay and from San Francisco, San Mateo and Santa Clara counties. Nevertheless, despite this recent move more than half of all commuters came from the city of Concord, other 680 corridor towns, or Concord's neighboring cities in northern Contra Costa County. Because of Concord's proximity to Solano County, North Bay cities contributed an additional 11 percent of the workforce.

Data from the Hacienda Business Park for 1984 and 1985 show a shift over time in where employees live, due to employee relocations and the hiring of local residents for replacement jobs. In 1984, one third of Hacienda Business Park employees reported being Tri-Valley residents (living from Pleasanton north to Danville or east to Livermore). By 1985, 44 percent of all Hacienda employees lived in this area, with one fifth living in

the city of Pleasanton.

Data from these three developments show the complexity of the choices that must be made regarding the location of jobs in the suburbs. While reverse commuting accounts for a share of the workforce in new buildings, a larger proportion of the workforce comes directly from the city where the development is located and neighboring towns. A great amount of interchange occurs among cities along the 680 corridor, with, for example, Concord residents commuting to Walnut Creek and vice versa. Any decisions about job growth along the 680 corridor may include important tradeoffs for residents who are also employees of locally expanding firms.

C. Anticipating and Responding to Growth

All three cities have planning departments that have been very active in managing the direction of growth. Under the growth pressures of the 1980s, each city has responded with its own menu of growth management measures.

Walnut Creek's experience has been the most battle-filled. Conflict has centered on downtown development, but citizen responses have encompassed the entire city and have gone far beyond control of office growth alone. The city's 10-year downtown plan written in 1975 set height limits of up to 10 stories and expressed the intention to live within the existing street system. The Bay Area Rapid Transit system (BART) was anticipated to absorb more of the commute traffic to the denser downtown areas than actually occurred. The city began "impact" management from this development more intensely in the 1980s,

with the institution of traffic mitigation fees (now at \$3 per square foot) as well as some voluntary TSM programs and housing set-asides, as negotiated during the permitting process. The most recently proposed downtown plan (released in 1986) anticipated somewhat reduced building levels compared to what would occur with no change from the 1975 core area plan (cutting new office development by about one fourth). Nevertheless, office stock would have been expected to increase by 2 million square feet of space beyond what is already in existence and under construction and retail space, housing, and hotel units are all higher under the latest draft plan.

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Citizen activity has developed in Walnut Creek in response to recent building levels and to the perception that traffic problems have resulted from this building. Three citizen sponsored initiatives qualified for the ballot in 1985. Measures A and B were voted on in March 1985. Measure A, which passed, placed a height limit freeze on all parcels of land in the city and set a maximum height limit of 6 stories throughout the city. Measure B, which failed, would have required that rezoning only occur with a yes vote by two thirds of those voting, and was directed against permitting second units in single family neighborhoods. Measure H, which passed in November, ties new construction permits to traffic levels at numerous intersections downtown and on Ygnacio Valley Road (a major road leading into the downtown core area). With some exceptions buildings or expansions over 10,000 square feet could occur only if traffic levels were at or below level D (85 percent of the intersections' theoretical capacity). The measure would effectively produce a

moratorium on all major nonresidential and residential projects in the city because of current traffic conditions, although a number of small scale projects are continuing.

As an alternative to Measure H, the city council placed two "advisory" measures on the November ballot, one proposing to build a freeway along one of the city's most congested routes and the other to set up a metering system for downtown growth. In council meetings metering for downtown buildings was discussed at the rate of 150,000 square feet annually, a level of about one third of recent growth. In November voters defeated the freeway measure and passed the metering measure, but passage of Measure H superceded the advisory measure. In addition, two growth control advocates won seats on the city council during the same election. Since November 1985 the new city council has examined options for "defensive" traffic planning, which would try to divert or meter traffic passing through Walnut Creek.¹⁷

The city of Concord has taken an active role in the planning and development of its central office area and BART station. The Central Concord Redevelopment Plan proposes a larger employment center than Walnut Creek's downtown plan and allows building heights up to 200 feet. Using redevelopment powers the city has been in a position to make street improvements, assemble property, and to selectively negotiate with private builders for special facilities and contributions. In early projects, requirements of developers were set on a case-by-case basis, with trade-offs bargained, such as adjusting mitigation fees in exchange for street improvements. More recently the city has

instituted two mitigation fees for builders -- a 0.5 percent "arts" fee and an 0.5 percent childcare fee -- and is considering an additional 0.5 percent fee for transportation system management.

Because Concord's building boom is more recent and because the day-to-day inconveniences from building are less, citizens have only recently begun using the initiative process in response to the city's changing skyline. Citing potential traffic impacts and the public revenue costs of redevelopment, Concord Citizens for Responsible Growth placed a height control initiative on the March 1986 ballot that would have limited all new construction to a maximum of 4 stories. The measure failed by a 13 percentage point margin. If passed, this measure would have produced a major change in the city's profile and in the city's future as a regional employment center.

Pleasanton faced severe residential growth restrictions in the 1970s but now is growing into one of the major employment centers in the southern half of the 680 corridor. In the early 1970s the Regional Water Quality Control Board required the city to halt residential growth until sewage treatment capacity could be expanded. Construction of a sewage treatment plant for the Tri-Valley area allowed the city to begin housing construction again, but under new growth control measures required as part of the funding by the Environmental Protection Agency. Nonresidential growth did not fall under this restriction. However, the city has used development agreements to require that developers anticipate many of the impacts of the employment growth. An initiative in 1983 that attempted to stop the major

office/industrial project was defeated by a large margin. The growth situation faced by Pleasanton has been more easily managed by development agreements for each individual case than would have been true in Walnut Creek or Concord, because one development group is responsible for most of the city's nonresidential building planned between 1980 and 1990. The developers of Hacienda have diverted some of the uncertainties that could stem from citizen opposition through having the total project under a development agreement and through funding a ballot vote on a general plan amendment related to the agreement. In addition, Pleasanton has a city-wide TSM ordinance which requires major reductions in commutes during peak hours from single-driver levels. The major development agreements in the city also specify that new development must halt if traffic level E is reached at any of 90 intersections in the city, until the traffic problem has been mitigated.

D. Estimating Square Footage and Job Impacts

Citizen's groups, city councils and planning commissions are not the only factors determining the level of office growth along Highway 680. Earlier work by the author points to the market limitations of office construction and absorption in suburban settings.¹⁸ This previous study concluded that if all planned space were built, the 680 corridor would continue to have very high vacancy rates into the 1990s. While recent absorption levels have greatly exceeded the predictions of the study, this has been at the cost of expensive concessions on the part of building owners, such as free rent, lower base rents, and

provision of improvements commonly provided by the tenant. Estimates of square footage reductions and job losses must take into account the interactions between the growth limitations and the current market situation. In addition, it is important to consider job losses in light of both the effects on individual cities and on the region.

Walnut Creek's strongest growth control initiative passed, while Concord's height control initiative did not. However, to illustrate the options voters have faced this section contrasts likely impacts of three levels of control in Walnut Creek (Measure A, office metering, and Measure H) and the potential effect of the Concord height limit.

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1. Impacts on Square Footage Built

Table 13 summarizes the most severe impacts of growth controls in the three 680 corridor communities. As of September 1985, Walnut Creek had 6 million square feet of office space existing and under construction with an additional 1 million square feet planned. For at least the next 5 years Measure A would have had little effect on proposed building levels because no additional buildings over 10 stories were planned and therefore the measure would not affect employment or city revenues. The metering plan would have reduced planned building in Walnut Creek between 1985 and 1990 by about 400,000 square feet. Measure H eliminates all planned office building as well as a major new retail and hotel project. However, about 400,000 square feet of the "planned" space began construction in October 1985 (earlier than initially scheduled) to avoid the impacts of Measure H.

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TABLE 13: OFFICE INVENTORY HISTORY AND FORECASTS, WALNUT CREEK, CONCORD, PLEASANTON, AND THE 680 CORRIDOR

YEAR	MILLIONS OF SQUARE FEET OF OFFICE SPACE			
	WALNUT CREEK	CONCORD*	PLEASANTON	680 CORRIDOR
1970	0.4	0.1	0.0	0.8
1980	2.3	0.7	0.4	5.0
1985				
In Place	5.4	2.0	3.1	15.6
Under Construction	0.6	0.7	1.1	7.8
Planned	1.0	1.8	1.2	8.4
1990 Estimate				
Without Controls	7.0	4.5	5.4	27.9#
With Controls	6.4	4.1	5.4	27.0

* Commercial space only; including major owner occupied space, Concord has approximately 2.7 million square feet in place and 1.7 million under construction.

Not including major owner occupied space.

Source: Kroll, op.cit., 1984, Coldwell Banker in Walnut Creek, and CREUE analysis.

Concord currently has 2.7 million square feet of commercial (for lease) office space in place or under way and almost 2 million square feet of owner-occupied space (including the 1 million square foot Bank of America building). An additional 1.8 million square feet are planned over the next 5 years. Based on estimates from recent trends and descriptions of planned construction, approximately 30 percent of this space would fall under the height control limits, but presumably some type of space could be built as an alternative with far smaller amounts of square footage. This discussion assumes that an actual decrease of planned space of 20 percent, or 360,000 square feet would occur because of a 4 story height control measure.

Pleasanton's growth management techniques--TSM and specified levels of building and infrastructure provision through development agreements--are of quite a different order. This type of management strategy is unlikely to significantly reduce total square footage built in the city, at least under current and foreseeable market conditions but it may affect the pace of building. One builder reports that at least two intersections will be affected by the "Level E" requirement within the next year, postponing some projects by 8 months or more.

Overall, these expected square footage reductions seem quite modest, but they do not necessarily reflect the perceptions under which people have been voting or signing petitions in Walnut Creek or Concord. In early discussions of downtown plan alternatives for Walnut Creek the possibility of adding an additional 5 to 6 million square feet of space was presented as one alternative. With permissive zoning Concord would accommodate

an additional 5 to 10 million square feet as well. While market conditions are very unlikely to lead to these levels, at least in the next decade, voters may have been reflecting fears of growth at this level.²¹

2. Employment Effects

Data limitations preclude the use of advanced statistical techniques to estimate job losses due to square footage restrictions. However, a few simple multipliers can be used to illustrate the "envelope" of employment effects that are likely to occur.

Average square footage use per office employee for new space is between 250 and 350 square feet in Contra Costa County. Therefore the maximum amount of direct office job displacement that would take place in these two cities would be 1,600 jobs under metering and 4,000 jobs under Measure H in Walnut Creek, assuming the full 1 million square feet were displaced.²² This would be a substantial share of the expected 8,700 total new jobs in the city estimated by ABAG. This maximum would occur only if new office space would have been fully occupied. In addition, Walnut Creek would lose some major new retail projects that could be responsible for a large proportion of the projected 1,800 new retail jobs in the city over the next 5 years. Concord would lose office space for 1,400 workers.

However, several equilibrating factors are likely to reduce job losses within these two cities and for the 680 corridor as a whole. A primary factor is vacant space along the 680 corridor. September 1985 figures show 3.4 million square feet of vacant

space along the corridor (a rate of 21.6 percent), with more than 1 million square feet of space in Walnut Creek. Buildings under construction will bring the total 680 corridor office space inventory to 23.4 million square feet. Of the 7.8 million square feet currently under construction, 46 percent (3.6 million square feet) is still uncommitted including an additional half million square feet of space in Walnut Creek. On average, Walnut Creek has absorbed about 400,000 to 450,000 square feet yearly since 1980 (net of vacated space). If this pace continues and if there were no growth controls on the city, 750,000 square feet could be vacant in 1990 unless major rent concessions continue. Even with all future building halted, existing space could probably absorb at least half of all office jobs that otherwise would be displaced from the full 1 million square feet of planned space (under Measure H) before significant rent increases took place. With the additional 400,000 square feet that broke ground just prior to the November vote, all of the expected new demand in the city might well be met through 1990, although the market for space would be tighter and existing building owners would profit from higher rents. (Retail job displacement would not be affected by these vacancy rates.)

Absorption of displaced Concord workers should be even less complex. Concord currently has 360,000 vacant square feet, with another 650,000 uncommitted square feet construction. Absorption has averaged 200,000 square feet since 1980, with absorption in 1984 at 250,000 square feet and almost 275,000 square feet for the first half of 1985. With this increasing rate of absorption it is reasonable to assume that absorption will continue at a

rate greater than the average for the past five years. However, even if absorption averages 500,000 square feet yearly through the beginning of 1990 (2.5 times the historic rate), total demand in Concord will grow to 3.9 million square feet, compared to an expected inventory of 4.1 million square feet under growth controls. In fact, Concord's net absorption may be substantially lower than this hypothesized level, if the opening of the 1 million square feet Bank of America building leads to consolidation of some of their operations now in leased space in Concord and Pleasant Hill.

When considered in the regional context, job loss in the near future is likely to be even less severe. If all planned space (without growth controls) is added, the 680 corridor would have almost 28 million square feet of space by 1990 or soon after, not including almost 4 million square feet of space in major owner-occupied projects. To maintain a vacancy level of 20 percent (a much higher level than was once considered the suburban "norm" of 10 percent), absorption over the next four years would have to average 3 million square feet yearly, twice the average rate of absorption in the first half of the 1980s. The Walnut Creek and Concord initiatives would reduce the 680 corridor inventory to 27.0 million square feet, leaving ample space to absorb employment growth.

E. Revenue Mismatches

Proponents of growth control measures in Concord and Walnut Creek argue that revenues from office buildings do not cover the costs they generate to the city. Simple balance sheet analysis

of expected revenues from new growth versus necessary transportation improvements support this argument. For example, a 1984 study commissioned by the City of Walnut Creek from Economic Research Associates indicated that the gap between capital and operating costs and estimated revenues was \$29 million with no significant increased build-out, up to \$50 million under existing plans, and over \$60 million with "full buildout" (assuming a higher level of density than is currently permitted). A more recent study by Keyser-Marston indicated that the city would lose over \$30 million in revenues over the next ten years from the passage of Measure H, but the city's estimates of the costs to maintain a "D" level of traffic congestion at downtown intersections was in the range of \$200 to \$400 million. Even before passage of Measure H, the city estimated that \$30 to \$50 million would be needed in the downtown core area for traffic-related improvements.

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However, paying for the costs of growth is a much more complex problem than the city balance sheets would indicate. It involves the challenge of anticipating the long-term cumulative costs during the early stages of growth when the addition of the first few buildings requires no infrastructure improvements, and includes consideration of how revenues from growth are spread among different jurisdictions.

The three cities described here vary substantially in terms of the extent to which they have been able to charge the costs of growth to new project developers. Most of Concord's new construction is in the Redevelopment District. This has had both advantages and disadvantages for the city. Because it is

financed through "tax increment financing," the Redevelopment District receives the full 1 percent of added value to the tax base each year, while other taxing jurisdictions (the city, the county, school districts, etc.) receive very little in income from this additional increment of value. With this income, the Redevelopment District funds many of the major capital improvements associated with the growth. Funding shortfalls may be felt by the city for specific services provided to buildings within the Redevelopment District such as police and fire and by the county and state for external traffic circulation generated by the new projects. The city is addressing some of the shortfall through special mitigation fees charged on a one-time basis as the permit is granted; meanwhile sales tax revenues compensate for some losses to the police department, and the Redevelopment Agency is discussing compensation options with the fire protection district.

Office buildings in Walnut Creek are largely under the taxing jurisdiction of the city, rather than under a tax increment program from redevelopment. The city thus receives a portion of the increased taxes of new commercial development. However, this is much lower than the share received by Concord's Redevelopment District, because it is shared with the county and other taxing jurisdictions. The Keyser Marston study assumed that about 12 percent of the property tax revenue would go to the City of Walnut Creek. Nevertheless, Walnut Creek is responsible for the same types of capital improvements as the Concord Redevelopment District and faces a more expensive problem in

traffic circulation to begin with, because of preexisting conditions. The city has begun to charge additional costs to developers, but far later in terms of the city's growth history than in Concord or Pleasanton. Fees for new buildings would have to be prohibitively high to cover the costs now faced by the city as a result of growth pressures both within the city and in neighboring places.

Developers in Pleasanton have made major contributions to the capital costs of new growth from the outset. ²⁴ Four new or remodeled freeway interchanges needed to accomodate new employment growth are being funded entirely by private developers at an approximate cost of \$50 million. In addition, a special assessment district has been set up to fund roads, water, and fire protection. The district is now fully funded, with charges ranging from \$1.50 to \$3.00 per square foot for buildings--reaching a total of over \$100 million in improvements. Builders also provide all on-site street improvements within their developments. Because the new development has gone into a previously undeveloped portion of the city, the local costs of new growth could be more clearly allocated directly to the new building owners. In addition, with many of the infrastructure costs covered by special fees and assessments, the property tax revenues now coming to the city from this development can be used to enhance services to local residents.

None of the cases described here have yet faced the problem of spillover effects beyond the city limits. All required fees, taxes, and special facilities stop at the top of the freeway on and off ramps. The extent to which the state and county

governments are able and willing to respond through spending to the added regional circulation problems generated by this growth remains to be seen. State funds have been allocated to some freeway improvements in the Walnut Creek area, but the actual construction activity is still two years in the future.

F. The Regional and Market Contexts

The three cities described here are part of larger suburban area that is changing rapidly. While their growth management techniques can only affect building within the city borders, the impacts of growth come from changes regionwide. This has become a major issue in the growth management debate, with Walnut Creek literally at the hub of the problem. A building moratorium in Walnut Creek will certainly not solve existing traffic problems, nor will it keep congestion from worsening, although it will slow the rate of traffic growth into downtown. Citizens are trading off this slowdown for a lower level of revenues for dealing with the problem.

In addition, the situation analyzed here is strongly affected by current market conditions. In a tighter office market, the job loss to the suburban ring would be greater, and the types of jobs locating in different suburban centers could change significantly. These implications for the region are discussed further below.

VII. Regional Policy Implications of Suburban Growth Strategies

Section VI describes the "first round" effects of these growth control initiatives, primarily from the cities' viewpoint.

Longer term, cumulative effects could be much more serious, both in terms of job losses and the ability of places to deal with the problems of growth.

Controls may have two general types of effects on the location of jobs within the San Francisco Bay Area and regionwide employment growth. First, they may shift where different types of jobs locate within the region. Second, they may make it harder for some types of jobs to expand in the region at all. Both of these effects have important implications for the region's economy.

A. The Shift in Job Location

The recent suburban office boom has meant a major relocation of jobs within the San Francisco Bay Area. Many more personal and business services are provided locally to suburban residents than were available previously. Professional firms (e.g. law firms, architecture and engineering firms, etc.) with clients well beyond the local area are choosing suburban sites in order to be close to housing opportunities for many of their employees. Major space-using activities, whether staffed primarily by clerical and administrative personnel or by professional and technical workers, are moving to suburban developments to find large amounts of contiguous space for development or lease.

Changes in the suburban building context may change the location decisions for some of these types of firms. Walnut Creek, for example, which now attracts a mix of the three types of office tenants, is likely to become even more concentrated than currently in the local service firm and small consulting firms. Height controls in Concord could make the city less

attractive to the large data processing concerns that are currently the backbone of its new tenant base.

Other suburban sites in the region presently can continue to absorb the firms displaced by the limited number of square footage and height control measures currently in place. However, firms that can no longer move to the "preferred" suburban sites and that find suburbs rapidly becoming as burdensome as central cities in terms of permitting requirements, may look again at options in San Francisco or Oakland before making a major suburban move. That "suburban flight" plans can change is illustrated by Pacific Gas and Electric Company's recent decision to cancel a planned move from San Francisco to Concord. This change did not result from growth controls, but came about largely due to shifting market conditions in San Francisco. However, a limited building environment could bring about similar results.

B. Impacts on Total Job Growth

From a regional context, the regional shifts that could occur due to growth control are not necessarily bad. They may lead to more efficient uses of transportation networks, and they would also to some degree stem the loss of entry level white collar jobs in central cities. The problem becomes of regionwide concern if it leads to significant migration of firms outside of the region.

The current levels of growth management are unlikely to cause major shifts outside the region. This is as much the result of an overbuilt market as of the amount of growth

control activity. However, even under current market conditions, the replication of some of the more restrictive measures at several other large development sites could change the level of job growth and, more significantly, the job mix in the region. Suburban areas are presently playing a very important role within the regional economy in providing lower cost locations for a wide range of employers. At one end of the spectrum, a large number of small tenants in suburban space are startup firms profiting from the flexibility and low cost of suburban space. At the other end are large employers seeking to reduce costs per worker by lowering rents. Firms facing high space costs and a tight labor market already are closely examining options outside of the region as well as within when considering relocation. Recent research on smaller metropolitan areas in California shows that firms have been making such moves only slowly, but a tighter suburban land market could precipitate additional moves.

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If suburban growth controls are not to become a problem in the context of regional economic growth, then additional mechanisms may be needed to deal with the growth problems that are regional rather than local in scope. Some options might include spreading mitigation fees to neighboring impacted communities, applying transportation system management programs to multi-jurisdictional areas, and using existing regional forums to discuss the emerging roles of growing suburban employment centers and to anticipate the development issues that will arise from new configurations of employment and residential centers.

The question of balancing housing availability with growing employment will continue to be central to any discussion on the

degree to which the negative impacts of suburban job growth can be avoided. In addition, the degree to which current residents have the right to dictate the future size and configuration of their cities will continue to be debated as employers move into new suburban sites.

Growth control remains a question not just of commercial and industrial space but of the broader urban landscape and the regional economy. How residential and nonresidential growth issues are resolved in the San Francisco Bay Area will be crucial to the level, type and location of new jobs in the region over the next decade.

Footnotes

1. The title of this paper plays on the title of a recent book by David Dowall, associate professor of planning at the University of California. The Suburban Squeeze: Land Conversion and Regulation in the San Francisco Bay Area, University of California Press, Berkeley, 1984. The book describes some of the effects of land use controls on regional housing supply and the cost of housing.
2. In 1978 California voters passed Proposition 13, a measure placed on the ballot by petition that limited the growth of property value assessments and the overall taxation rate of property. These limits made residential growth much less attractive for many communities.
3. Larry Orman, "Ballot Box Planning: The Boom in Electoral Land Use Control," Public Affairs Report, Institute of Governmental Studies, University of California at Berkeley, Volume 25, No. 6, December 1984, p. 1.
4. Some aspects of San Francisco's growth control activity are described in Kenneth T. Rosen and Ruth Shragowitz, "The Proposed Growth Limit on Commercial Construction for San Francisco," Center for Real Estate and Urban Economics, Working Paper 85-94, University of California, Berkeley, May 1985.
5. An April 1985 article in U.S. News & World Report cites figures from The Office Network in Houston which indicate that cities where suburban construction is underway far outweighs central city growth of office space, including Dallas (18.3 million square feet of suburban to 4.4 million square feet downtown), Washington D.C. (16.9 million compared to 4.5 million), New York (13.0 compared to 5.1 million), Los Angeles (10.0 suburban and 4.4 downtown), and Boston (8.4 suburban and 1.0 downtown). Figures are quoted in Michael Doan, Joseph Benham and K.M. Chrysler, "When the Commercial Builders Invade Suburbia," April 29, 1985, p. 71.
6. Some of these limitations are discussed in an earlier working paper by the author. Kröll, "Employment Growth and Office Space Along the 680 Corridor: Booming Supply and Potential Demand," Working Paper 84-75, Center for Real Estate and Urban Economics, University of California, Berkeley, 1984, compares earlier projections from the ABAG model with alternative forecasts and actual countywide figures. In general, the ABAG model projects growth regionwide and then uses location models to allocate growth to counties and then cities. Accordingly, the city-level allocations are subject to fairly high error. ABAGs early projections for the 680 corridor were quite low compared to the author's analyses, but more recent ABAG estimates have been much closer to the author's estimates and other measures.

7. See Kroll, op.cit., 1984, and Jean Ross, "Technology and the Relocation of Employment in the Insurance Industry," unpublished masters thesis, Department of City and Regional Planning, University of California, Berkeley, 1985, pp. 80 - 94.
8. Walnut Creek is an exception to this trend, with a female labor force participation rate of only 45 percent in 1980. However, this results from the presence of a large retirement community (Rossmore) which lies partially within the Walnut Creek city limits.
9. JHK & Associates, Origin/Destination Study for the Walnut Creek Core Area, Emeryville, May 1985, and Robert Cevero, "Unlocking Suburban Gridlock," Journal of the American Planning Association, forthcoming, Summer 1986.
10. Unless otherwise stated in this section, data on existing and planned office square footage in 680 corridor cities was calculated from data provided by Coldwell Banker Commercial Real Estate Services in Walnut Creek. Information on building tenants comes from a survey done by the author in January 1984 and published in more detail in Kroll, op.cit., 1984. Commute pattern data come from the Metropolitan Transportation Commission, "1970 & 1980 Census Journey-to-Work, County-to-County & Superdistrict-to-Superdistrict Total Workers," Data Release #3, September 1984. Land availability figures are calculated from forecast data provided for this project at the census tract level by the Association of Bay Area Governments, October 10, 1985.
11. Except where otherwise noted, office space square footage reported here refers to commercial space only (i.e., space built for lease).
12. Kroll, op.cit., 1984.
13. Ibid.
14. Freeway volume data reflects Caltrans figures and was obtained through personal communications with Eric Parfrey of the Contra Costa County Planning Department, February 1986. The Walnut Creek commute study referred to is JHK & Associates, Origin/Destination Study for the Walnut Creek Core Area, Emeryville, May 1985.
15. The Shadelands Office Park survey data were compiled from computer printouts kept by the City of Walnut Creek Planning Department; the survey was done by RIDES, a nonprofit regional ride share agency for the San Francisco Bay Area, funded by the State of California and the Metropolitan Transportation Commission. The Concord Airport Plaza data were summarized from information provided by the City of Concord, Department of Public Works. The Hacienda Business Park data come from a personal communication from Karen

Fraser-Middleton, Transportation Manager for the Hacienda Business Park Owners Association, January 30, 1986.

16. The proposed plan referred to in this paragraph is the version analyzed in the Draft Supplement to Environmental Impact Report for 1985 Core Area Plan Studies, City of Walnut Creek, Community Development Department, January 1986.
17. Personal communication with Ed Skoog, City Councilman, March 1986.
18. Kroll, op. cit., 1984.
19. Unless otherwise specified, office square footage and vacancy information is calculated from data provided to the author by Coldwell Banker Commercial Real Estate Services, Walnut Creek, for fall of 1985.
20. Conversation with staff of Coldwell Banker, Walnut Creek office, November 1985.
21. The 11 to 12 million square feet of space in Walnut Creek was mentioned at a community meeting attended by the author on January 31, 1986. The Concord estimate is calculated from available commercial land in the city.
22. Because office space tends to hold many spinoff jobs as well as basic jobs, it would not be appropriate to assume a multiplier effect from displaced jobs through office construction restrictions. This analysis does not look at construction jobs lost but only at displaced office workers.
23. Economic Research Associates, "Fiscal Implications of Core Area Alternative Futures," prepared for the City of Walnut Creek, September 20, 1984; Keyser Marston Associates Inc., Memorandum to the City of Walnut Creek, "Walnut Creek City Revenues as They Relate to the Traffic Control Initiative," September 6, 1985; "Development and Planning Implications, Traffic Control Initiative," Memo prepared by the Community Development Department for the Walnut Creek City Council, October 1985.
24. State Transportation Improvement Program, California Department of Transportation, District 4, 1983 and personal communications with Thomas Terrill, Reynolds and Brown, Concord, February 1986.
25. Cynthia A. Kroll, "Metropolitan Spillover and California's Central Valley," Working Paper Number 85-106, Center for Real Estate and Urban Economics, University of California, Berkeley, December 1985.