

MASTER PLAN REVISION

Township of North Caldwell

Essex County, N. J.

MAY 1983

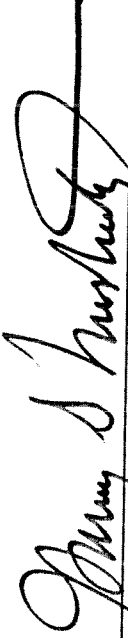
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NORTH CALDWELL - MASTER PLAN REVISION

Township of North Caldwell
Essex County, N.J.

May 9, 1983

The original of this report was signed and
sealed in accordance with R.S. 12:4-1.



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May 9, 1983

Mayor and Council and
Planning Board of the
Township of North Caldwell

Dear Officials:

I am pleased to present for your consideration the 1983 Revised Master Plan. The Plan includes reports 1 and 2 which were previously submitted and new sections on circulation and land use.

Our findings show that North Caldwell has developed into an attractive, predominantly single-family community providing a wide range of services and facilities for its residents. The Revised Master Plan found no serious problems or deficiencies related to those functional elements covered in the Plan.

Our analysis indicates that the future population probably will remain stable or increase slightly to approximately 6,500 persons with a potential maximum of 8,500 by the year 2000. Approximately 350 acres of possible developable open land remains, with the largest tract, 145 acres, belonging to Essex County.

The survey found that the Township has developed in accordance with the goals and objectives of previous planning efforts, and strict land development controls have resulted in an orderly, harmonious and compatible pattern of land use. The Township has earned its reputation as a well run and desirable community.

Sincerely yours,

HARVEY S. MOSKOWITZ, P.P., P.A.

Harvey S. Moskowitz, President

HSM:LM

Member, American Institute
of Certified Planners

Licensed Professional Planner,
State of New Jersey

TOWNSHIP OF NORTH CALDWELL

List of Officials

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James R. Matarazzo
Robert J. Nash
Jeanette Remington

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John S. Kosko
Township Administrator and Secretary of Planning Board

Jay Scott MacNeill, Planning Board Attorney

Thomas J. LaConte, Township Attorney

Stephen Petro, Jr., Township Engineer

Frances I. Lucchino, Township Clerk

Edwin N. Hadley served as Mayor and a member of the Planning Board, and Lucien O. Frohling served as a member of the Council during the revision period.

Table of Contents

	<u>Page</u>
Introduction	1
Part I.	
POPULATION, HOUSING EMPLOYMENT AND REGIONAL PERSPECTIVES	
Population	4
Future Population Trends in North Caldwell	11
Births to Township Residents	11
Housing Turnover	11
New Housing Construction	12
Growth Trends in Essex County and North Caldwell Region	13
Jobs - North Caldwell and Adjoining Municipalities	17
Regional Job Growth and the Housing Market	19
Regional Housing Need	20
State, County and Adjoining Municipal Master Plans	21
New Jersey Development Guide Plan	21
County Land Use Plan	22
Adjoining Municipalities	23
Part II.	
COMMUNITY FACILITIES AND SERVICES	
Introduction	25
Trends and Projections in the 5-14 Year Old Age Cohort	26
Municipal Facilities: Public Safety, Public Works and Municipal Facilities	27
Parks and Recreation	28
Township Schools	31
Grandview School and Enrollment Trends in Grades K-3	32
Gould School and Enrollment Trends in Grades 4-6	33

Part II. (Continued)

	<u>Page</u>
Library Service for North Caldwell	34
Other Library Functions	38
Options for Library Service	39
Maintain Existing Arrangements	39
Contract Service	40
Joint Library Service	40
County of Essex Cooperating Libraries System (CECLS)	41
Municipal Library	42
Establishing and Financing of a Public Library	43
Municipal Library Standards	44
Location	46
Possible Library Sites	47
Gould Avenue School	47
Construction on the Municipal Complex Site	48
Residential Property on Gould Avenue	48
Municipal Library Cost	49
Initial Cost	49
Operating Cost	50
Summary and Recommendations	51

Part III.

CIRCULATION ELEMENT

Introduction	54
Road Categories	55
Hazardous Intersections	60
Standards and Recommendations for Extension of Cul- de-Sacs and Unimproved (Paper) Streets	61

Part IV.

LAND USE ELEMENT

Introduction	68
Natural Resources and Environmentally Sensitive Areas	68
Passaic River and Green Brook Floodplains	69
Ponds	69
Wetlands	70
Steep Slopes	70

Part IV. (Continued)

	<u>Page</u>
Utilities	71
Water	71
Sanitary Sewers	72
Storm Sewers	74
Energy Conservation	74
Proposed Land Use and Zoning Recommendations	76
Green Brook Country Club	77
West Essex High School	77
Ravin Property	77
Glover Property	78
Kessler Property	78
Brookside Terrace Extension Lands	79
North Caldwell Lawn and Tennis Club	79
Walkers Pond	79
Matarazzo Farm	79
Essex County Lands	80
Bloomfield Avenue Office Zone	80
Other Regulation Changes	81
Disposition of Township-Owned Land	81
<u>MAPS</u>	
Map 1 PRIMARY COMMUTING REGION	19
Map 2 ESSEX COUNTY	21
Map 3 LAND USE PLAN	22
Map 4 CIRCULATION ELEMENT	67
Map 5 RECOMMENDED ZONING AND LAND USE FOR MAJOR VACANT PARCELS	82

NORTH CALDWELL - MASTER PLAN REVISION

Introduction

In 1975, North Caldwell adopted a comprehensive master plan and adopted revisions to the Township zoning ordinance based on the Plan. The Township is now conducting a reexamination and revision of that master plan, in accordance with the New Jersey Municipal Land Use Law requirement that a master plan be reexamined at least once every six (6) years. The Land Use Law specifies that the master plan reexamination address the major problems and objectives relating to land development in the municipality at the time the master plan was adopted, how these problems and objectives have changed since, and the changes recommended in the master plan as a result.

One of the changes this master plan revision will examine are the changes in population and housing in the Borough, based on data from the 1980 U.S. Census.

The revised plan will also examine several trends which could affect future land development in North Caldwell. These include changes in the housing market, including mortgage rates and changing demand for housing; court cases in New Jersey concerning municipal obligations to help meet regional housing needs (Mt. Laurel, et al.); increased transportation costs affecting commuting; shifts in job growth in New Jersey to the developing suburban counties; and an increased concern with energy conservation, including an energy conservation element now required in municipal master plans under State statute.

The following are the major problems and objectives in the 1975 Master Plan which will be reexamined in this master plan revision:

1. Future use of the few large parcels of vacant land remaining in the Township -- In 1975, North Caldwell was 75 percent developed, and the master plan recommended uses for the remaining large vacant parcels. Most of these parcels are still partly or entirely undeveloped, and the master plan revision will reexamine the present zoning and proposed use for each in light of changes in the last six years. The most important and largest of these parcels are the County lands, characterized by few development constraints, and Essex County's interest in selling them for private development.

2. Overall land use patterns in the Township -- Less than 1 percent of the Township's land use is commercial and industrial, located entirely on the Township's perimeter, and residential uses are almost entirely single-family homes located for the most part on relatively large lots (one-half acre and larger). Should this pattern be maintained? What are the constraints imposed by Township sewerage and water supply systems?

3. Present and future needs for community facilities -- The master plan will examine, in light of recent and projected population trends, the needs for schools, recreation land and facilities, and municipal facilities such as fire, police and administrative offices. The plan will also examine the need for, and feasibility of, a Township library.

4. Needs for improvement to the Township's road network
How have traffic patterns and volumes changed since 1975? Which
of the road improvements in the 1975 Master Plan have been
undertaken? Which should now be given high priority?

5. The Township's role in the regional housing
market -- What is that role, in light of the Mt. Laurel decision
and subsequent court cases?

6. Energy conservation -- How can the Township's land
development regulations help promote energy conservation, in
accordance with the State's recently adopted planning
requirement?

7. Consistency with other plans -- Are the Township's land
use policies and zoning regulations consistent with those of the
county and adjoining municipalities, and with the State
Development Guide Plan?

Part I.

POPULATION, HOUSING, EMPLOYMENT AND REGIONAL PERSPECTIVES

Population

The 1980 Census provides the most recent population and housing data for North Caldwell, and the following analysis is based on that.

In 1980, there were 5,832 people living in North Caldwell. Of these, 551 were in so-called "group quarters:" institutions, particularly the Essex County Jail Annex. The remaining 5,281 were members of households, and with 1,589 occupied housing units in the Township, the average household size in 1980 was 3.32 people. (See Table 1.)

Housing size in the Township is relatively large, but family size is small: 91 percent of all housing units had 6 rooms or more, but only 20 percent of all households had 5 or more members, and 35 percent were one- or two-person households. This reflects the fact that many Township families are at a stage in the family life-cycle when grown children have left home and parents remain in a house purchased when children were younger and living at home.

Almost all of the Township's housing is single-family homes (96 percent) and owner-occupied (96 percent). The median value of owner-occupied housing in 1980 was \$121,300, and 67 percent of the Township's owner-occupied housing was valued at \$100,000 or more. In general, housing in North Caldwell is large, expensive, singlefamily, owner-occupied homes. And the

housing market is tight; in 1980, only 1.1 percent of all housing in the Township was vacant, a very low percentage.

As of the 1980 Census, the Township had very little multi-family housing (4 percent), most of it in two-family homes. Since then, a townhouse development has been started, in which 13 of a planned 62 units have been built, at the Township's northern edge along Lindsley Road.

The number of housing units in North Caldwell increased between 1970 and 1980 as single-family home construction continued at a moderate rate. During this time, total population declined, resulting in a decrease in the average household size from 3.8 persons in 1970 to 3.32 persons in 1980. Small families (1 or 2 persons) increased from 25 percent to 35 percent of all households, while large families (5 or more) decreased from 30 percent to 20 percent of all households (see Table 2). The most common family sizes in 1980 were 3 or 4 persons, as they had been in 1970; about 45 percent of all households. Families who moved into the Township during their child-rearing years are beginning to reach the "empty-nest" stage, as children reach adulthood and leave home, while parents may remain in the family home for a number of years afterward. The decline in North Caldwell's household size is primarily a result of this population shift, although nationally, household size is declining for other reasons: later marriages, fewer children, and more frequent divorce. These national trends are probably responsible for some of the Township's population decline.

Table 1
Population and Housing Trends
North Caldwell, 1970-1980

	<u>1970</u>	<u>1980</u>	<u>Change, 1970-1980</u> <u>Number</u>	<u>Percent</u>
Total Population	6,425	5,832	-593	-9.2
Total housing units	1,549	1,608	+59	+3.8
Households (occupied housing units)	1,540	1,589	+49	+3.2
Population in households	5,852	5,281	-571	-9.8
Persons per household (average)	3.8	3.32	-.48	-12.6
Renter-occupied housing units	93	69	-24	-25.8
Single-family housing	1,479	1,544	+65	+4.4
Housing in 2-9 units/ structure	70	64	-6	-8.6

Source: U.S. Census, 1970; U.S. Census, 1980.

Table 2
Changes in Family Size
North Caldwell, 1970-1980

Persons in Unit Occupied Housing Units	1970		1980	
	Number	Percent	Number	Percent
1 or 2	382	24.8	554	34.9
3 or 4	677	44.0	719	45.2
5 and over	<u>481</u>	<u>31.2</u>	<u>316</u>	<u>19.9</u>
Total:	1,540	100.0	1,589	100.0

Average household size: 3.80 3.32

Source: U.S. Census of Population, 1970; U.S. Census of Population, 1980.

Changes in the Township's age profile between 1970 and 1980 verify the "empty-nest" trend. Both the number of pre-school (under 5) and school-age (5-17) children decreased over the decade, while the number of working-age adults (18-64) increased. (See Table 3.) The number of older people (65 and over) remained about the same between 1970 and 1980, less than 6 percent of the total population; but this group should increase during the next decade and beyond as the Township's present population gets older.

Most of North Caldwell's growth took place during the 1950's and 1960's, as large numbers of single-family homes were constructed. (See Table 4.) By the 1970's, about 75 percent of the Township's land had been developed, and most of the remaining undeveloped land was steeply sloped, otherwise difficult to develop, or in public and quasi-public uses: the County lands,

Green Brook Country Club, etc. During the 1970's, a moderate amount of new single-family housing was built in North Caldwell: 153 building permits were issued between 1970 and 1980, an average of about 14 a year. (See Table 5.) However, this new housing was not enough to offset a population decline among existing households. Table 6 shows the net change from natural population increase: declining births resulted in a net increase of births over deaths of only 31 during the decade. Table 7 shows the net result of the various components of population change, with the "unexplained" component attributed to a net population decrease in existing households.

Table 3

Changes in Age Profile

North Caldwell, 1970-1980

<u>Age Group</u>	<u>Population in Age Group</u>				<u>Change 1970-1980</u>
	<u>1970</u>		<u>1980</u>		
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	
Under 5	441	6.9	257	4.4	-154
5-17	1,860	28.9	1,294	22.2	-566
18-64	3,771	58.7	3,940	67.6	+169
65+	<u>353</u>	<u>5.5</u>	<u>341</u>	<u>5.8</u>	-12
	6,425	100.0	5,832	100.0	

Source: U.S. Census of Population, 1970; U.S. Census of Population, 1980.

Table 4

Historic Population Trends

North Caldwell, 1940-1980

<u>Year</u>	<u>Total Township Population</u>	<u>10-Year Population Change</u>
1940	1,572	
1950	1,781	+209
1960	4,163	+2,382
1970	6,425	+2,262
1980	5,832	-593

Source: U.S. Census, 1940, 1950, 1960, 1970, 1980.

Table 5

Building Permits Issued

North Caldwell, 1970-1980

<u>Year</u>	<u>Permits Issued (all single-family units)</u>
1970	23
1971	18
1972	14
1973	16
1974	6
1975	7
1976	11
1977	10
1978	12
1979	19
1980	<u>17</u>
Total:	153

Annual Average, 1970-1980: 13.9
Demolitions, 1970-1980: 4
Net Increase in Housing Units: 151

Source: N.J. Department of Labor & Industry.

Table 6

Net Population Change

North Caldwell, 1970-1980

<u>Year</u>	<u>Births</u>	<u>Deaths</u>	<u>Net Change</u>
1970	55	31	+24
1971	33	27	+6
1972	40	34	+6
1973	30	41	-11
1974	27	31	-4
1975	43	37	+6
1976	40	40	-
1977	43	27	+16
1978	37	35	+2
1979	28	37	-9
1980	<u>31</u>	<u>36</u>	<u>-5</u>
Total:	407	376	+31
Annual Average, 1970-1980:	37	34.2	+2.8

Source: N.J. Department of Health.

Table 7

Components of Population Change

North Caldwell, 1970-1980

1970 Population:	6,425 (U.S. Census, 1970)
Net Natural Increase, 1970-1979:	+36 (See Table 6)
Net Change Group Quarters Population:	-22 (U.S. Census, 1970, 1980)
Estimated Net Increase, New Households:	<u>+438</u> (132 housing units, 1970- 1979, X 3.32 average household size)
Hypothetical 1980 Population:	6,877
Actual 1980 Population:	<u>5,832</u> (U.S. Census, 1980)
Estimated net decrease in population in existing households:	-1,045

Future Population Trends in North Caldwell

Changes in the Township's population over the next ten to twenty years will depend on various factors, some of which are difficult to predict. The most important are births to Township residents, the rate and net effect of housing turnover, and the rate and type of new housing construction. The following will attempt to analyze the anticipated direction of these trends and the probable effect on the Township's population.

Births to Township Residents. During the 1960's, there were an average of 43.4 births per year in North Caldwell; during the 1970's, births dropped to an annual average of 37.6; or 35.7 if 1970, the high year for the decade, is eliminated. However, there was no discernible trend from 1971 to 1980; births fluctuated up and down, between a high of 43 and a low of 28. (See Table 6.) However, the low number of births in 1970 and 1980 (28 and 31, respectively) may represent the beginning of a drop to a lower level during the 1980's than that of the 1970's. The community facilities element of the master plan revision will examine the implications of a lower birth rate for school enrollment projections and other Township facilities.

Housing Turnover. Housing turnover will probably result in a moderate increase in the Township's population, to the extent that older couples with grown children sell their homes to families with younger children. This change will take place over a long period of time, probably twenty to thirty years. It should be noted that not all home sales represent a net gain in

population: some may be from one family with children to another.

New Housing Construction. Single-family home construction is continuing at a moderate rate, which will probably remain at current levels until high mortgage interest rates decline. In addition, no major residential projects beyond those presently committed can be undertaken until the moratorium is lifted on the Caldwell sewerage treatment plant. This could take five years or more, depending on the solution agreed to by the Caldwell sewerage authority and its users, who are considering several options. When additional sewerage capacity is available, the large vacant tracts in the Township could be developed for at least 626 housing units, with an estimated 2,100 people, based on the recommendations of the 1981 Vacant Lands Study. (See Table 8.) However, some of these tracts may not be developed for a long period of time, if at all. The additional population of 2,100 is a maximum which could be added over the next twenty to thirty years.

During the 1980's, therefore, population will probably remain stable and may even decline slightly as trends of the 1970's continue. During the 1990's, there may be a slight increase in population if births increase and there is a substantial amount of new construction on large vacant parcels. By the year 2000, the Township's population should be somewhere between 6,000 and 7,000. The ultimate population in North Caldwell could be as much as 8,500 if there is a return to

earlier population levels as housing turns over and if all of the vacant tracts are developed. For short-term planning purposes, a population of 6,500 is a realistic figure.

Table 8

Potential Population Capacity of Vacant Lands

in North Caldwell

Tract	Acres	Recommended		Total Housing Units ^b	Estimated		Total
		Density ^a	Units/Acre		Population Per Unit ^c	Estimated Population	
Green Brook C.C.	50	2		90	3.5		315
West Essex H.S. (part)	21.5	2		38	3.5		135
Ravin	15	4		60	2.0		120
Glover	36	1		32	3.5		112
Paragano	20	1		18	3.5		63
Wildwood Swim Club	13	2		23	3.5		80
Walker's Pond	18	2		32	3.5		112
Matarazzo	85	2		153	3.5		535
Essex County Lands	100	2		180	3.5		630
				626			2,102

^aA Study of Vacant Lands in the Borough of North Caldwell, November 1981.

^b10 percent deducted from single-family tracts for roads, etc.
^cMultipliers based on housing surveys in New Jersey and Northeastern U.S.

Growth Trends in Essex County and North Caldwell Region

During the 1970's, a moderate amount of new housing was built in Essex County's northwest quadrant which includes North Caldwell and its neighboring municipalities. These seven municipalities accounted for about one-third of the County's housing growth during the 1970's, although they had only 6 percent of the County's total housing in 1970. (See Table 9.)

Despite this growth in housing, municipal population declined in six of the seven municipalities; only Fairfield, with a very large increase in housing (24 percent) also had a population increase of 16 percent.

These municipalities, except for Fairfield, are "mature" suburban communities whose greatest period of housing growth is past, with little land remaining for additional development and a population growing older and household sizes declining, as children begin leaving home.

Between 1970 and 1980, household size decreased in all seven municipalities (see Table 9) as well as in Essex County as a whole. The average household size in North Caldwell and most of its neighboring communities is higher than the county average because these communities have higher proportions of single-family housing than the county as a whole.

The population of North Caldwell itself is quite different than Essex County. (See Table 10.) Household size is larger, with much smaller proportion of one-person households and a much larger proportion of married couple-with-children households.

Table 9

Growth Trends, North Caldwell
and Adjoining Municipalities, 1970-1980

	Population			Housing			Population Per Household
	1970	1980	Percent Net Change	1970	1980	Percent Net Change	1970 1980
N. Caldwell	6,425	5,832	-9.2	1,549	1,608	+3.8	3.80 3.32
Caldwell	8,719	7,624	-12.1	3,022	3,046	+0.8	2.78 2.42
Cedar Grove	15,582	12,600	-19.1	3,668	3,839	+4.7	3.42 2.94
Essex Fells	2,541	2,363	-7.0	710	738	+3.9	3.44 3.12
Fairfield	6,731	7,987	+16.0	1,813	2,244	+23.8	3.83 3.60
Verona	15,067	14,166	-6.0	4,841	5,344	+10.4	3.13 2.71
W. Caldwell	11,887	11,405	-4.2	3,315	3,651	+10.1	3.62 3.16
Essex County	929,986	850,451	-8.8	312,479	316,855	+1.4	3.02 2.79

Source: U.S. Census, 1970; U.S. Census, 1980.

Table 10

Selected Population and Housing Characteristics

<u>North Caldwell and Essex County, 1980</u>			
	<u>North Caldwell</u>	<u>Essex County</u>	
Population per household:	3.32	2.79	
Percent one-person households:	6.4%	25.1%	
Percent households, married couple, one or more children:	46.7%	24.4%	
Percent housing, one-family units:	96.0%	35.0%	
Percent households, renter-occupied:	4.3%	58.5%	
Median value, owner-occupied housing:	\$121,300	\$67,200	
Median contract rent, renter-occupied housing:	\$323	\$210	
Housing vacancy rate:	0.9%	3.3%	
Vacancy rate, owner-occupied housing:	0.7%	1.0%	
Vacancy rate, rental housing:	4.3%	5.0%	
Median Age:	33.4 yr.	31.4 yr.	
Age Profile - Under 5:	4.4%	6.7%	
5-17:	22.2%	21.5%	
18-64:	67.6%	60.2%	
65+:	5.8%	11.6%	

Source: U.S. Census, 1980.

The median age in North Caldwell is 33.4 years, while the County's is 31.4. Moreover, the County's population is heavily concentrated in the younger and elderly, while the Township's is closely grouped toward the center cohorts. The Township's housing is almost all one-family units, in contrast to only 35 percent of the County's housing; conversely, almost none of the Township's housing is rental, in contrast to 58 percent of

the housing in the County. And the median value of owner-occupied housing in North Caldwell is almost twice the average county value, while median rent is 50 percent higher in the Township.

Employment - North Caldwell and Adjoining Municipalities

North Caldwell is a residential community; most of its residents commute outside to jobs. In 1980 there were 500 private sector jobs in North Caldwell, a 26 percent decrease over the 675 jobs the Township had in 1970.¹ At the same time, there were 1,589 households in the Township, about three times more households than jobs (see Table 11). North Caldwell has no large industrial or commercial areas; its jobs are in the few businesses and industries along Bloomfield Avenue and Fairfield Road, and in scattered locations elsewhere in the Township. There are also a number of public sector jobs in the community: by the County, the West Essex regional schools, the Township's schools and the Township's municipal departments.

Most of the other communities in northwestern Essex County are also residential. Of North Caldwell and its six neighbors, only Fairfield and West Caldwell are major employment centers. Table 11 shows that in 1980 these two municipalities had a combined total of about 19,000 more jobs than households. Other nearby job concentrations are in Wayne and Little Falls,

¹The number of private sector jobs has been declining since 1978. In 1981, it had dropped to 465.

just over the Passaic County line. Table 11 also shows that during the 1970's, job growth surpassed housing growth in almost all the area's municipalities, although most of the growth took place in Wayne and Fairfield. These two municipalities have large tracts of land suitable for industrial and commercial development adjoining two major highways, I-80 and N.J. 46.

Table 11

Jobs and Housing, North Caldwell
and Adjoining Municipalities, 1970-1980

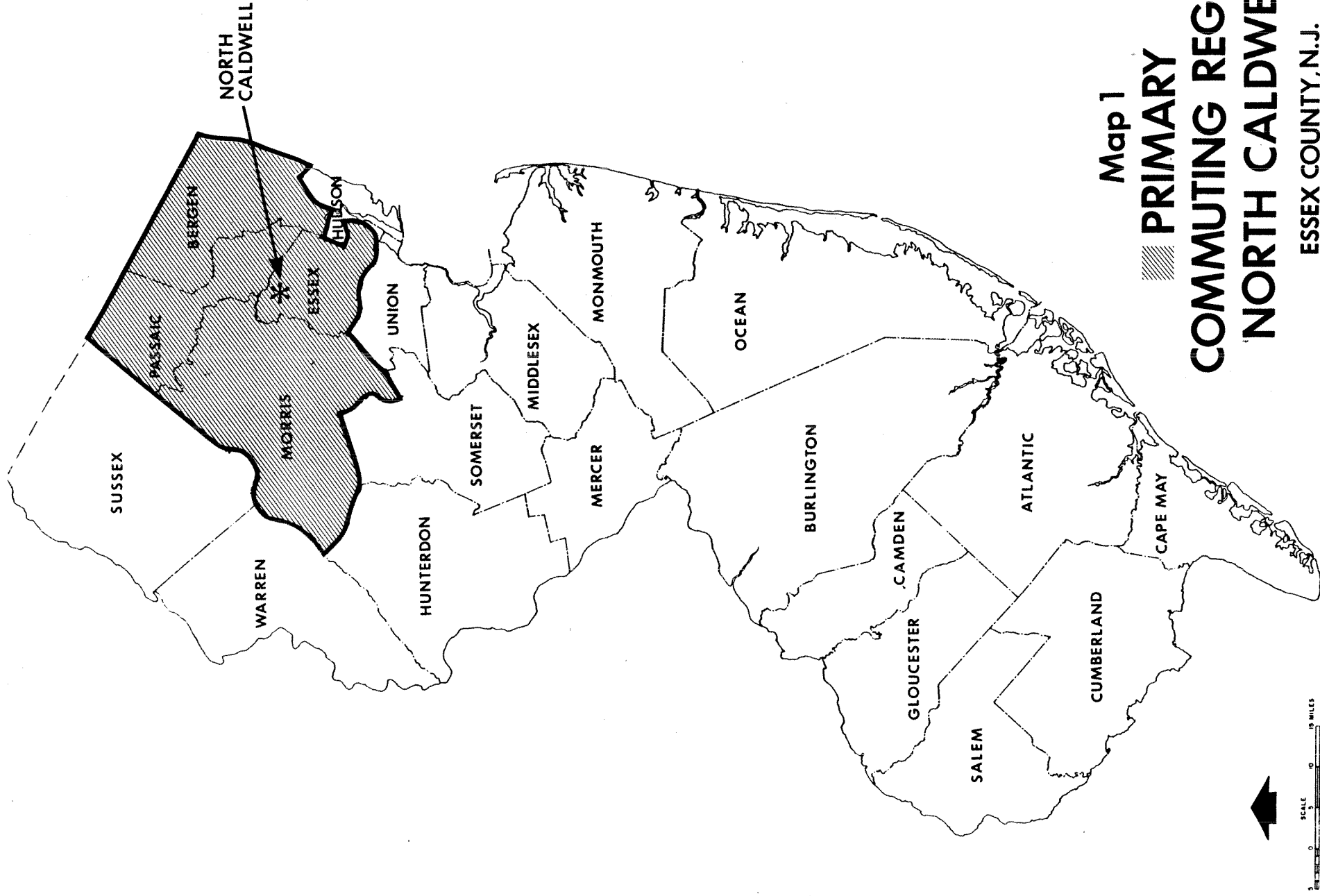
	1970		1980		Net Change 1970-1980
	Jobs*	House- holds	Jobs*	House- holds	
N. Caldwell	675	1,540	500	1,589	-175
Caldwell	1,597	2,998	2,030	3,003	+433
Cedar Grove	2,613	3,633	3,605	3,792	+992
Essex Fells	111	700	210	718	+99
Fairfield	6,788	1,755	18,167	2,217	+11,379
Verona	2,391	4,815	2,458	5,197	+67
W. Caldwell	3,172	3,284	7,687	3,609	+4,515
Essex County	16,672	302,582	307,795	299,934	+17,485
Little Falls	7,700	3,880	5,557	4,208	-2,143
Wayne	16,507	13,623	30,110	14,298	+13,603
*Private sector jobs covered by the N.J. Employment Security System.					+675

Source: U.S. Census, 1970 and 1980; N.J. Department of Labor & Industry.

Regional Job Growth and the Housing Market

North Caldwell is located in the center of the four-

county region which comprises northeastern New Jersey, as shown on Map 1 on the following page. These four counties -- Essex, Bergen, Passaic and Morris -- had 950,000 jobs in 1980, an



increase of 121,800 from 1970, almost all of it in Bergen and Morris. (See Table 12.) North Caldwell is conveniently situated for auto commuting to jobs throughout this region by Route 80, just to the north of the Township. In addition, commuter rail and bus service to New York is available.

The growth in jobs in the region and the attractiveness of the Township housing, community facilities and physical setting suggest that there will be a continuing market for existing housing and the relatively modest amount of new housing which can be built on North Caldwell's remaining vacant land.

Table 12

Job Changes, Four-County Region, 1970-1980

	<u>1970</u>	<u>1980</u>	<u>1970-1980</u>	<u>Percent Change 1970-1980</u>
Essex County	326,200	308,200	-18,000	-5.5
Morris County	86,400	149,900	+63,500	+73.5
Passaic County	155,000	158,000	+3,000	+1.9
Bergen County	<u>267,600</u>	<u>340,300</u>	<u>+72,700</u>	<u>+27.2</u>
Totals:	835,200	956,400	+121,200	+14.5

*Private sector jobs covered by N.J. Unemployment Compensation, rounded to nearest 100.

Source: N.J. Department of Labor & Industry: Covered Employment Trends in New Jersey.

Regional Housing Need

The Mount Laurel II court case, recently decided by the Supreme Court, prescribes certain obligations for low and moderate income housing for New Jersey municipalities. The Town-

ship and Planning Board attorneys are currently reviewing the decision to determine the impact on North Caldwell, and they will advise the Township accordingly.

State, County and Adjoining Municipal Master Plans

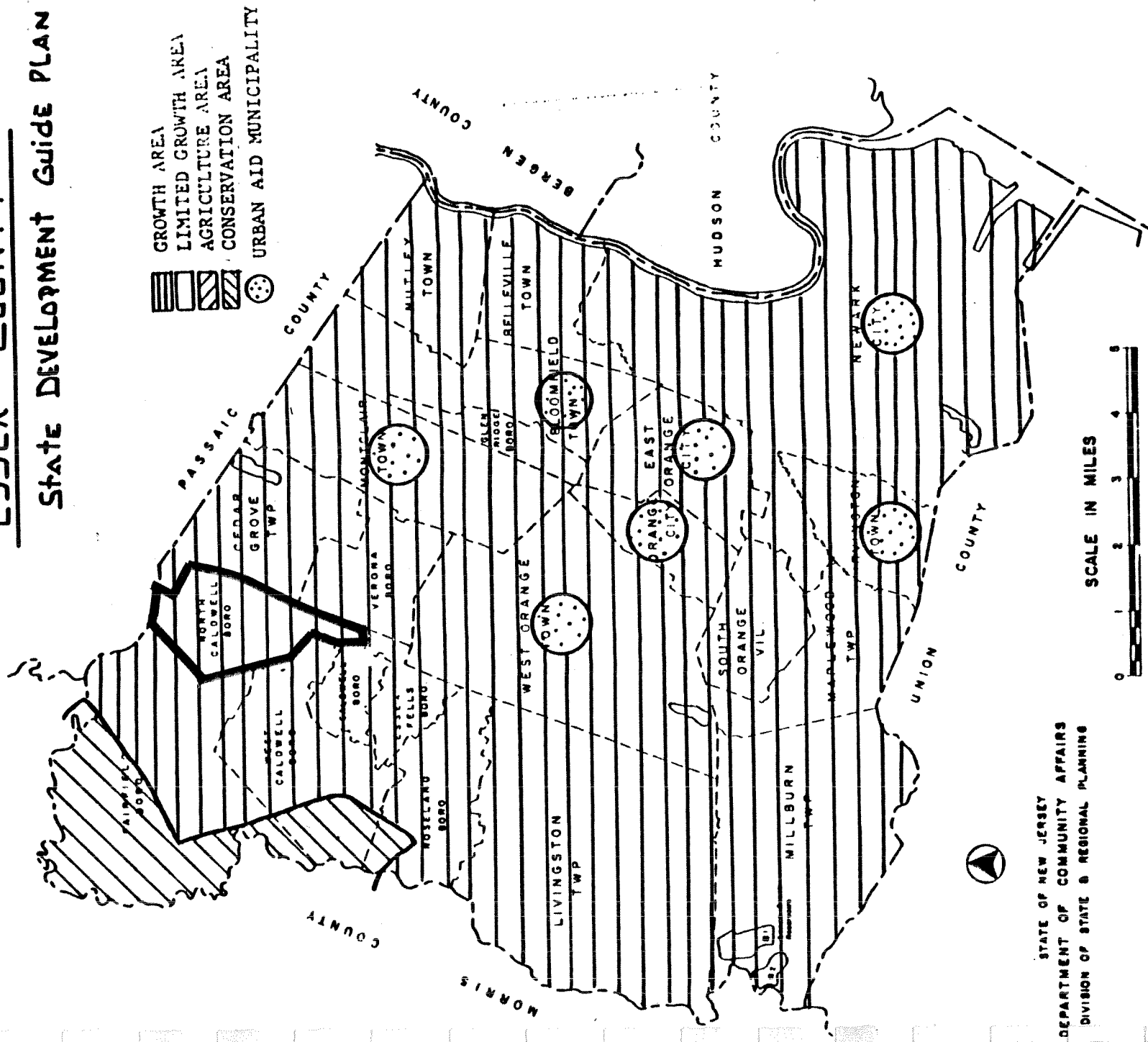
In accordance with the requirements of the New Jersey Municipal Land Use Law, North Caldwell's zoning and planning policies have been compared with State and County plans and with the master plans and zoning of its adjoining municipalities. In general, the Township's planning is consistent with the planning of the State, Essex County and adjoining municipalities.

New Jersey Development Guide Plan. This plan, issued in draft form in 1980, is a proposed land use plan for the State of New Jersey. It is intended as a guide for State agencies whose projects affect land development (the Departments of Transportation, Community Affairs and Environmental Protection, etc.) to coordinate the actions of these departments around a consistent set of land use and development policies.

In the Guide Plan, North Caldwell is located in a "growth area" which includes New Jersey's northeastern counties. (See Map 2 on following page.) Growth areas in the Guide Plan are areas where new development is desirable because urban services and utilities already exist. The Guide Plan recommends channeling new development within these growth areas into the State's large, older cities which should remain employment and housing centers. The plan also recommends strengthening the mass

ESSEX - COUNTY

State Development Guide Plan



STATE OF NEW JERSEY
DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF STATE & REGIONAL PLANNING

transportation systems which serve these cities and the areas around them.

If the Guide Plan policies are followed, high density housing and new employment in the region around North Caldwell should locate in Newark, Paterson and Passaic, rather than in outlying suburbs. This is consistent with the Township's own planning goals of preserving its character as a residential community of single-family homes.

County Land Use Plan. The Essex County Land Use Plan is also consistent with North Caldwell's planning and zoning. The County plan designates North Caldwell for one- and two-family residential use except for the following nonresidential areas: the County lands, designated for public use; the Green Brook Country Club, designated for semi-public use; municipal lands and adjoining areas to the west along Green Brook, designated for park and recreation use; commercial use along Bloomfield Avenue; and industrial use along Fairfield Road in the Township's north-west corner. Map 3 shows the County land use map for northwestern Essex County.

The planning policies in the County development plan emphasize improving the county's older urban areas and improving the mass transit systems which serve these areas.

The County plan has no development policies for County-owned lands in North Caldwell, Verona and Cedar Grove, other than designating them as public use areas on the County land use plan.

PASSAIC COUNTY

CEDAR GROVE

VERONA

ESSEX
FELLS

AVENUE

MOUNTAIN

CALDWELL

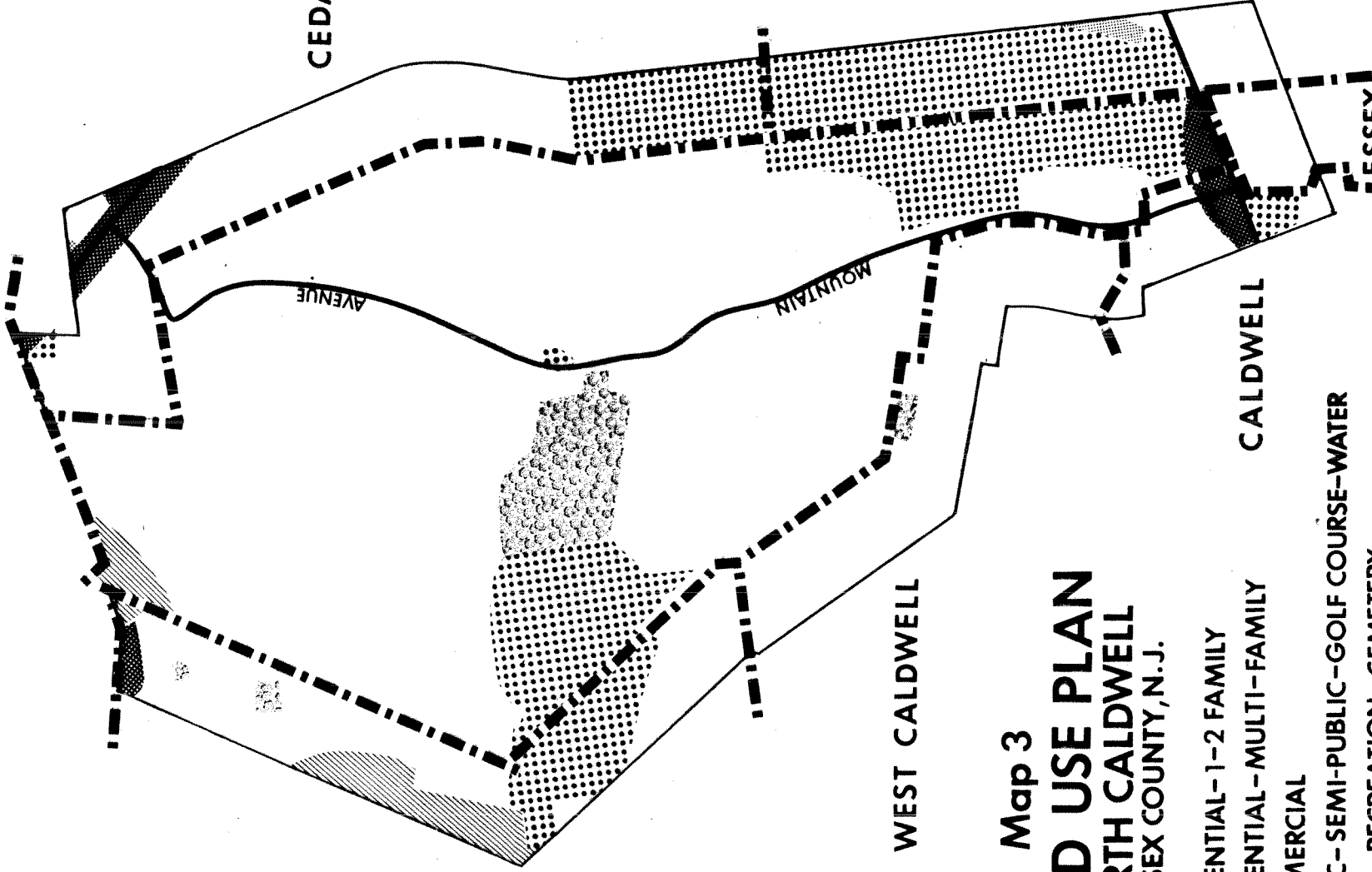
WEST CALDWELL

FAIRFIELD

Map 3

LAND USE PLAN NORTH CALDWELL ESSEX COUNTY, N.J.

- RESIDENTIAL - 1-2 FAMILY
- RESIDENTIAL - MULTI-FAMILY
- COMMERCIAL
- PUBLIC - SEMI-PUBLIC - GOLF COURSE - WATER
- PARKS - RECREATION - CEMETERY
- INDUSTRIAL



Adjoining Municipalities. North Caldwell shares common boundaries with seven municipalities, six in Essex County and one, Little Falls, in Passaic County. On the whole, North Caldwell's planning policies and zoning regulations along its boundaries are compatible with those of adjoining municipalities. There are a few areas which should be given special consideration. These are described below.

Verona and Cedar Grove - Essex County Lands. The Essex County Jail Annex and adjacent lands are located in North Caldwell, Verona and Cedar Grove. All three municipalities have zoned these lands for low density residential use, and the Verona Master Plan recommends that lands which are unusable (steep slopes, etc.) should be deeded to Verona as permanent open space. Any private development of the County lands should be based on plans for the entire tract, as discussed in detail elsewhere in this master plan report.

Fairfield: Green Brook Country Club. The Green Brook Country Club is located in North Caldwell and Fairfield, with about 101 of its 220 acres in North Caldwell. In both municipalities, the land use plan recommends keeping the lands in open space. Current zoning in North Caldwell is for open space, and in Fairfield, low density single-family residential use. If the North Caldwell master plan revision recommends any special residential zoning, however, it should take into account the Fairfield portion of the property.

Cedar Grove: Paragano Property. The Paragano property lies along the boundary with Cedar Grove in the northeast corner of North Caldwell, and the southern portion of the property extends into Cedar Grove. In North Caldwell, the entire property is zoned R-1, for single-family homes on half-acre lots. In Cedar Grove, the zoning permits single-family homes on 18,000 square foot lots, but provides an option for office and research development on lots of at least five acres. The master plan should consider the implications of this type of development on the adjoining lands in North Caldwell.

Caldwell: Bloomfield Avenue. The block between Elm Road and Bloomfield Avenue is in North Caldwell's Office District zone, which permits professional, business and medical offices and banks but not retail uses. The adjoining frontage along Bloomfield Avenue in Caldwell is zoned General Business District (B), which permits retail and service businesses as well as offices. The master plan should consider whether this difference in zoning could create problems for future development.

Part II.

COMMUNITY FACILITIES AND SERVICES

Introduction

The master plan considers present and projected future needs for the facilities and services provided by the Township; schools, parks and recreation, police and fire protection, and municipal administration. A special library report examines the question of whether the Township should provide library service for its residents, and if so, by what means.

Demographic studies prepared for the master plan revision indicate that in the short term the Township's population will probably remain at about its present level, and over the long term, a maximum increase of about 2,000 by the year 2000 can be expected. Planning for community facilities is therefore based on a current population of 6,000 and a maximum population of 8,000.

Community facilities planning is affected by changes among the age groups in the Township's population. Among recent trends which should prove important are the increase in one- and two-person households, the decrease in school-age children and the projected increase in senior citizens. Changes in the grade school age cohort (5-14) are especially important because they affect school facilities provided by the Board of Education, and they represent the greatest demand for active recreation facilities like ball fields, playgrounds and swimming facilities. The following section analyzes recent and projected trends in North Caldwell's 5-14 year-old age cohort.

Trends and Projections in the 5-14 Year Old Age Cohort.

In 1970, there were 1,243 children in the 5-14 year old age cohort in North Caldwell, or 19.3 percent of the population. By 1980, the number had dropped to 914, only 15.6 percent of the population.

Changes in this age group during the 1980's will depend on several factors: the number of children under 5 in 1980, the number of children born in the Township between 1980 and 1985, and the number of children in this age group moving into the Township during the decade. In 1980, the under-5 age cohort was only 58 percent of the under-5 cohort in 1970. Annual number of births in the Township dropped from previous years in 1979 and 1980, and if this trend continues, fewer children will be born between 1980 and 1985 than during previous 5-year periods. Further, current and projected housing trends do not suggest that there will be any increase in school-age children moving into the Township during the 1980's. New housing is being built at a modest rate, and because of the cost of houses in the Township, many of the families purchasing new housing have children already past grade-school age.

All of these trends indicate that the 5-14 year old age cohort in North Caldwell will continue to decline during the 1980's, as it did during the 1970's.

Municipal Facilities: Public Safety, Public Works and Municipal Facilities

Facilities for municipal administration, public safety (the fire and police departments) and public works are all located in the municipal complex on Gould Avenue.

The department of public safety is housed in the old Borough Hall and a three-bay fire station adjoining it. The old Borough Hall was recently renovated for the police department and contains about 5,000 square feet of floor space on two floors.

According to the Police Chief, the existing space for the Police is adequate and should remain so for the foreseeable future.

The Township administrative offices are located in the municipal building, completed in 1981. The building contains about 5,000 square feet on the ground floor, which is used for offices and meeting rooms, and a basement which is used for storage and provides room for future expansion of the municipal offices. With little population or commercial growth projected for the Township, the municipal building should meet the Township's administrative needs for the foreseeable future.

On the south side of Gould Avenue, separated from the municipal building by a residential lot, is a building containing the Fireman's Community Center and public works garage. The community center has a large room used for social events and meetings. The garage is at the rear of the building, visually separated from the community center by its lower grade. The

public works garage is adequate for the Township's equipment, although additional storage space is needed for small equipment. Some storage area could be provided by expanding the shed adjoining the tennis courts.

Parks and Recreation

The National Parks and Recreation Association recommends that a municipality be responsible primarily for those parks and recreation facilities used by its residents on a daily and weekly basis. Three types of municipal park facilities are recommended: playlots and mini-parks, neighborhood parks and district parks. Playlots and mini-parks are the smallest type of park facility, serving the immediate area. They are appropriate for areas of high density urban housing like row houses or apartments. In North Caldwell, where most housing is single-family homes on lots of 1/3 acre or more, this type of park is not needed.

Neighborhood parks are somewhat larger and provide playgrounds, sports fields and other recreation facilities for local needs. They are often associated with elementary schools and should be within 1/4-1/2 mile of their users. The Recreation and Parks Association recommends at least 2.5 acres of land in neighborhood parks per 1,000 population.

District parks provide more specialized facilities, such as tennis courts and swimming. They should be located within 1/2-3 miles of their users with at least 2.5 acres of land in district parks per 1,000 population. Because of the Township's

small population and size, the neighborhood and district park requirements can be combined into a single standard of 5 acres of municipal park per 1,000 population. North Caldwell should therefore have about 30 acres of park and recreation land for its current population of about 6,000, and should plan for about 40 acres for the projected maximum population of 8,000.

North Caldwell's recreation facilities include the municipal complex on Gould Avenue and the two recreation areas associated with the Township schools, totalling about 36 acres:

Municipal recreation complex:	28 acres (approx.)
Grandview School	5.7 acres
Gould School	<u>2.0 acres</u>
	35.7 acres

Township sports teams also use fields at the West Essex Regional School, located in the Township on West Greenbrook Road.

The Township's recreation land meets recommended standards for its present population. Facilities at the municipal recreation complex include one ballfield (Firemens Field), one multi-purpose field (Liberty Field) which has two ballfields and a soccer/football area, 6 tennis courts, a swimming pool complex with playground and picnic benches, a picnic grove and a wooded area. The cleared portion of the site is almost entirely developed, and the undeveloped portion has severe limitations to development, being heavily wooded, at the rear of the site at a substantially lower grade than the front portion, and partly in the Green Brook floodplain. Any extensive additions to the Township's active sports facilities would

require acquisition of additional land. The only significant potential for additional recreational use on the site is for walking trails and similar "passive" recreation. A number of additions to the Township's recreation facilities have been suggested by the Recreation Advisory Board. Because of the limited potential of the undeveloped, wooded portion of the existing recreation complex, some of these may require additional land acquisition. The suggested new facilities include:

1. An additional multi-purpose playing field for league teams. The fields at the municipal recreation complex are now heavily used and the school fields are not suitable for some league play.
2. Lighting for Liberty Field, to permit its use at night. (If an additional field is acquired outside the recreation complex, this may not be needed.)
3. Bocce court.
4. Development of hiking trails in the woods.
5. Courts for platform tennis.
6. Tennis practice wall.
7. Flooded area for ice skating.

The Township should try to set priorities among these improvements for the most effective use of its limited funds. Projected demographic changes suggest that facilities for children may be less important in five to ten years, and facilities for adults and senior citizens more important. The Township should also try to gauge potential demand for each of these proposed facilities among residents, possibly with a poll. A long-term program of priorities should be based on poll

results, projected demographic changes, and the cost of each proposed facility.

The recreation complex could be expanded by acquiring the single-family home property on Gould Avenue, just east of the municipal building. This property, if and when it is offered for sale, could be acquired by the Township. Because of the site's steep slope, however, its suitability for specific uses should be determined before the Township requests a right of first refusal.

An additional sports field could be acquired from Essex County on the Hospital lands property, at the corner of Mountain Avenue and Sanitarium Road. The topography is suitable, and the site could be included in a greenbelt buffer developed as part of an overall development plan for the County lands, as recommended in the Township's Study of Vacant Lands of November 1981. Creation of a municipal sports field on the Mountain Avenue site has been discussed in informal talks held with County officials on the development of the County lands.

Township Schools

The Township school system has two schools; the Grandview School for grades K-3 on Hamilton Drive East, and the Gould School for grades 4-6 on Gould and Mountain Avenues near the municipal complex.

The total pupil capacity of the two schools, as rated in the master plan for educational facilities, is 742 students. The combined enrollment of the two schools in February, 1982, was

447, or 295 students less than capacity. Enrollment has been declining in both schools, as it has in many suburban school districts, and recent demographic trends point to a continuing decline during the 1980's. Table 1 shows recent enrollment trends in the school system.

Table 1

Recent Enrollment Trends - North Caldwell Schools

<u>Grade</u>	<u>1977-1978</u>	<u>1980-1981</u>	<u>1981-1982</u>	<u>February 1982</u>
K	61	44	50	62
1	61	50	44	48
2	91	64	50	48
3	<u>86</u>	<u>57</u>	<u>64</u>	<u>65</u>
Total K-3	299	215	208	223
4	91	62	57	58
5	111	94	62	68
6	<u>95</u>	<u>93</u>	<u>94</u>	<u>98</u>
Total 4-6	297	249	213	224
Grand Total:	<u>596</u>	<u>464</u>	<u>421</u>	<u>447</u>

Source: North Caldwell Master Plan for Educational Facilities,
December 1977.
North Caldwell Board of Education, enrollment figures
supplied March 1982.

Grandview School and Enrollment Trends in Grades K-3.

In 1977-78, when the school master plan was prepared, 299 pupils were enrolled in grades K-3, down from 425 in the 1970-71 school year. The school master plan projected a continuing decline, to a low of 239 in 1979-80, followed by slight increases over the next eight years, to an enrollment of 280 by 1987-88, the end of the planning period. As of the 1981-82 school year, this

projected turnaround had not yet taken place. Enrollment was down to 223 in February 1982 at Grandview School.

Enrollment should continue to drop during the next few years. Actual births in the Township from 1977 through 1980 have been even lower than those projected in the school master plan and the children born during these years will begin entering the school system in 1982.

The rated capacity of the school is for 361 students so there is already considerable excess capacity. The Grandview School should be adequate for the lower grades in North Caldwell for the foreseeable future.

Gould School and Enrollment Trends in Grades 4-6. The Gould School at Gould and Mountain Avenues has a rated capacity of 381 students and is used for grades 4-6. During the early 1970's, enrollment remained above 320 but has been declining steadily since the 1975-76 school years. In 1977, when the school master plan was prepared, enrollment was 297, and had dropped to 224 by February, 1982.

Enrollment projections in the school master plan were for a steady decline through the 1983-84 school year, followed by a modest upturn in the next four years. The enrollment projected for the 1981-82 school year, 233, is close to the actual enrollment of 224 in February, 1982. However, the continuing decline in enrollment in grades K-3 and the drop in births in recent years suggest that enrollment in the middle school will continue to decline during the 1980's. The Gould School now has

157 fewer students than its rated capacity and this gap will probably increase as the small lower-grade classes move up through the system.

The Gould School consists of two buildings. The newer Mountain Avenue building contains ten regular classrooms, one special classroom and a combination gymnasium-auditorium. The older Gould Avenue building, dating to 1924, contains, in addition to six (6) classrooms, a cafeteria, library (media center), art room and music room. If the Gould Avenue building were to be phased out, and converted for non-school uses, the Mountain Avenue building would require an addition to provide all of these facilities. This would be expensive and possibly prohibitive because of the site's difficult topography. A reuse plan should be developed for the Gould Avenue building as a first step.

Library Service for North Caldwell

It has been suggested that North Caldwell explore the possibility of establishing a library. This section will examine the options available to the Township for providing municipal library service and assess the feasibility of each.

Where do North Caldwell residents obtain library service? There are municipal libraries in six of the seven towns adjoining North Caldwell (Essex Fells has no library). Each provides library service which meets minimum recommended standards for size of book collection, number of employees and

hours of service (see Table 2). All six are about the same size, although Cedar Grove, Verona and Little Falls support somewhat larger collections than Caldwell, West Caldwell and Fairfield. All six libraries are two to three miles from the center of North Caldwell, and they are located near shopping and services used by North Caldwell residents. Table 2 compares various characteristics of these six libraries, including book and periodical collections, staff, hours of service, and expenditures.

Table 2

Area Library Statistics, 1980

	Population	Equalized Valuation (\$000)	Total Expenditures	Salaries & Wages	Library Materials	Expenditure Per Capita	Employees (full-time equivalent)	Professionally Certified Employees	Total Volumes Owned	Volumes Per Capita	Periodical Subscriptions	Hours of Service (weekly)
Caldwell	7,624	\$152,290	\$95,863	\$63,588	\$24,734	\$12.57	5	2	36,113	4.74	106	52
Cedar Grove	12,600	\$305,686	\$174,020	\$116,285	\$26,414	\$13.81	8	4	49,271	3.91	201	52.5
Fairfield	7,987	\$387,247	\$111,979	\$76,257	\$20,012	\$14.02	8	1	39,183	4.91	167	52
Little Falls	11,496	\$280,064	\$108,106	\$73,539	\$13,847	\$9.40	6	1	47,794	4.16	89	45
Verona	14,166	\$315,652	\$163,522	\$108,203	\$26,746	\$11.54	8	4	56,428	3.98	131	63
West Caldwell	11,407	\$368,403	\$208,474	\$132,811	\$32,709	\$18.28	12	3	38,778	3.40	147	60

Source: Public Library Statistics, 1980, N.J. Department of Education, Division of State Library, 1981.

North Caldwell residents use all six libraries, according to information in a survey of their nonresident cardholders in the Spring of 1982 (see Table 3). Nonresident regulations and fees vary among them: some libraries offer reduced rate student cards, some offer reduced rate or free cards to senior citizens, and some offer free cards to those employed in the municipality. The figures in Table 3, therefore, do not necessarily reflect the true preferences of North Caldwell residents if all factors were equal. In Fairfield, for instance, there are few paying cardholders from North Caldwell. However, it has a large job base, and offers free cards to nonresidents employed in Fairfield. Table 3 does indicate that North Caldwell residents use libraries in a variety of locations. One reason is that there is no single centralized location where North Caldwell residents go for shopping and services. According to the survey, Caldwell, Cedar Grove, Little Falls and West Caldwell are used the most, and used by equal numbers of North Caldwell residents. Table 3 also shows that at least 25 percent of the Township's households (391 of 1,589) pay to belong to local libraries. This is a lower library membership than would be expected from a population such as North Caldwell's. The high income and education levels in the Township are usually associated with a much higher percentage of library use. As these figures do not include residents who receive a free card in the municipality where they are employed, potential membership in a Township library should be considerably higher. In addition, there is a

strong probability that many residents prefer to buy their own books or use reference material in schools or employment centers.

Table 3

North Caldwell Households With Nonresident Cards

in Area Libraries, Spring 1982

<u>Library</u>	<u>North Caldwell Residents Holding Nonresident Cards</u>	<u>Nonresident Fee (annual)</u>
Caldwell:		
Regular	70	\$25 regular
Senior citizens	9	Senior citizens free
Cedar Grove	0-85	\$15/household
Fairfield	8	\$20/adult \$10/student Employees in Fair- field free
Little Falls	88	\$15/household
Verona	10	\$30/household
West Caldwell:		
Household	56	\$55/household
Students	<u>65</u>	\$15/student
Total:	391	

Source: Consultant's Survey, Spring 1982.

Other Library Functions. In addition to lending books and periodicals, libraries serve a variety of other functions in the community.

One is to provide reference services, both to residents and to local businesses. In North Caldwell, however, there is very little business, and reference materials would be primarily for Township residents, particularly school children.

A community library can also provide space for community meetings, lectures, classes, and entertainment programs, as well as exhibits and displays. North Caldwell already has a community center, located in the municipal complex, which provides a large meeting room for many of these purposes. This function of a library, although useful, is therefore not critical.

A community library can also serve as a repository for books, documents, maps, and other materials concerning local history.

Options for Library Service. There are several ways in which the Township can provide library service to its residents: (a) by contract with an existing library; (b) jointly with an existing library; or, (c) with its own municipal library facility. The following describes the advantages and disadvantages of each, as well as the option of maintaining existing arrangements, and the role of the County Cooperating Library System.

a. Maintain Existing Arrangements. One option for the Township is to maintain the status quo, with Township residents joining privately the library of their choice. This permits the choice of a library most satisfactory for considerations such as convenience, facilities offered, and cost. Library service is obtained on a user-fee basis; i.e., it is paid for only by those who use it. One disadvantage of this arrangement is that library service is available to children only when traveling with parents. None of the libraries in the area can be easily reached on foot or by bicycle from North Caldwell.

b. Contract Service. If North Caldwell wishes to support library service from its tax base, one option under the N.J. Library statutes is to contract with an existing public library for an annual municipal contribution, to be negotiated between the two municipalities which will permit all North Caldwell residents to join the library. Contracting for library service does not require approval by a referendum; however, it is subject to renegotiation each year. Because North Caldwell residents now use several libraries in the area, there is no clear choice for the most appropriate municipality for a contract arrangement. If the Township wishes to pursue this option, it should explore it with Caldwell, West Caldwell, and Cedar Grove, all of which have a substantial number of nonresident cardholders from North Caldwell. The Little Falls library, being located in Passaic County, would not be able to offer participation in the Essex County cooperating system.

c. Joint Library Service. Another option under State law is for two municipalities to support a joint library. Such an arrangement must be established by referendum in both municipalities, and is overseen by a Board of Trustees with members appointed from both municipalities. Joint libraries are usually created where two municipalities have a special relationship, such as a central shopping town and its surrounding township; Morristown-Morris Township and Princeton Borough-Princeton Township are two such examples with joint libraries. There are only five joint municipal libraries in New

Jersey. West Caldwell has been suggested as an appropriate choice for a joint library arrangement; however, as with contract service, it is not the only logical choice.

County of Essex Cooperating Libraries System (CECLS).

An interlibrary cooperating system has been established in Essex County with funding from the County and the New Jersey State Library, under which all public libraries and three college libraries in Essex County are open to members of any participating library. If North Caldwell establishes its own library, or joins another library under a contract or joint library arrangement, North Caldwell residents will automatically become participants in the County cooperating system. At present, any household in North Caldwell may join the system privately, by joining any public library in the County and paying a fee of \$60 per year, which covers the library's own nonresident fee, the balance going to the CECLS system.

The CECLS has suggested several alternatives whereby North Caldwell could join the system as a municipality: (1) reimbursing any local family joining the system for the \$60 annual fee; (2) establishing joint or contractual library service with one of the area's libraries, which would make all local residents members of the County system; or (3) establishing a municipal library in North Caldwell, which would then automatically become a member of the County system.

As membership in County system is now available to North Caldwell residents on a user-fee basis, the critical issue is not

participation in the system, but rather what kind of library service, if any, the town should provide for its residents. In addition, the future existence of the County cooperating system depends on the continuance of County and State funding.

Municipal Library. A library can be established in North Caldwell in either of two ways under New Jersey statutes: a public library, funded by the Township; or an association library organized by a citizens' non-profit association and funded through a combination of fees, gifts and municipal contributions.

A public library must be established by binding referendum and once established, must be supported at a minimum level of 1/3 mill per dollar of municipal assessed valuation. The municipality holds title to the library building and library policy is overseen by a Board of Trustees appointed by the Mayor.

An association library may be established without a referendum. The municipality is not legally obligated to support it and may withdraw or reduce its support, as has happened recently in some financially strapped municipalities, leaving the library without adequate operating funds. This alternative is not recommended unless the association has endowments or some assurance of continuing.

The following section will explore the most important considerations in establishing a municipal library in North Caldwell: procedures, location, size, costs and revenue sources. The analysis is based on the assumption that a library in the

Township would realistically serve only North Caldwell residents. The Township's topography isolates it from surrounding communities and it has no commercial areas, public facilities or employment base to attract nonresidents to the Township. A library should therefore be designed for a present population of 6,000 and a maximum population of 8,000 (the projected population at full development of the community's vacant land).

Establishing and Financing of a Public Library. A municipal library must be established by binding referendum at a general or special election. The referendum should be based on a preliminary program and costs developed by a library planning consultant in conjunction with a committee of interested residents, and representation from the Council and the Board of Education.

If the library is approved, the Mayor appoints a Board of Trustees, with five citizen members and the Mayor and Superintendent of Schools sitting ex-officio. The Township may appropriate capital expenditures or issue municipal bonds for construction, and it retains title to the library building. Operating expenses are appropriated from the current municipal budget, at a required minimum level of 1/3 mill per \$1.00 of assessed valuation (actual library budgets in New Jersey tend to be substantially higher than the minimum). Municipal appropriations may be supplemented by private gifts and endowments which may be invested by the Board of Trustees to provide library income.

A municipal library is eligible to receive State library aid, which is granted on a per capita basis to municipal libraries which meet State standards for number of books, number of periodicals, number and qualifications of personnel and hours of service. A municipality of 6,000 people would be required to have two (2) full-time paid employees (neither need be a certified professional librarian), a collection of at least 8,000 volumes, 50 periodicals and 30 hours or more of service a week.

In 1980, per capita State aid to municipal libraries in Essex County averaged 7.6 percent of library income, ranging from 14.4 percent of library income in Irvington to 3.8 percent in Fairfield.

State construction grants are also available for public libraries under the New Jersey Library Construction Incentive Act, for land and buildings, site improvements, new construction and rehabilitation of older buildings. Federal funding for library construction is no longer available.

Municipal Library Standards. Library planners have established standards for planning and evaluating libraries based on population, space, size of book and periodical collections, hours of service and size of staff. Table 4 compares standards from three sources: the American Library Association, a basic reference work on library planning, and the minimum State aid requirements for a municipality the size of North Caldwell.

A comparison of Tables 2 and 4 shows that the municipalities adjoining North Caldwell exceed these standards in almost all cases.

Table 4

Library Standards for Small Area Libraries

	<u>ALA^a</u>	<u>Wheeler, & Goldhor^b</u>	<u>New Jersey State Aid Requirements^c</u>	<u>Suggested Preliminary Standards for North Caldwell</u>
Volumes (for 6,000 population)	21,000	21,000- 30,000	8,000	21,000
Total Floor Space (for 8,000 popu- lation)	5,600 sq.ft.	5,600- 6,400 sq.ft.*	5,600 sq.ft.	8,000
Periodicals (for 6,000 population)	50-75	N.A.	50	75
Hours of 30 Service per Week	30-45	N.A.	30	
Staff	3-5 full-time equivalent including 1 certified professional	N.A.	2 full-time equivalent	2 full-time equivalent

^aInterim Standards for Small Area Libraries, American Library Association, 1962.

^bPractical Administration of Public Libraries, Wheeler & Goldhor, Harper & Row, 1962.

^cN.J. Administrative Code; 6:68-1, State Library Aid, and 6:68-4, Library Construction Incentive Act.

*This source recommends 8,000 square feet as the minimum size facility to justify library service.

The right-hand column in Table 4 gives preliminary recommendations for a library building program, based on the standards and on present and projected population. They are only for the purpose of making preliminary cost estimates; a more extensive library planning effort might come up with different recommendations taking into account special community needs, population characteristics and residents' interests.

Location. The proper location of a library will help ensure that it is easily accessible and fully used. The American Library Association recommends that a library be within 15 minutes travel time of the population it serves, near the geographic and population center of its service area and with no transportation barriers to access. It should be located near other traffic-generating activity like a shopping center, civic center or school. The library site should have direct access from the street, adequate parking, and be free of nuisances such as excessive noise, traffic and heavy industry.

To meet these criteria, the ideal location for a library in North Caldwell would be the vicinity of the municipal complex on Gould Avenue. The Township has no retail shopping district, and the municipal recreation complex is the only focus of activity for community residents. It is centrally located, and because the town's population is evenly distributed, it is also roughly at the population center. A library near the recreation complex would be no more than 1½ miles and an easy bicycle ride from almost any point in the Township.

Adequate parking is essential. The N.J. State Library recommends 2-3 spaces per 1,000 population, or 16-24 spaces for the maximum service population of 8,000. This would require 6,400-9,600 square feet of parking area.

With a building of at least 8,000 square feet, and about 9,600 feet of land for parking, a site of at least one-half acre would be needed for a library in North Caldwell.

Possible Library Sites. This section briefly discusses possible library sites in the vicinity of the municipal complex, including renovation of the Gould Avenue School if phased out by the Board of Education; use of a portion of the municipal complex site; and purchase of the residential property adjoining the municipal building.

Gould Avenue School. The 1977 Facilities Master Plan of the Board of Education raised the possibility of phasing out the Gould Avenue School in the Gould School complex and converting it to other uses if enrollment continued to decline in the Township schools. The building has over 10,000 square feet of floor area on three floors. In the Spring of 1982, enrollment in the Gould School (Grades 4-6) was 213, compared to the rated capacity of 381 for the school complex, leaving unused capacity for 168 students. Although in theory, this would permit the closing of the six classrooms in the Gould Avenue School, the school also provides special facilities for grades 4-6, including a cafeteria, art and ceramics rooms, library (media center) and music room. Phasing out school use of the Gould Avenue building

would therefore require an addition to the Mountain Avenue building to provide these facilities for the middle school. The cost of such an addition would probably more than offset any cost saving from using an existing building for a library. The Gould Avenue building also presents several problems for library use: floor reinforcement may be needed to support the heavy floor load exerted by bookshelves; opening up of the interior space would probably be needed; and the site lacks adequate parking.

Construction on the Municipal Complex Site. Although the municipal complex on Gould Avenue includes 29 acres, almost all of the buildable portions of the property have been developed for buildings, recreation facilities and associated parking. The most suitable area for a library would be on land now occupied by parking lots for the pool and municipal building which is the only remaining open land near the street. A site evaluation and parking study would be needed to judge the feasibility of such a project.

Residential Property on Gould Avenue. The property adjoining the municipal building on the east, which includes a private house on a lot of about one acre, would be an ideal library location. If there is interest in a municipal library, the Township should consider a first refusal on the property when it is offered for sale. The house on the site could serve as the nucleus of a library building, but would require a substantial addition to provide the needed floor area and the type of space suitable to a library.

Municipal Library Cost. The following is a very rough preliminary estimate of initial costs and operating costs for establishing a public library in North Caldwell. They are only for the purpose of assessing the feasibility of supporting a library in the Township. If a referendum is held on the establishment of a library, a detailed cost analysis for a building program on a specific site should be prepared.

Initial costs will include site acquisition, building construction or renovation, furnishings and equipment, and the initial book and periodical collection. Operating costs will include salaries for library and adjunct personnel and materials, including continuing book and periodical purchases.

Initial Cost. Initial costs can be roughly estimated at this stage for all elements except site acquisition, which would depend entirely on whether the site is privately or municipally owned, or under some other public jurisdiction, such as the Board of Education. The following cost estimate is based on construction and furnishing of an 8,000 square foot building, stocked with an initial collection of 21,000 books (3.5 books per capita for the present population of 6,000), and an initial collection of 75 periodicals. The cost of the book collection could be reduced by the donation of books, and construction costs could be lower if an existing building is renovated. Total initial cost, excluding site acquisition, is estimated at about \$890,000, as shown in Table 5, below.

Table 5
Estimated Initial Costs (Excluding Site)

<u>for Municipal Library</u>	
Construction (8,000 sq.ft. @ \$65/sq.ft.)	\$520,000
Furnishings and Equipment (8,000 sq.ft. @ \$20/sq.ft.)	160,000
Book Collection (21,000 vols. @ \$10 each)	210,000
Periodical Collection (75 @ \$20 each)	<u>1,500</u>
Total	\$891,500

Source: Costs from Public Library Services Division, N.J. State Library.

The New Jersey Library Construction Incentive Act provides funds for costs associated with construction of a new library. The State regulations for construction grants specify that a grant shall be no less than 20 percent of project cost, but no more than 40 percent, or \$300,000, whichever is less. The regulations also stipulate a priority system for awarding of grants, with first priority going to area libraries, or municipal libraries in model city or community development city municipalities. North Caldwell would qualify as a second priority applicant, which includes all other municipal libraries. Within each priority grouping awards are made in reverse order of the applicant's per capita wealth (ratio of equalized valuation to population). North Caldwell would probably be low on the priority scale and chances of receiving a construction incentive grant are small.

Operating Cost. Operating costs can be estimated from per capita expenditures in other public libraries in the area.

The New Jersey State Library compiles annual cost figures as well as other statistics for all public libraries in the state. The most recent figures available are for 1980, and these have been translated into 1982 costs using the increase in the consumer price index between 1980 and 1982 (8 percent between December 1980 and April 1982).

In 1980, the average per capita operating cost for all public libraries in Essex County was \$14.54. In the six municipalities adjoining North Caldwell, per capita operating cost in 1980 ranged from a low of \$9.40 in Little Falls to a high of \$18.28 in West Caldwell, but in the others per capita cost fell between \$11.50 and \$14. A reasonable per capita cost for planning purposes, therefore, is \$14, inflated to \$15 to reflect 1982 prices. With a current population of about 6,000, a projected annual operating budget for a municipal library in North Caldwell would be about \$90,000. If the Township were to receive 7.5 percent of this in State Library aid (the 1980 average for Essex County libraries), the operating budget would be reduced to \$83,250.

Summary and Recommendations

The basic options for providing library service in North Caldwell, in addition to maintaining the status quo, are joint or contractual service with an existing municipal library in the area, or establishment of a North Caldwell municipal library.

Neither joint nor contractual service appears to offer local residents any significant advantages over existing arrangements. Assuming that the library providing the service bases North Caldwell's contribution on its per capita operating costs, it would probably cost almost as much per household as the \$60 which an individual household can now pay to join an area library and the County cooperating library system. And even with a joint or contractual arrangement, North Caldwell residents would have to obtain library service outside the Township, as they do now.

The only meaningful alternative to the status quo is a municipal library in North Caldwell. This will be expensive, both to build and to operate, and will be supported by a potential population of no more than 8,000. Costs may be reduced by monetary gifts from Township residents, book donations, State construction grants, and State per capita operating aid.

A library located within the Township would benefit primarily the residents' children, who would be able to use the library independently. A municipal library would also supplement library resources in the schools and meet special local needs for books, periodicals, other media and services.

Because of the relatively high cost and limited benefits of a local library, it is recommended that the Township not actively pursue the issue unless it is apparent that substantial public interest and support exists among the residents. At that time the Council can initiate the next steps; i.e., preparing a

preliminary plan and costs to submit a binding referendum to the voters. A large endowment for construction and/or operating income could bring down costs substantially. This approach might be explored by interested citizens.

Part III.

CIRCULATION ELEMENT

Introduction

In the 1975 Master Plan, the Township's road network was characterized as serving primarily residents' trips to work and shopping, with little commercial, industrial or through traffic. It cited as the principal reason, North Caldwell's physical isolation, with steep slopes along its eastern and northern boundaries, and moderate slopes along the southern and western boundaries, and the fact that no major arterial roads pass through North Caldwell. In 1975, as is true today, the most heavily traveled road within the Township was Bloomfield Avenue, which runs along the southern boundary for about 1,500 feet.

While the description of the road network is still generally accurate, there has been a noticeable increase in traffic, particularly on the County arterials. (See Table 1.) From 1973 to 1981, the average increase has been 55 percent. Given the fact that only 113 building permits were issued for new homes throughout the Township from 1972 to 1980, and household size dropped from 3.54 to 3.2, a good part of the traffic increase on County roads represents through traffic; vehicles bound to and from destinations outside the community. Part of the problem may be alleviated when a new interchange at Route 46 and Passaic Avenue in Fairfield is completed in 1983-1984. The present intersection becomes severely congested during peak hours and many motorists heading east on Route 46 probably cut through North Caldwell to bypass the problem.

There is no public transit service in North Caldwell except for buses along Bloomfield Avenue at the extreme southern end of the Township. Notwithstanding the recent increase in through traffic, the Township's road network is not particularly well-suited for through traffic, either in a north-south or east-west direction, because of the extreme slopes along the entire northern and eastern perimeter and because of the curvilinear nature of the County arterials. The lack of direct traffic routes, the low density of housing in the Township, and the absence of commercial, industrial and institutional activity make public transportation service infeasible and inappropriate in North Caldwell.

Road Categories

In order to analyze the need for road improvements, this master plan study has classified roads and streets in North Caldwell as arterial, collector and local, according to their function and the volume of traffic they carry. Almost all roads within the Township are classified as collector or local streets. The only arterials are Bloomfield Avenue, which serves as the municipal boundary between North Caldwell and Essex Fells, and Mountain Avenue, with average daily traffic volumes at the low end of the range considered typical of an arterial road. Main Street-Fairfield Road, just outside Township boundaries, is also an arterial road.

Daily traffic volume reflects the function a road is performing. On a street network in a built-up area such as North Caldwell, typical daily traffic volumes and functions are as follows:

Arterial: 5,000 cars a day and over; carries primarily inter-municipal through traffic.

Collector: 2,000-5,000 cars/day; carries traffic from points of origin to arterial roads.

Local: Under 2,000 cars/day; primarily serves adjoining land uses, with little or no through traffic.

Table 1 lists traffic counts taken on roads in North Caldwell during 1972/1973 and 1981 by the Essex County Department of Engineering. The 1981 counts were ten-hour counts (taken between 8 a.m. and 6 p.m.), and adjusted to average daily traffic counts (ADTs) using a generally accepted multiplier of 1.6. This multiplier may be high for a community such as North Caldwell, which has relatively little activity which would generate traffic during evening and night hours and virtually no through traffic. The 1981 estimated ADTs should therefore be considered maximum volumes. They indicate that, within the Township, only Mountain Avenue carries traffic above the collector level. The street classifications can be seen in the Circulation Element Map No. 4.

All of the arterial roads and most of the collector roads in North Caldwell are under the jurisdiction of Essex County. The only collector roads under municipal jurisdiction are Smull Avenue and Greenbrook Road East. All local streets are municipal, and no state roads are located within North Caldwell.

All the roads within North Caldwell have two traffic lanes, but the relatively low volumes they carry indicate that existing capacity should be adequate for their present and anticipated future use. Capacity should remain adequate in the future because there is little room for new development in the Township, and hopefully, through traffic will use Passaic Avenue when the present bottleneck at Route 46 in Fairfield is corrected. The largest potential future traffic generator is the development of the Essex County lands. The traffic impact on Township roads will be an important consideration in evaluating any development proposed for these lands.

Table 1

1981 Traffic Counts - County Roads, North Caldwell

1981 Estimated ADT** (vehicles)	Specific Location of Count		General Location and Date of Count	
	1972/1973 ADT			
7,533 1,941 5,435 2,314	5,243	Mountain (N. of Elm) Mountain (S. of Elm) Elm (E. of Mountain) Elm (W. of Mountain)	Mountain Ave. & Elm Rd. 1/6/81	Mountain Ave. & Sanitarium Rd. 6/29/81
5,906 5,798	3,225*	Mountain (N. of Sanitarium) Mountain (S. of Sanitarium)	Mountain Ave. & Forest Ave. 10/28/81	Mountain Ave. & Smull Ave. 6/17/81
5,568 5,870 2,027	4,266*	Mountain (S. of Forest) Mountain (N. of Forest) Forest (W. of Mountain)	Mountain, Gould & Knollwood Ave. 6/12/81	Mountain Ave. & Greenbrook Rd. E. 1981
8,725 8,075 3,051 1,368	5,756	Mountain (S. of Gould) Mountain (N. of Gould) Gould (W. of Mountain) Knollwood (E. of Mountain)		
5,693 8,234 3,133	4,639	Mountain (S. of Smull) Mountain (N. of Smull) Smull (S. of Mountain)		
5,989 7,645 3,531	4,253*	Mountain (N. of E. Greenbrook) Mountain (S. of E. Greenbrook) Greenbrook (W. of Mountain)		
4,144 4,685 2,278	2,941*	Central (S. of Gould) Central (N. of Gould) Gould (E. of Central)	Central Ave. & Gould Ave. 1/5/81	

Table 1 (Continued)

1981 Estimated ADT** (vehicles)	General Location and Date of Count		Specific Location of Count		1972/1973 ADT	
4,379 6,894 3,581	Central Ave. & Greenbrook Rd. E. 9/29/81	Central (S. of Greenbrook E.) Central (N. of Greenbrook E.) Greenbrook (E. of Central)	1,888	Grandview Pl. (W. of Grandview) Little Falls Rd. (N. of Grandview) Main St. (W. of Little Falls Rd.) Park Place (E. of Little Falls Rd.)	7,264	4,411 7,005 10,107 157
8,741 3,134 5,770	Mountain Ave. & Lindsley Rd. 11/25/81	Lindsley (E. of Mountain) Lindsley (W. of Mountain) Mountain (S. of Lindsley Rd.)	5,633			

*Ten-hour count adjusted by a factor of 1.6.

**1972/1973 count is phased between 1981 count at a specific intersection when exact location is unknown. Result may not be directly comparable.

Source: Essex County Department of Engineering.

Hazardous Intersections

The Township's most critical circulation problems are hazardous road conditions arising from steep grades and older intersections. The 1975 Master Plan identified five especially hazardous locations in the Township and recommended improvements to them. Some improvements have been made recently, but some problems still remain. Improvements and problems are discussed below. (See Circulation Element Map No. 4 for locations.)

A. Mountain Avenue, south of its intersection with Lindsley Road. This is an exceptionally hazardous location because of its steep grades, narrow road width and sharp curves. Improvement to this intersection is slated to begin shortly as part of the County TOPICS program. Aside from the intersection area, the County has no plans at present to improve any other section of Mountain Avenue. The Township should not permit any new road intersections along Mountain Avenue north of Elm Place, to avoid creating additional problems. Driveways in this area should be limited, as well. Beachmont Terrace should not be extended through to Mountain Avenue at its eastern end, and Oak Place should be vacated east of Birch Avenue.

B. Grandview Avenue and Main Street. The 1975 Master Plan recommended channelization of this intersection and installation of a traffic signal. At the present time, there are no plans to improve this intersection. Part of the delay, no doubt, is caused by the fact that the intersection involves both Essex and Passaic counties.

C. Gould Avenue and Central Avenue. Channelization was recommended for this intersection, but the County has no improvement plans at present. Since Central Avenue is a local road and Gould Avenue a County arterial, a cooperative effort is involved and should be pursued.

D. Gould Avenue and Mountain Avenue. North Caldwell has recently moved the flashing school signs at this intersection which has significantly improved traffic flow and safety.

E. Bloomfield Avenue at Elm Road. The 1975 Master Plan made several alternative recommendations for improvements at this intersection. Essex County has recently painted channelization markings, but no additional improvements are planned at this time.

The Township's primary responsibility is for the local street network. Master plan recommendations include future extensions of existing streets and cul-de-sacs, future improvements of paper streets, and street abandonments. The following sections discuss these problems and offer specific recommendations.

Standards and Recommendations for Extension of Cul-de-Sacs and Unimproved (Paper) Streets

The following policies and standards are suggested to assist in planning the future extension of cul-de-sac streets and the future improvement of paper streets, as vacant lands in North Caldwell are subdivided and developed. The recommendations are shown on the Circulation Element Map (Map No. 4).

The Township's current practice reflects a combination of cul-de-sacs and through streets based on physical limitations, traffic and neighborhood needs and public service requirements. The following guidelines for future roads are recommended:

1. Where a cul-de-sac street would be substantially longer than 600 feet, or serve more than 10 single-family detached units, a through street should be provided. In good planning practice this is considered the maximum desirable length to provide access for emergency vehicles, and to maintain traffic volumes on the street at a sufficiently low level to justify a cul-de-sac.
2. A through street should be used when it improves local circulation patterns by providing access from a residential area to a major street where it does not now exist, or where existing access involves hazardous road conditions.
3. Creating a new through street may also be justified to improve access for school buses and other public service vehicles by reducing the need for circuitous routes and reducing response time.

The following dead end or cul-de-sac streets should be extended when adjoining vacant lands are developed:

1. Stony Brook Drive and Sheffield Road. Stony Brook Estates, a recently approved subdivision, will extend Stony Brook Drive to Small Avenue and will include a connection to Sheffield Road.

2. Farmstead Road. A sketch plan for this area shows Farmstead Road extending to Green Place with two cul-de-sacs providing access to the interior of the tract.
3. Brookside Terrace. The stub of Brookside Terrace north of Willowbrook Drive should be extended to meet Dupont Drive if Dupont Drive (a paper street) is improved in the future to provide access to the Paragano property. The through street will provide a more direct route to Mountain Avenue for a substantial number of properties. A cul-de-sac could be extended beyond Dupont Drive to provide access to the interior of the property.
4. Hamilton Drive East. This road should be extended to meet Beachmont Terrace when the Glover tract is developed. It will provide access to the Glover tract and improve access for the entire neighborhood to Grandview Avenue.
5. Meadow Lane. To provide access from the Walker Pond property, Meadow Lane should be extended to Mountain Avenue.
6. Birch Avenue. The northern end of Birch Avenue should be extended to connect with Beachmont Terrace. It will also permit access to several large tracts fronting on Mountain Avenue without the necessity of direct access onto Mountain Avenue along this hazardous stretch of road.

The following cul-de-sac streets should not be extended:

7. Birchwood Road and Stephanie Drive. These two roads should not be connected except for emergency access. The reason for not allowing the connection (except on an emergency basis) is

that Stephanie Drive services a townhouse development of 62 units (at full development) while Birchwood Road provides access to approximately 9 single-family lots. Moreover, a stub off of Stephanie Drive will eventually be used to service the Ravin tract which could theoretically have 68 units. Consequently, the heavy mix of traffic could prove to be detrimental to Birchwood Road. In addition, Birchwood Road enters Grandview Place at a point with awkward sight distance and close to the Grandview Avenue intersection. For these reasons the two should not be connected, but it would be desirable to maintain an emergency access in the event such is needed.

8. Shenandoah Drive. Flood-prone areas on adjoining lands to the north make further extension of this street to Allen Road or Grandview Avenue undesirable. However, a turnaround should be provided at the end of the cul-de-sac.

9. Glenview Road. This should not be used for traffic from the Essex County lands when they are developed. Sanitarium Road should be the principal traffic route from the County lands to Mountain Avenue.

10. Beachmont Terrace (eastern end). The eastern end of Beachmont Terrace could be extended into the rear of properties along Mountain Avenue and eventually connect with Birch Avenue. It should not be extended to intersect Mountain Avenue, which would worsen an already hazardous road condition.

11. Beaumont Terrace (western end). The western end should connect with Grandview Avenue and Hamilton Drive West to improve access to this area.

The following paper streets should be vacated:

12. Sunset Parkway. This is on very steep land, which should remain undeveloped. Most of it is owned by the municipality and is recommended for retention as a conservation area.

13. Oak Drive. This should be vacated since it serves no function.

14. Oak Place (between Oak Drive and Mountain Avenue). Improvement of this part of Oak Place would create an intersection with Mountain Avenue on a curve and at a point with poor sight distance to the north.

15. Cedar Drive. This stub street is too narrow for an adequate right-of-way or roadway. When lands in this vicinity are developed, an adequate right-of-way, appropriately located, should be acquired for interior access.

16. Elm Place. Vacate Elm Place from Birch Avenue east to Mountain Avenue to eliminate hazardous intersection.

17. Birch Avenue. Vacate southerly end at intersection with Spruce Road. Not needed and on a very steep grade where it meets Spruce Road.

18. Theresa Street. The eastern end is now vacated. The remainder should be vacated depending on how development takes place.

The following paper streets should be reserved for future improvement as development takes place:

19. Beachmont Terrace (western end). Extend into Glover tract to provide access to the property and improve general neighborhood access to Grandview Avenue.

20. Beachmont Terrace (eastern end). This part will provide access to the rear of properties fronting on Mountain Avenue and should be connected to Birch Avenue. It should not be extended to intersect Mountain Avenue, where it would aggravate already hazardous road conditions.

21. Dupont Drive. This road will provide access from the Paragano property to Mountain Avenue and should be extended to Brookside Avenue. Also, if and when the private pool and tennis club is developed, a road from Wildwood Drive should be extended to Dupont Drive.

22. Birch Avenue north of Oak Place. This short stub, along with a new road, will eventually connect with Beachmont Terrace and provide access to abutting properties.

23. Meadow Lane extension. To provide additional access to the Walker Pond property, consistent with access from the Walker Pond property to Mountain Avenue.

The following new roads should be considered:

24. Main Boulevard-Roosevelt Boulevard Area. This area, much of which is owned by the Township, lies immediately to the west of lands in Cedar Grove and Verona, and north of the Essex

County lands. Portions of the land have already been sold by the Township, and as more land is sold, additional roads will have to be platted. Preliminary plans call for the extension of Roosevelt Boulevard and Main Boulevard with extensions of Wind Ridge Drive and Norwood Terrace. These are shown on Map 4.

25. Kessler Property. Additional access to Fairfield Avenue would be desirable to facilitate traffic distribution.



MAP 4
CIRCULATION ELEMENT

0 500 1000 1500 2000
SCALE IN FEET

BOROUGH OF WEST CALDWELL
BOROUGH OF WEST ESSEX
BOROUGH OF VERONA
TOWNSHIP OF CEDAR GROVE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**NOTE : NUMBERS AND LETTERS ON MAP REFER TO
NUMBERED AND LETTERED PARAGRAPHS IN
CIRCULATION ELEMENT REPORT.**

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WINSHIP OF NORTH CALDWELL SEX COUNTY, NEW JERSEY

Part IV.

LAND USE ELEMENT

Introduction

The following Land Use Element considers environmental limitations on development in North Caldwell, discusses the provision of potable water and sewerage treatment, suggests changes in the zoning ordinance to encourage energy conservation, and recommends how the remaining vacant land or open space parcels in the Township should be used.

Natural Resources and Environmentally Sensitive Areas

The remaining undeveloped areas in North Caldwell include some lands which will create environmental problems if they are developed. Among these problem areas are steep slopes, ponds and wet lands, and flood-prone areas. The 1975 Master Plan included environmental maps identifying wet areas, floodplain lands, steep slopes and areas with shallow bedrock, and the land use recommendations in the plan were based on this data, among other considerations.

The Vacant Lands Study of November 1981 field-checked all of the major vacant properties in North Caldwell. Where mapped environmental data was not confirmed by on-site inspection, the land use recommendations were altered accordingly.

The following areas require particular attention because of environmental problems:

Passaic River and Green Brook Floodplains. These floodplains have been delineated by the N.J. Department of Environmental Protection to enable the Township properties to qualify for Federal flood insurance. The delineated area includes 100-year and 500-year floodplains along the Passaic River, and along Green Brook from the dam just above Mountain Avenue to the point where the brook enters Fairfield.

The Township floodplain regulations should be amended to reflect this new floodplain data. In the floodplain regulations, Article XVIII of Chapter 107, the definition of "flood prone areas" should be changed to include those areas within the 100-year floodplain as delineated on the Flood Boundary and Floodway Map of the Flood Insurance Study (Sec. 107-75). Section 107-77 should also be changed accordingly.

A substantial part of the Green Brook floodplain will be preserved as open space, on the Township's recreation lands and on the Green Brook Country Club property.

Ponds. Walkers Pond and a large pond on the Matarazzo property have been identified as natural resources which should be preserved as adjoining lands are developed. The land use plan element recommends R-1 single-family residential cluster zoning for both of these properties as an option which would permit the ponds to be preserved as open space. Under such an arrangement, the ponds would be owned by the residents of any future development.

Wetlands. The 1975 Master Plan mapped areas with soils which are wet nine months or more during the year. These include portions of the Matarazzo farm, vacant lots in the Roosevelt Boulevard area, lands on the Walkers Pond property in the immediate vicinity of the pond, and a small area on the Green Brook Country Club property along the Fairfield boundary.

Before approving development proposals on these properties, the Planning Board should conduct on-site field investigations to determine the impact of development on these wetlands.

Steep Slopes. The 1975 Master Plan identified several areas with slopes over 15 percent. These are the Ravin property on Lindsley Road, lands along Mountain Avenue in the Township's northeast corner, a small section in the Roosevelt Boulevard area, lands north of Farmstead Road, and the ravine along Green Brook on the Green Brook Country Club and former Dugan properties.

The most critical steep slope areas in town are the Ravin property and the lands along Mountain Avenue, including the Paragano property discussed in the 1981 Vacant Lands Study. On the Ravin property, the existing R-4 cluster zone and the Township's site plan regulations will provide adequate planning controls while permitting development. The lands along Mountain Avenue have difficult transportation and utility access as well as extremely steep slopes. Recommended zoning is for single-family development on lots of one acre or more. It is also

important that no new roads be permitted to intersect Mountain Avenue north of Elm Place because of the hazardous driving conditions created by the steep topography.

Utilities

This phase of the master plan revision examines the provision of water, disposal of sanitary sewage, and stormwater management in the Township.

Water. Water service is available throughout the entire community. The majority of users are served by water from the Essex Fells Water Department except for 55 homes in the north end of the Township served by the Commonwealth Water Company. The Township is a wholesale purchaser of water from Essex Fells and then distributes it over its own mains to individual residents.

The Township currently uses approximately 600,000 gallons of water per day; up from the average of 325,000 gallons per day during the 1960-1964 period. For the past several years, the rate of consumption has remained constant as new homes have off-set declining household sizes. Storage of the water is in a 1.3 million gallon ground storage water tank. During peak summer hours, consumption hits 1.5 m/g/d and Township officials attribute this to unregulated automatic lawn sprinklers. An unofficial odd/even system is now in operation so that sprinkling for even numbered houses is permitted on even days and vice versa. A formal arrangement, possibly by ordinance, is needed to reduce peak consumption.

While Essex Fells has sufficient capacity to continue to service the municipality, the most pressing need is for a connection to another source of supply for back-up and emergency purposes. A possible connection with West Caldwell, which is served by the Jersey City system, is considered too expensive, and a connection to the Passaic Valley Water Commission system would require a pumping station. The most feasible connection appears to be with the Verona system, which is also supplied by PVWC.

While there appears to be no major problem with water supply and distribution, a water study is desirable to review the existing distribution system, suggest regulations to control lawn sprinklers, and to recommend a specific emergency supply connection.

Sanitary Sewers. Unlike water, sewage disposal is considerably more complicated and the problems relate to the Caldwell Treatment Plant in West Caldwell which North Caldwell uses.¹ At present, there is a ban on the extension of the system since the Caldwell treatment plant has insufficient capacity, and the level of service needs upgrading. In recent years, North Caldwell has extended the system by approximately 150,000 gallons per day by shifting that amount of sewerage to the Two Bridges Sewerage Authority plant through Fairfield. This additional capacity is now committed. The major problem is further

¹The West Caldwell Treatment Plant serves West Caldwell, North Caldwell, Caldwell, Roseland, Essex Fells, and contiguous areas of Fairfield and West Orange.

complicated by some of the ancillary issues. For example, West Caldwell claims that any additional capacity from flow reduction to the Caldwell system rightfully belongs to West Caldwell. In addition to problems dealing with capacity and level of treatment, any additional flows to West Caldwell will require upgrading of the Kirkpatrick pumping station in West Caldwell. That serves about 1,300 homes in North Caldwell and is at capacity.

There are 65 homes in North Caldwell that flow to the Little Falls sewer plant. Little Falls now seeks removal of this flow which North Caldwell is contesting in current litigation.

Most Township officials agree that North Caldwell will not be able to increase sewage capacity without the cooperation of its neighbors. A logical plan, from a physical standpoint, would be for sewerage from most of the town to go to Two Bridges, with the remaining going to Caldwell. To utilize the Two Bridges plant will require the installation of expensive infrastructure and higher operating costs. Once installed, it would probably make sense to use the system to provide contract services to Roseland and other areas.

In summary, while there are no problems with the Township's own collection system, increased capacity would have to be provided if several of the vacant properties in the Township -- County lands, Walker property, etc. -- are developed. The increased capacity (treatment and conveyance) are technically feasible, but questions relating to costs must still be considered.

Storm Sewers. There is no chronic storm sewer problem with existing storm sewers, but there are areas in the Township which are subject to periodic flooding. Major improvements will be required to alleviate the problem in initially identified areas such as: rear of Mountain Avenue from Elm Road to Meadow Lane; interior of land bounded by Brookside Terrace to White Oak Drive; and the rear of Mountain Avenue from Main Boulevard to Forest Avenue in West Caldwell.

Energy Conservation

A recent amendment to the Municipal Land Use Law requires that the Master Plan include an energy conservation element. The objective is to suggest measures that municipalities may take to reduce energy consumption and to provide for the maximum utilization of renewable energy sources. Since North Caldwell is virtually a completely built-up community, such energy conservation options as orientation of streets and buildings, variable setbacks and lot sizes, and more efficient energy housing types, such as townhouses or multi-family, are not feasible, except where presently zoned. The changes recommended in this master plan revision are designed to encourage existing property owners to install solar energy systems. The following changes in the Township's Zoning Ordinance are recommended to accomplish this goal.

1. Add the following definitions to the Zoning Ordinance in their appropriate alphabetical place.

SOLAR ACCESS - A property owner's right to have the sunlight shine on his land.

SOLAR COLLECTOR - Any device, absorbent surface, structure or window (double glazing or greater) which is oriented in such a fashion that it can be utilized for the collection of solar energy to supply a significant fraction of the energy needed for space heating or for domestic hot water.

SOLAR ENERGY SYSTEM - Any system, design, assembly or device which is used to collect, store, and distribute energy derived from the sun for the purpose of heating or cooling the interior spaces of buildings or for heating domestic hot water. Solar energy systems may include but are not limited to solar collectors, solar reflectors, heat storage tanks, south facing double glazed window walls, attached south facing greenhouses utilizing double glazing, and architectural overhangs for blocking sunlight on south facing windows.

SOLAR SKYSPACE - The space between a solar energy collector and the sun which must be free of significant obstructions to ensure the cost effective operation of the system between the hours of 9 a.m. and 3 p.m. on June 21st and December 21st of each year.

SOLAR SKYSPACE EASEMENT - A right, expressed as an easement, covenant, condition, or other property interest in any deed or other instrument executed by or on behalf of any landowner, which protects the solar skyspace of an actual, proposed, or designated solar energy collector at a described location by forbidding or limiting activities or land uses that interfere with access to solar energy.

2. The following changes should be included in a new section entitled Energy Conservation Measures. It should contain the following provisions:

- a. Solar energy systems shall be exempt from the maximum ground coverage permitted in all zones.
- b. Solar energy systems used for space heating and domestic hot water shall be permitted in all minimum front, side and rear yards.

c. Solar energy systems, including apparatus such as solar collectors, solar reflectors, solar shading devices for south walls, solar shading devices for roof ponds, storage tanks, and roof top greenhouses shall be exempt from height requirements and from regulations governing projections into required yard areas.

d. The installation of solar collector panels shall be allowed as a matter of right on all nonconforming buildings, providing the installation does not increase the degree of nonconformity.

e. Greenhouses and solar porches may be included as part of the minimum habitable floor area up to a maximum of 30 percent of the required total floor area of the dwelling.

f. As part of site plan review, the Planning Board shall consider the location of shading, vegetation, buffering, berms, and similar devices to promote energy conservation.

Proposed Land Use and Zoning Recommendations

This master plan revision has examined the policies, objectives and assumptions in the land use recommendations of the 1975 Master Plan. It also examined changes since 1975 in population growth, land development, and availability of utilities and transportation. The master plan revision also includes a study of each of the major vacant land parcels in North Caldwell, its surrounding uses, site conditions and other factors affecting future development.

The following recommendations on the land use plan and zoning ordinance are based on the Vacant Lands Study (1981) and on studies undertaken as part of this master plan revision. Most of the existing zoning regulations and land use plan recommendations have been retained. The vacant parcels considered in the study are shown on Map 5. The numbers in the text are keyed to the numbers on Map 5.

Green Brook Country Club (Site 1). This property is zoned Open Space and Public Land. The Vacant Lands Study suggested that if the country club finds it necessary to develop a part of its property in the future, the Township might wish to adopt zoning permitting permanent retention of the golf course as open space in exchange for development credits. No zoning changes are recommended at this time, and the land use plan should continue to show the property as open space.

West Essex High School (Site 2). This property is zoned Open Space and Public Land, and the zoning should be retained. If, in the future, the school wishes to dispose of excess lands on its property, the Township should consider adopting R-1 cluster zoning for the lands to be sold, to permit the creation of a buffer between the school grounds and the new residential area.

Ravin Property (Site 3). The existing R-4 cluster zoning should be retained on this parcel. The R-4 cluster permits a combination of attached and detached houses at a maximum density of 5 dwelling units per acre, or 12-1/2 bedrooms

per acre. This is the maximum permitted density, but a preliminary review clearly indicates that the maximum density is not attainable because of the parcel's steep slopes and restricted access.

Glover Property (Site 4). The land is similar in character to surrounding lands which are developed at a density of 1/2 acre per lot. It has no severe environmental problems, although some steep lands are found at the northernmost end. The property adjoins a townhouse development on the north, but this development is visually and functionally isolated from the Glover property by the steep slopes between them.

The previous study indicated that deed restrictions limiting development to one-acre lots applied to this property. A subsequent recommendation was made to lift the deed restriction to permit the current zoning of 1/2 acre to apply, recognizing that some lots may have to be larger because of grades. These would be picked up at the time of subdivision approval.

Kessler Property (Site 5). The existing industrial park zoning is appropriate for the location of this property and its site characteristics, and should be retained. The property extends into Fairfield, where it is also zoned for light industrial use. However, the Fairfield zoning permits additional uses, including banks, offices and commercial uses, and the minimum lot requirement is one acre, whereas North Caldwell requires a minimum of two acres. Site plan sketches made for the Vacant Lands Survey indicate that the property can be developed

with two-acre lots, and no change is recommended in the bulk requirements. However, office and general commercial uses (non-retail) would be compatible with the present uses and the intent of the zone. We recommend the zoning be so amended.

Brookside Terrace Extension Lands (Site 6). This land includes the property described in the Vacant Lands Study as the Paragano property, lands owned by the Township adjoining the paper street Sunset Parkway, and lands east and west of Mountain Avenue just south of the sharp curve where it descends toward Lindsley Road. All of these lands are steep and some are virtually inaccessible. It is recommended that these lands be rezoned from R-1 (single-family residential, 1/2 acre lots) to single-family residential on one-acre larger lots. The Township-owned lands in the Sunset Park area should be retained in public ownership for conservation purposes.

North Caldwell Lawn and Tennis Club (Site 7). This property, described as the Wildwood Swim and Tennis Club in the Vacant Lands Study, should be retained in its present R-1 zoning category so that any subsequent development would be in keeping with the character of the surrounding area.

Walkers Pond (Site 8). This property should be retained in its present R-1 zoning category so that any subsequent development would be in keeping with the character of the surrounding area.

Matarazzo Farm (Site 9). The 1981 Vacant Lands Study found no areas on this property requiring special environmental

considerations other than the large pond on the section of the property identified as 9-4 in the Vacant Lands Study. However, a part of this parcel has been granted preliminary approval as a conventional single-family development. All parcels should be retained as R-1.

Essex County Lands (Site 10). There are approximately 145 acres of County land located in North Caldwell, part of a total tract consisting of approximately 647 acres including lands in Verona and Cedar Grove. The properties presently contain the Essex County Jail Annex and an old hospital, a portion of which is used for several out-patient clinics. In North Caldwell the property is zoned R-1, single-family detached. While the property is suitable for a variety of uses, any possible rezoning should await the completion of the County comprehensive study now underway. The study will consider circulation, utilities, environmental constraints, future use of County facilities on the property, and impacts on surrounding development in bordering communities.

Bloomfield Avenue Office Zone. The zoning in this area, which permits only banks and offices, is inconsistent with existing development. Land uses in this zone include a gas station, a small retail development (four stores), a stone supply company, and a bank, as well as a number of houses, including several with offices and one with a liquor store. As most existing lots in the zone are smaller than the 1/2 acre required by the zoning ordinance, two or more lots would have to be

combined for new development. This would create parcels better suited to accommodate the circulation and parking needed for commercial development.

It is recommended that the lot size requirement be retained in the Office District zone, but that commercial retail and service establishments be added to the uses permitted. Restaurants should not be permitted in the zone because of the hazardous traffic conditions at the Bloomfield Avenue-Elm Road intersection. Restaurants are traditionally heavy traffic generators.

Other Regulation Changes

1. To reduce conflicts between adjacent zoning districts, the Zoning Ordinance should be revised to require that where two different zoning districts abut, the yard requirements of the less intensive district shall be maintained in the more intensive zone along common boundaries.

2. To maintain adequate sight distances on corner lots and for purposes of aesthetics, the width of corner lots shall be increased by 25 feet, and the side yard of the yard abutting the side street shall be the same as the front yard setback of the houses on the side street.

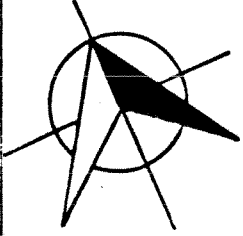
Disposition of Township-Owned Land

The Township of North Caldwell owns a number of properties throughout the municipality. Some of these are small parcels which should be sold for building lots, if large enough,

or offered to adjoining property owners if undersized. Specific recommendations will be forthcoming from a special subcommittee established by the Council.

Three areas should be given special consideration:

1. Lands in the Sunset Park area (Block 51, lots 3 and 4, Block 75, lot 6C). These lots, totalling about 10 acres, are very steep and virtually inaccessible and should be retained by the Township as a conservation area. Sunset Parkway, a paper street on these lands, should be vacated.
2. Parcel adjoining the Gould Avenue School (Block 1207, lot 3). This 2.3 acre lot has no street frontage but has rights-of-way to both Robin Hill Road and Park Avenue. It should be subdivided into one or two building lots, granted variances for the lack of frontage, and offered for sale.
3. Parcels in the Roosevelt Boulevard area. These lots should be sold for private development as recommended in the Hendricks appraisal report, with the subdivision and street layout for each section determined as it is sold.



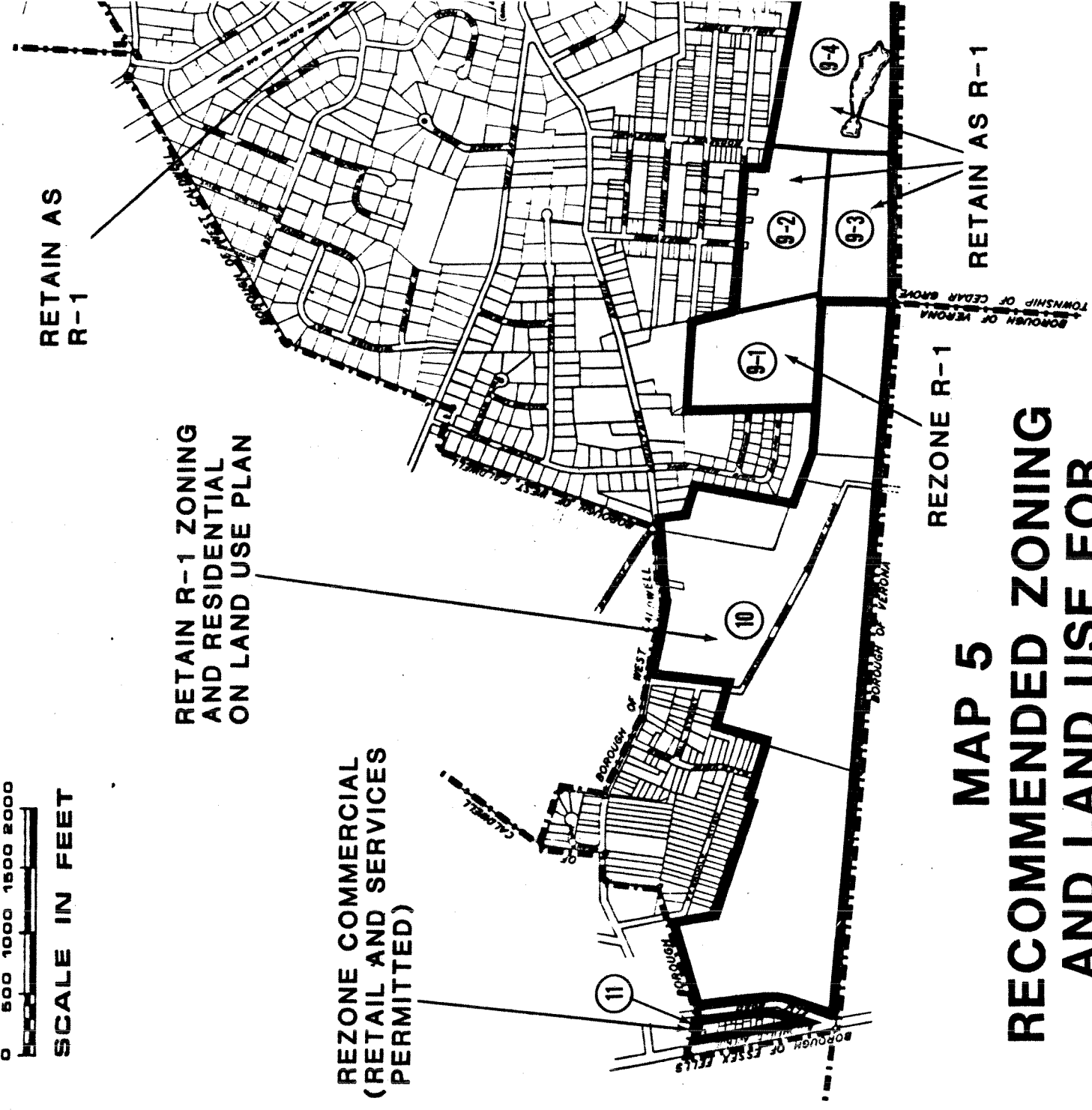
SCALE IN FEET

RETAIN
AND PU
AND OP
LAND U

RETAIN AS
R-1

RETAIN R-1 ZONING
AND RESIDENTIAL
ON LAND USE PLAN

REZONE COMMERCIAL
(RETAIL AND SERVICES
PERMITTED)



REZONE R-1

RETAIN AS R-1

MAP 5 RECOMMENDED ZONING AND LAND USE FOR MAJOR VACANT PARCELS 1983

TC
ES

EN SPACE
C LAND ZONING
SPACE ON
PLAN

REMOVE DEED
RESTRICTION TO
PERMIT 1/2 ACRE LOTS

RETAIN AS
INDUSTRIAL

RETAIN AS R-4
AND SHOW AS
TOWNHOUSES
ON LAND USE
PLAN

REZONE TO
SINGLE-FAMILY
1-ACRE

RETAIN AS
-1



TOWNSHIP OF NORTH CALDWELL
SEX COUNTY, NEW JERSEY

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