

GEO-REZONING

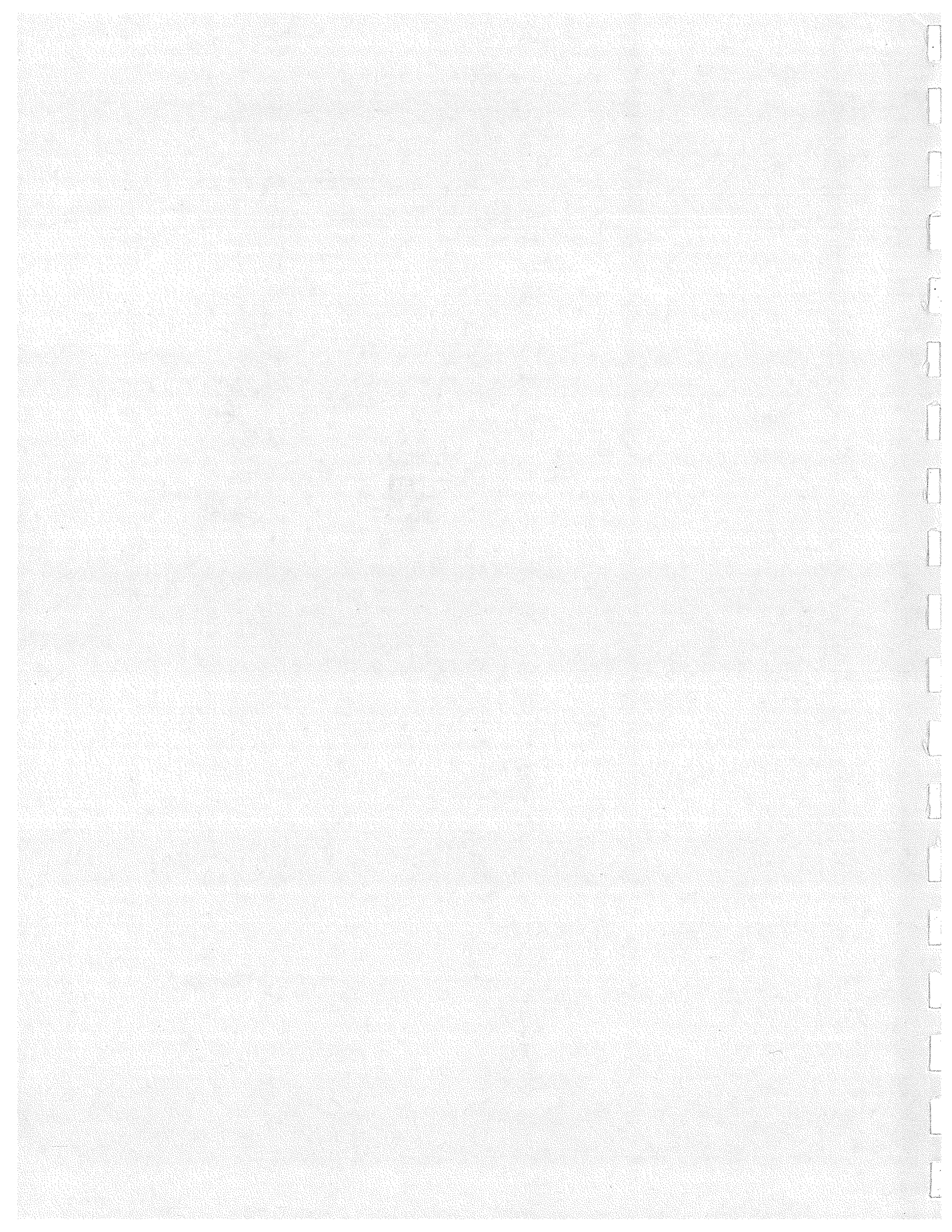
Background Information Packet

Southwest Anchorage

(April 30, 1984)



Municipality of Anchorage
Tony Knowles, Mayor



Municipality of Anchorage



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TONY KNOWLES,
MAYOR

OFFICE OF THE MAYOR

April 30, 1984

Dear Anchorage Citizen:

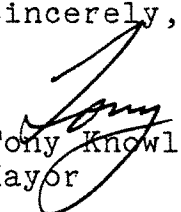
Holding public hearings on zoning cases by geographic area is bringing out a tremendous change in the manner in which land use decisions are made. It is exciting to be a part of that change.

More than ever before, decision-makers have at their disposal a multitude of statistics and data to aid them in the tough tasks of deciding land use issues. This has become possible with the collection and compilation of information by the Community Planning Department each month for one of the six geographic rezone areas of Anchorage - Eagle River, Northeast, Northwest, Southwest, Southeast, and Turnagain Arm.

Each month a different geographic area is the focus of indepth study. Information about the geographic region is analyzed and presented in a Geo-Rezoning Background Information Packet. This packet serves as a tool for all parties - Boards and Commissions, Assembly, Municipal Administration and staff, community councils, and the general public - for assessing land use questions.

With great pleasure, I offer you this document. The intent is to provide a comprehensive picture of Southwest Anchorage as it is today so that we, all of us, can make decisions that will favor the vision of Anchorage we have for tomorrow. Won't you join me in pursuing this vision?

Sincerely,


Tony Knowles
Mayor

**GEOGRAPHIC REZONING
BACKGROUND INFORMATION PACKET
SOUTHWEST ANCHORAGE**

PREPARED BY:
**COMMUNITY PLANNING DEPARTMENT
MUNICIPALITY OF ANCHORAGE
TONY KNOWLES, MAYOR
MAY 1984**

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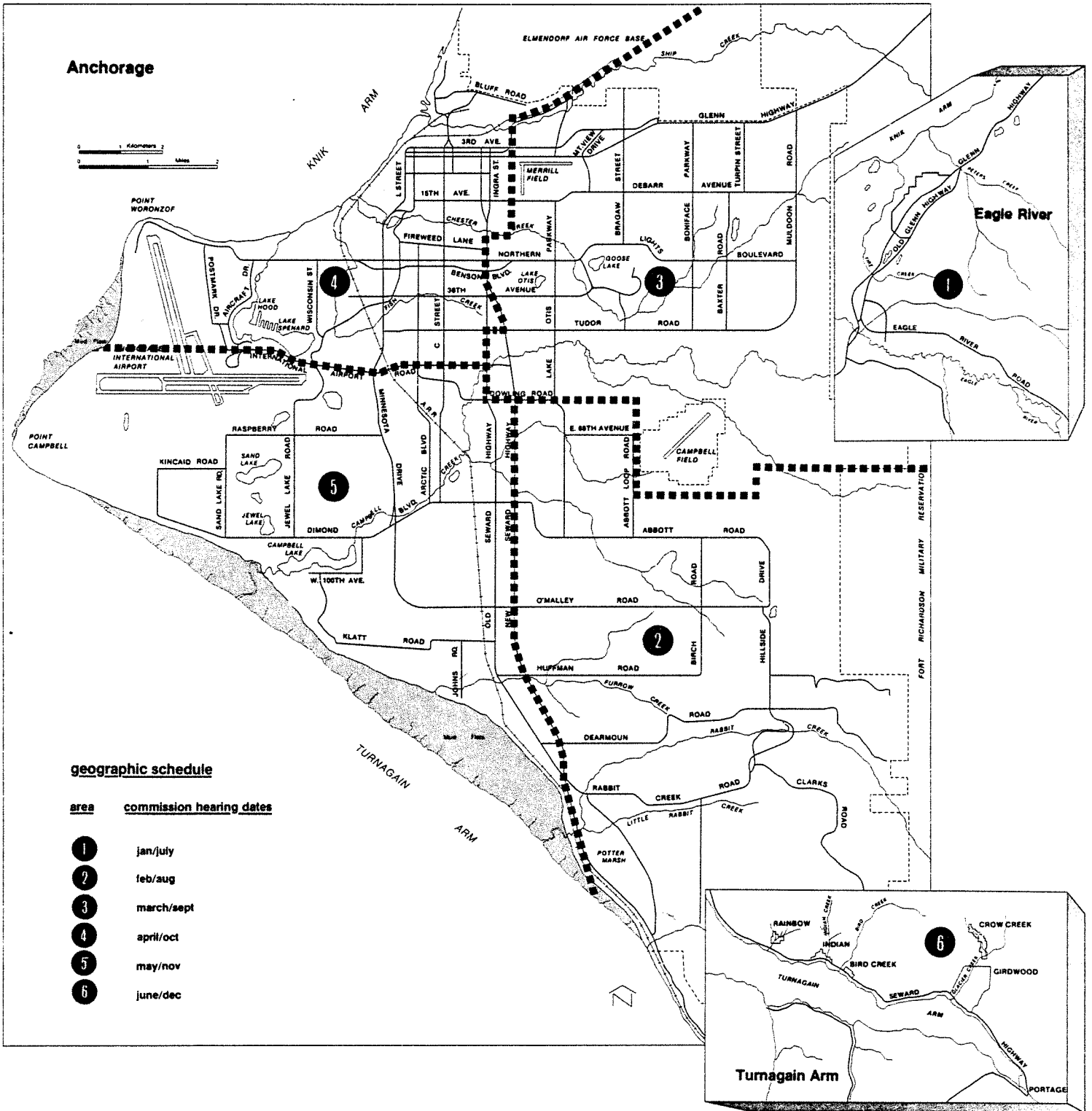
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Municipality of Anchorage with Geographic Rezone City Areas

INTRODUCTION

Southwest Anchorage is a dynamic community with a critical role to play today and in the future in the development and growth of the Anchorage Bowl. Its residents comprise one-sixth the total Municipal population. With large tracts of land opening for development now and through the early 1990's - particularly the Campbell-Klatt and Sand Lake gravel pits areas - Southwest will become home to a substantial portion of Anchorage's future population.

The dramatic population and housing stock growth this area is experiencing now and in the next ten years both stem from the Southwest's extensive supply of undeveloped residential land. More than half the vacant residential zoned acreage remaining in the Bowl area today, which is served or scheduled to be served by water and wastewater systems, is in Southwest Anchorage. In general, vacant tracts here and in neighboring Southeast will open for development from this time forward in a phased pattern determined by the extension of supporting public services and infrastructure - most importantly, wastewater, water and roads. The land issues accompanying this outward progression of phased, large tract development away from the city core are markedly different from those associated with the infilling land development characteristics in Northeast and Northwest Anchorage where today little undeveloped land remains.

The accelerating development of South Anchorage at this time is in concert with the land management policies of the Comprehensive Plan - most particularly the phased facility strategy. This strategy aims to guide both the pattern and pace of development through the well planned and carefully coordinated extension of infrastructure into this area. The provision of wastewater and water systems adequate to serve the area's current and anticipated growth is particularly important.

Development in some parts of the Southwest is now at the leading edge of utility service availability, most notably in the Klatt Bog and Connors Bog areas. The Southeast Interceptor and West Interceptor construction projects underway this year are programmed to meet both the current and future needs of these areas, providing relief to an already overtaxed wastewater system and the capacity to serve on-going and future development.

Water, or rather the lack of it, will present special problems in the Sand Lake gravel pits area. Residential re-development of this sector will be substantially constrained until an adequate Municipal water supply and distribution system is available. This is not likely until at least the end of the decade.

With growth come problems and those problems confront Southwest with several development issues. A significant portion of Southwest's vacant residential land supply is comprised of wetlands, including more than eight hundred acres in the Klatt Bog conservation wetlands area. These wetlands may be developed but require special regulation and control to ensure their essential hydrologic, stormwater retention, and wildlife habitat functions are retained. The need to protect critical wetlands features must be balanced, however, by the need to provide sufficient area for population growth. This is a particularly significant issue for two reasons: [1] the supply of undeveloped residential land elsewhere in the Bowl is running out, and [2] otherwise developable non-wetland areas, such as the Sand Lake gravel pits, are not scheduled for utility system installations for five to ten years but service soon will be available in the Klatt Bog area. Protecting critical environmental features in the wetlands and controlling both the pace and pattern of their development now count among Southwest's greatest challenges.

The rapid residential, commercial and industrial growth experienced in the Southwest since 1980 is taxing the existing road network. Road conditions on many of the main thoroughfares are critically congested, especially at peak hours, and pressed to meet the area's growing needs. Several road improvement projects are now or soon will be underway to help relieve existing congestion, prevent worse problems, and open new areas for development. The Minnesota Extension now under construction, concurrent extension of 'C' Street from Minnesota south to Klatt Road, expansions or widening of Dimond Boulevard and Raspberry to Jewel Lake Road, and the soon to be completed Northwood Drive extension from Strawberry Road south to 83rd Avenue are but a few of the high priority road improvement projects programmed for this area. Now and for the future it will be critically important to coordinate the phasing of these and other roadway improvements with the numerous public service projects, that will open the Klatt Bog, Connors Bog and Sand Lake gravel pits areas for development.

Though Southwest diverts some of its elementary and junior-senior students to neighboring Southeast, the community is still pressed for adequate facilities to serve its growing student population. All but three public schools are over capacity - the junior-senior facilities by staggering numbers. The opening of Hanshaw Junior High this fall, followed by Mears Junior High the next year, will help alleviate the worst and most immediate problems in all South Anchorage. Overcrowding in elementary schools will continue to be a problem for the near term underscoring the importance of selecting and reserving sites for new school facilities soon.

Neighborhood and community parks, those closest to the places where people live and play, form the backbone of a balanced parks and recreation system. Such parklands are in short supply in Southwest Anchorage and will become increasingly inadequate as the population grows. New greenbelts are also needed, particularly in the Sand Lake gravel pits area where open space corridors will help establish the form of a developing community otherwise devoid of natural amenities.

These are but the highlights of the Southwest development picture discussed in this information packet. The information presented here complements the geographic re-zoning process by providing an overview of where the community stands today, where it is likely headed for the future, and perhaps most importantly, how its growth and development relate and are linked to Anchorage as a whole: Northeast, Northwest, Turnagain Arm, Southeast, Eagle River/Chugiak, and Southwest - together.

This and other geo-rezone information packets are intended to facilitate several decision-making processes concerning capital planning, long-range community planning, and, of course, conditional use and rezoning requests. But in the end, their foremost objective is to provide a bridge linking the efforts of all Anchorage citizens - area residents, developers and public officials alike - working together to help establish better neighborhoods and a better community in this time of rapid growth.

Southwest Anchorage

ANCHORAGE INTERNATIONAL AIRPORT

International Airport Road
Dowling Rd.
Highway
Highway
C Street
Arctic Blvd.
Campbell Drive
Minnesota Blvd.

TAKU/CAMPBELL

SAND LAKE

Northwood Street
Strawberry Rd.
W. 88th Ave.
Arlene St
Dimond
Jewel Lake Road
Raspberry Road
Sand Lake Rd.
Kincaid Road
Jewel Lake
Sand Lake

Seward
New Seward
Old Seward
O'Malley Rd.

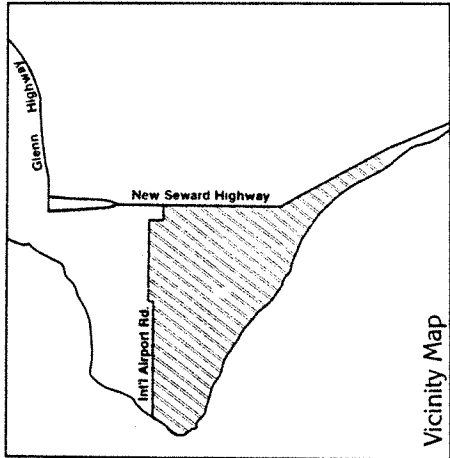
BAYSHORE/KLATT

Huffman Rd.
Johns Road
Timperlane Dr
Klatt Road

OLD SEWARD/OCEANVIEW

Turnagain Arm

Point Campbell



Community Council Boundaries

Figure 1

DEMOGRAPHICS

Southwest Anchorage houses a largely homogenous and affluent population. The area is predominately white with one in ten residents representing a racial minority. Average incomes throughout the area are considerably higher than the Municipal-wide average, while the percentages of people below the poverty level are consistently lower (Table 1). By these two standards, the Old Seward/Oceanview area is of particular note: average income in this community council area is 37% above the Municipal average and only 2.5% of its residents fall below the poverty level.

Contrary to what might be expected, median housing values in the Southwest do not consistently track with the area's higher levels of average income. In fact, median housing values in the four community council areas are widely dispersed around the Municipal average. In the Sand Lake and Taku-Campbell areas, housing values are substantially lower than the Municipal average, while those in the Bayshore/Klatt and Old Seward/Oceanview areas are approximately six percent higher. These differences are primarily attributable to the number of older, smaller housing units in the Taku-Campbell and Sand Lake areas by contrast to the number of newer larger homes in the other two areas. Differences in housing densities are also a factor, with higher priced single-family, detached houses generally more prevalent in the Bayshore/Klatt and Old Seward/ Oceanview areas.

School age children comprise well over a third of the residents in all community council areas except Taku-Campbell. With the lowest percentage of school age children, it is perhaps no coincidence that Taku-Campbell is also the community council area with the lowest average number of persons per household (2.71 persons versus a Southwest average of 3.04 and a Municipal average of 2.80).

Southwest Anchorage has grown rapidly since 1980, experiencing a 39% increase in population as compared with a 32% increase for the Municipality as a whole (Table 2). Almost 40,000 people now reside in Southwest Anchorage, with the population very unevenly distributed between the four community council areas. Sand Lake houses almost half the area's residents; Taku-Campbell approximately one quarter; with the remaining quarter split fairly evenly between Bayshore/Klatt and Old Seward/

TABLE 1
CENSUS PROFILE

SOUTHWEST ANCHORAGE
1980

Community Council	Total Population	Race ¹ (Percent of Total)			Age ¹ (Percent of Total)		Median Age	Persons/ Household Average	Income Average (Dollars)	Persons Below Poverty ⁴	Total Housing Units	Vacant Units (Percent)	Median Housing Value (Dollars)			
		Wht.	Blk.	Native ²	Asian ³	Other								0-5	65+	
Sand Lake	13,668	91.0	1.6	3.3	2.7	1.8	9.0	37.0	1.1	27.0	3.01	37,232	5.1	5,086	11.0	72,400
Taku-Campbell	6,011	89.0	3.7	3.8	2.4	1.4	9.2	32.8	1.5	26.8	2.71	34,476	6.2	2,504	14.0	81,700
Bayshore/Klatt	4,562	91.0	1.6	4.7	1.9	1.0	9.3	39.1	1.2	26.2	3.13	39,299	7.1	1,628	7.0	94,000
Old Seward/ Oceanview	4,452	-92.0	1.8	3.0	2.0	1.5	10.1	39.9	0.6	27.0	3.29	43,870	2.5	1,407	7.0	94,300
Southwest Total	28,693	90.5	2.0	3.7	2.4	1.5	9.2	37	1.2	N/A	3.04	38,719	N/A	10,625	10.0	N/A
Anchorage Total	174,431	85.0	5.3	5.1	2.3	2.0	9.4	35	2.0	26.3	2.80	32,073	10.2	70,363	13.0	89,100

1 - Census data has been adjusted by the Community Planning Department to correct erroneous census block assignments between community council areas.

2 - Native - American Indian, Eskimo and Aleut

3 - Asian - Asian and Pacific Islander

4 - Represents the percent of people below 125 percent of the 1979 poverty level. Poverty level varies by family size, number of children and the age of the householder or individual. Examples of 100% poverty level are a single person making \$3686 or a family with two parents and two children making \$7356 in 1979.

Source: 1980 Neighborhood Statistics Program, U.S. Department of Commerce, Bureau of the Census

Oceanview. Further disparity between various parts of this community is seen in the comparative rates at which population increased between 1980 and 1983. Increases ranged from a low of 19% in Old Seward/Oceanview to a high of 73% in Taku-Campbell. Major differences in population distributions and growth rates between various parts of the Southwest tend to support a development maxim: that population is largest and grows fastest where building parcels are better and best served by public water and wastewater systems.

Housing stock changes in Southwest Anchorage from 1980 to 1983 further reflect the area's rapid growth. By comparison to a 16% increase for the Municipality as a whole, housing stock in the Southwest increased 27%. This substantial difference is in part attributable to the Southwest's large supply of vacant residential lands, especially by comparison to other sectors of the Anchorage Bowl. For most part, housing stock and population increases in the area closely paralleled one another. Taku-Campbell led the growth with a 48% increase in housing; Old Seward/Oceanview and Sand Lake experienced the smallest growth rates at 20% and 18% respectively. During the same three year period, the percent of vacant units in Southwest Anchorage dropped substantially, from 10% in 1980 to 5% in 1983.

TABLE 2
POPULATION AND HOUSING STOCK
Southwest Anchorage
1980, 1983

Community Council	Population			Housing Stock		
	1980	1983	Percent Increase	1980	1983	Percent Increase
Sand Lake	13,668	17,904	31	5,086	5,984	18
Taku-Campbell	6,011	10,403	73	2,504	3,710	48
Bayshore/Klatt	4,562	6,284	38	1,628	2,146	32
Old Seward/ Oceanview	4,452	5,336	19	1,407	1,684	20
Southwest Total	28,693	39,927	39	10,625	13,524	27
Anchorage Total	174,431	230,846	32	70,363	81,609	16
Percentage of Anchorage Total in Southwest	16	17	--	15	17	-

SOURCE: 1980 Neighborhood Statistics Program, U.S. Department of Commerce, Bureau of the Census

1983 Household Survey, Municipality of Anchorage, Community Planning Department

TABLE 3
DEMOGRAPHIC COMPARISONS OF GEOGRAPHIC REZONE AREAS
ANCHORAGE
1983

	Eagle River	Southeast	Northeast	Northwest	Southwest	Turnagain Arm	Total Anchorage
Population (Percentage)	16.7	11.8	31.8	21.8	17.3	0.6	100
Number of Households (Includes family, family with child & non-family)	6,418	8,286	25,494	20,258	13,001	594	74,051
Households Who Rent Residence (percentage)	22.7	11.7	34.5	63.5	25.0	38.2	32.6
Family Households with Children (number)	4,197	4,766	13,283	7,148	7,403	229	37,026
Family Households with Children (percentage)	65	58	52	35	57	39	50
Number of Families Headed by Male Single Parent	215	234	747	536	357	15	2,104
Number of Families Headed by Female Single Parent	214	336	2,364	1,629	877	31	5,451
Number of Families Headed by Single Parents	429	570	3,111	2,165	1,234	46	7,555
Families with Children that are Headed by a Single Parent (percentage)	10.2	11.9	23.4	30.3	16.7	20.1	20.4
People over 65* (number)	297	40	1,552	2,363	655	43	5,313
People over 65*(percentage)	1.4	1.5	2.1	4.8	1.6	3.0	2.3
Children 0-19 Years Old (number)	8,332	9,808	23,739	12,979	14,262	411	71,013
Children 0-19 Years Old (percentage)	38	36	33	26	36	29	33
Mean Length (years) of Residence in Anchorage	8.1	7.3	8.1	8.7	8.2	9.1	8.3
Mean Years of Education (persons +25)	13.8	14.2	13.8	13.6	13.7	14.1	13.9
Median Age	25.9	27.5	26.4	27.4	26.3	29.7	

* Includes senior citizen homes

SOURCE: 1983 Household Survey, Municipality of Anchorage, Community Planning Department

Southwest Anchorage shares with the Southeast and Eagle River several characteristics typical of developing, low density, suburban communities (Table 3). Families with children predominate in these areas, and there are proportionately lower percentages of single-parent households. The population is young with large numbers of school age children and very few residents over 65 years of age.

As more land is developed and population increases in the Southwest, some of these demographic characteristics will probably begin to alter. Multi-family units in major, new developments will attract more small families and singles to the area. Population will tend to age as the area matures. The area will likely become more attractive to elderly residents as public infrastructures and services are expanded, increasing the ease of access to urban amenities - shopping, churches and the like. Though the change will be gradual and a matter of degree, future trends in Southwest will likely reflect a transition from its suburban character to a more densely developed city character now typifying Northeast and Northwest Anchorage.

Southwest Anchorage

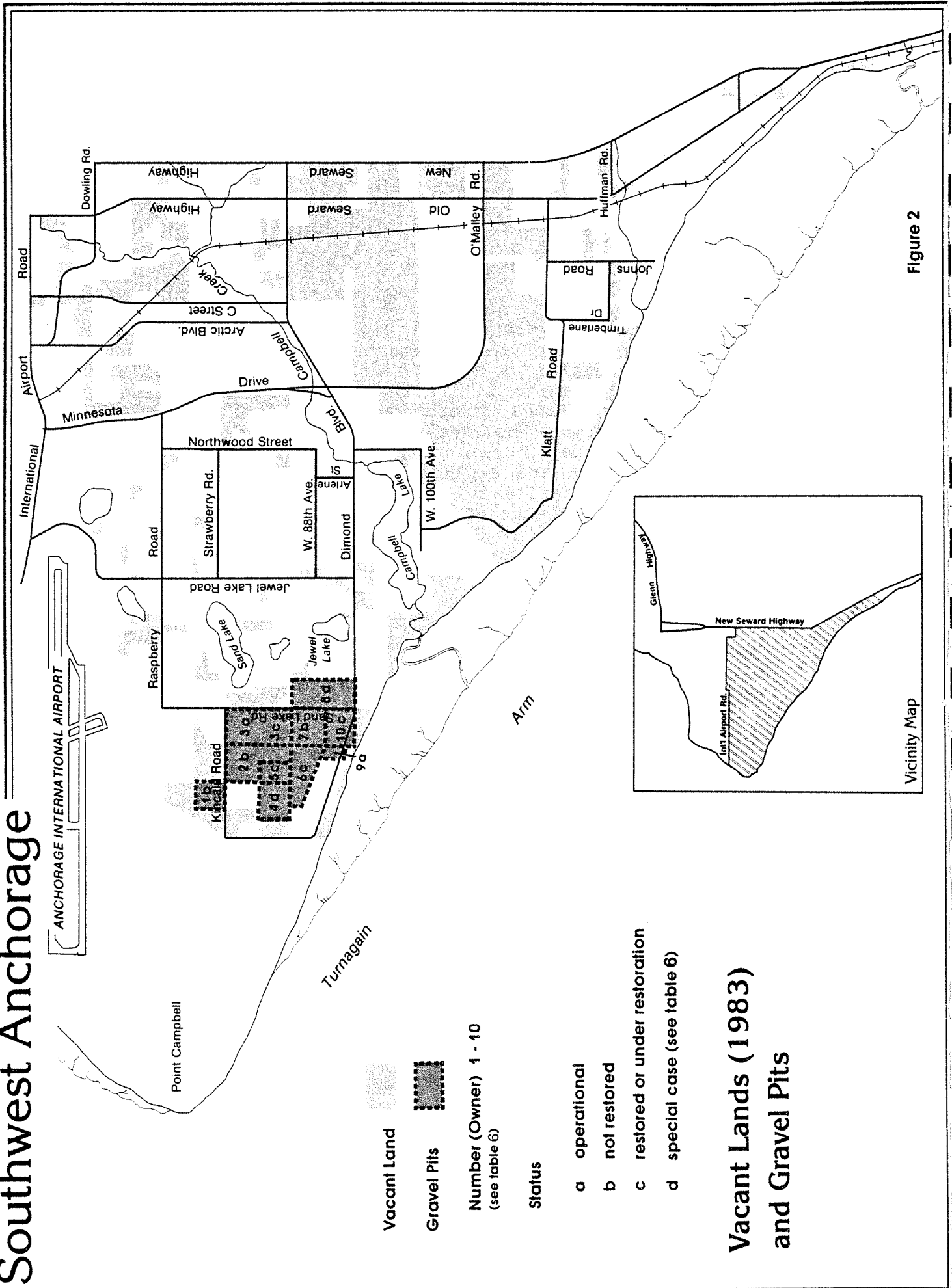


Figure 2

LAND USE

Overview

Today just over half of the vacant residential land served or planned for service by water and wastewater systems in the Anchorage Bowl is in Southwest Anchorage.¹ By virtue of this, Southwest presents us a planning challenge: to time and coordinate the extension of public services and infrastructure so as to provide for the efficient and cost effective development of the last remaining large tracts of vacant land in the Anchorage Bowl. This contrasts with Northeast and Northwest Anchorage where only small tracts of vacant land remain and where the dominant land development issues relate to infilling. The phasing of development is particularly important to two subareas in Southwest Anchorage, the Klatt Bog and Connors Bog tracts and the 480-acre Sand Lake gravel pit area.

Residential growth in Southwest has been and will continue to be accompanied by commercial development along the arterials and at or near major commercial nodes. Increasing industrial development is also anticipated, particularly along the railroad. Commercial and industrial development in Southwest Anchorage between 1980 and 1983 occurred at approximately 199 acres per year (Table 4 and 5). Over the past three years, a total of 130 acres of commercial zoned land and 466 acres of industrial zoned land have been developed, leaving 110 acres of vacant commercial zoned land and 1059 acres of industrial zoned land. However, land use figures by zoning classification can be misleading since much commercial development has occurred on land that is zoned industrial or unrestricted. This is possible because the current ordinance allows commercial uses on industrial zoned land. For example, the shopping areas along Dimond Boulevard as well as the Dimond Mall expansion are on land zoned for industrial use. This accounts for a significant portion of the total acres of industrial zoned land developed since 1980.

¹Approximate percentages are: Southwest 53%, Southeast 27%, Northeast 12%, Northwest 8%.

TABLE 4
 LAND USE IN ACRES
 Southwest Anchorage
 1980-1983

	Vacant Acreage 1980	Acres of Developable Land Used* 1980-83	Vacant Developable Acreage 1983
Single-Family	3165	1204	1961
Two-Family	190	113	77
Multi-Family	689	264	425
Total Residential	<u>4044</u>	<u>1581</u>	<u>2463</u>
Commercial	240	130	110
Industrial	1525	466	1059
Total Comm/Industrial	<u>1765</u>	<u>596</u>	<u>1169</u>
PLI	554	400	154
Unrestricted	510	243	267

* Included in this figure is acreage that was put into the preservation wetlands category: 25 acres of Residential, 75 acres of Unrestricted, 110 acres of PLI (U + PLI = Connor's Bog) and 1 acre of Industrial.

There is an evident demand for commercial land in this area, particularly along the Old Seward Highway and Dimond Boulevard - the last areas besides midtown where substantial acreage of vacant land suitable for commercial use still remains. While industrial activity in this area may increase in the future, especially along the railroad, it is likely that industrial zoned land will continue to be used for commercial purposes. This will be true unless the zoning ordinance is amended confining lands zoned industrial to industrial use and rezoning lands suitable and needed for commercial use to commercial zones. If these changes do not occur, three problems in Southwest will persist: [1] commercial encroachment into areas best suited for industrial use, [2] incompatible commercial and industrial uses locating adjacent to one another, and [3] government inability to economically provide for the very different road and utility needs of commercial and industrial uses.

New areas of Southeast and Southwest Anchorage are opening for development as transportation, utilities, schools, parks, and other public infrastructure is provided and as the private housing market responds to the twin stimuli of demographic growth and available state housing financing. In coordination with currently scheduled infrastructure development, the four large tracts of developable land in Southwest and Southeast Anchorage will likely open to development in the following sequence: Klatt Bog and Connors Bog at present, followed by the Potter Valley area in Southeast Anchorage beginning in 1985, the Goldenview area in Southeast Anchorage in 1986, and the Sand Lake gravel pit area in the early 1990's. Development will probably occur in a phased sequence that may extend 8 to 10 years from these start-up dates in response and proportionate to the rate of economic growth in the metropolitan area generally as well as the availability of other housing of like size and price.

There were 4,044 acres of undeveloped residential land in Southwest Anchorage in 1980. Over the past three years, a total of 1,581 acres have been developed at an approximate rate of 527 acres a year. Residential development will probably accelerate in the future due to the limited undeveloped residential land supply in the Northeast and Northwest and the extension of public services and facilities to portions of the Campbell/Klatt and Connors Bog areas. Over 80% of the undeveloped residential land in Southwest Anchorage today is zoned for single-family use; 15% is multi-family; less than 1% is two-family (Table 4). Actual development will include single family detached as well as multi-family attached units due to the flexibility allowed with cluster, planned unit development, and planned community development options.

Table 5, column four, shows the 1983 total vacant land acreage in Southwest Anchorage. This includes lands having zoning classifications that would seem to allow development but that are in fact non-developable, namely tidal flats and preservation wetlands. There are 212 acres of preservation wetlands and 1,237 acres of tidal flats. These amounts are deleted from the zoning district totals in column five. Thus, column six shows the total vacant lands available for development in Southwest Anchorage at the end of 1983. Although land is available for development, it may not be immediately developable due to the absence of public services and infrastructure.

TABLE 5

LAND USE PATTERNS BY ZONING DISTRICT
Southwest Anchorage
1980-1983

Zoning District	Vacant Acreage In 1980	Acres of Developable Land Used 1980-83	A C R E A G E 1 9 8 3		
			Total Vacant Developable and Non-Developable	Vacant Non-Developable (Preservation Wetlands, Tidal Flat)	Vacant Developable Acreage
R-1	2151	1256	1016 -	121 =	895
R-1A	929	+ 137	1320 -	254 =	1066
R-5	47	35	12 -	0 =	12
R-6	38	+ 44	118 -	36 =	82
R-7	-	-			-
R-8	-	-			-
R-9	-	-			-
R-2A	187	111	76 -	0 =	76
R-2D	3	2	1 -	0 =	1
R-2	445	213	232 -	0 =	232
R-3	244	75	169 -	0 =	169
R-4	6*	+ 18	24 -	0 =	24
D-2	-	-			-
D-3	-	-			-
B-1	22	2	20 -	0 =	20
B-2A	4	4	0 -	0 =	0
B-2B	-	-			
B-2C	-	-			
B-3	174	96	78 -	0 =	78
B-4	12	11	1 -	0 =	1
R-0	28	17	11 -	0 =	11
I-1	1039	462	577 -	1 =	576
I-2	486	3	483 -	0 =	483
I-3	-	-			
PL1	554	400	910 -	756 =	154
U	510	243	548 -	281 =	267
TOTAL	6879	2732	5596 -	1449 =	4147

* May be outside Southwest Boundary.

NOTE: 1980 acreage counts were determined using aerial photos and manually measuring vacant land while 1983 acreage counts were determined completed using Property Appraisal's land records. Thus, the 1983 acreage figures are more accurate than the 1980 figures.

There are a few zoning use districts that had acreage increases over the last three years. Details on changes in land use patterns in this area over the last three years are also seen in Table 5. The increase of 137 acres in land zoned R-1A is due to small rezonings and probable inaccuracy in the 1980 land inventory. Miscellaneous rezones and the large rezone on Woo Boulevard account for the overall increase in lands zoned R-6. The increase in R-4, multi-family acreage, is primarily the result of rezoning in the Discovery tract case west of 'C' Street and Strawberry Meadows.

Klatt Bog Wetlands

Klatt Bog conservation and developable wetlands and Connors Bog preservation and developable wetlands are regulated by the Anchorage Wetland Management Plan (Figure 3). Construction on development wetlands requires conformance to the General Permit issued by the Community Planning Department; development on conservation wetlands requires a site specific permit issued by the Department of the Army/Corps of Engineers. Features particular to wetlands such as high water tables, high peat levels, and their integral role in the area's hydrologic cycle require special control measures during development to prevent flooding problems and to assure the integrity of the natural drainage system. Since construction on wetlands has occurred only in the last few years in Anchorage, emphasis has been placed on the use of construction techniques that assure the integrity of foundations. The Municipality's 1985 Capital Improvement Program includes funding for a Klatt Bog drainage study, which will include the definition of drainage basin boundaries and guidelines for foundation and drainage design. Because this large wetlands tract functions as a single unit, it is important that developments in individual parts of the Klatt Bog be integrated with areawide water, sewer and drainage systems.

Sand Lake Gravel Pits

Land use of the 480-acre Sand Lake gravel pit area is presently in transition. The area is changing from open pit mining to restored and reseeded areas and eventually to a redeveloped residential status. There are gravel pits in operation, some that are not restored and in violation of previous agreements, gravel pits that are restored or under restoration, and special case areas (Figure 2 and Table 6). The transition process is to be guided by policies and standards in the Planning and Zoning Commission's recently adopted Sand Lake Redevelopment Plan including the resolution amendment, Standards for Operation, Redevelopment and Restoration.

TABLE 6
 STATUS OF SAND LAKE GRAVEL PITS
 Southwest Anchorage

<u>Pit #</u>	<u>Pit Name or Owner/Operator</u>	<u>Status (April 1984)</u>
1	Vast	Former extraction. Not restored, in violation. Redevelopment Plan proposed.
2	Kalmbach	Former extraction. Not restored, in violation. New extraction proposed.
3	Evenson	North half operational until 12/84. South half restored.
4	Sky Hills	Largely undeveloped. Disturbed area in southeast corner not restored. (Special case)
5	Susky	Former extraction. Restored.
6	Seaview	Former extraction. Under restoration.
7	Wright	Former extraction. Not restored, in violation. New extraction proposed.
8	Alaska Sand & Gravel	Former extraction. Peat disposal and redevelopment plan (concept). Re-evaluation in 3/85. (Special case).
9	Tallman	Operational until 12/84.
10	Stephan & Son	Former extraction. Restored.

Site redevelopment plans and review procedures are called for to assure redevelopment occurs in an orderly manner which is carefully coordinated with the provision of basic public services and amenities including sewer, water, drainage, roads, open space and parks. Of particular importance is the installation of sewer trunk lines in the area, currently targeted for 1988-89 in the Municipality's Capital Improvement Program. Water service is an even larger constraint since the nearest connection to serve the area is located at Tudor and Bragaw Streets. Since residential development is dependent upon the availability of water and sewer systems, development of the gravel pit area will be limited until adequate facilities are available.

ENVIRONMENTAL CHARACTERISTICS

Wetlands

Freshwater wetlands are a critical environmental feature in Southwest Anchorage. Not only does the area contain the Municipality's single largest wetland tract - the Campbell-Klatt Bog - it also contains the most diverse variety of wetland complexes. Wetland tracts comprise a significant portion of all undeveloped acreage in the Southwest, and are considered one of the largest remaining sources of developable residential land supply in the Anchorage Bowl.

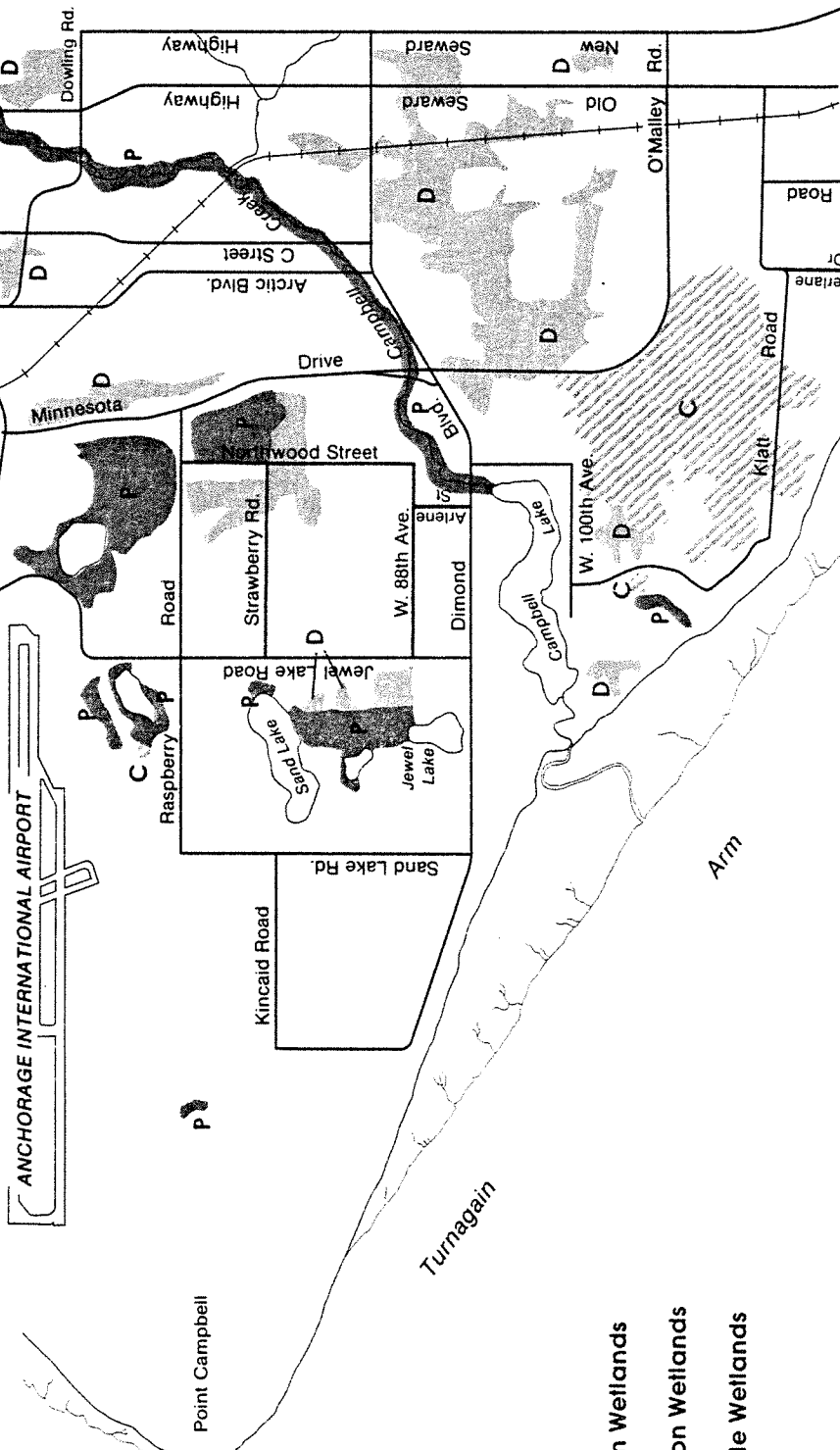
There are, nonetheless, substantial differences between these wetlands in terms of their suitability and availability for development. These differences primarily reflect the relative importance of the wetlands in maintaining essential hydrologic, stormwater retention, and wildlife habitat functions. While some wetland areas can be developed with little or no impairment to natural systems, others are relatively intolerant of human use and are valuable in their undisturbed or original conditions.




The Anchorage Wetlands Management Plan (AWMP) delineates policies and standards which distinguish different wetland types and provides the basis for their development and/or protection. Wetlands are divided into three basic categories: Preservation, developable and conservation wetlands. Designated wetlands categories within Southwest Anchorage are depicted in Figure 3.

As the term implies, preservation wetlands are intended to be retained in their natural state because of their inherent values to essential environmental and ecological functions. Preservation wetlands comprise one quarter of the more than 3000 acres of wetlands tracts within the Southwest. These are principally located along Campbell Creek; around Jewel, Sundi, Sand and DeLong Lakes; and on state, municipal and privately-owned lands in the Connors Bog preservation wetlands. Since public policy is to preclude all but essential development in these areas, the classification of preservation wetlands markedly diminishes the total vacant acreage that might otherwise be available for development in Southwest Anchorage.

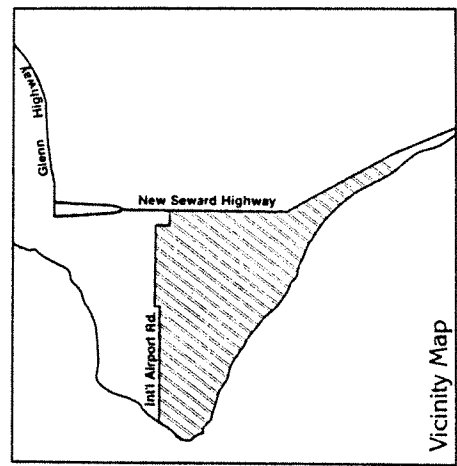
Southwest Anchorage

ANCHORAGE INTERNATIONAL AIRPORT



-  Preservation Wetlands
-  Conservation Wetlands
-  Developable Wetlands

Wetlands —
Approximate Locations



Vicinity Map

Figure 3

Almost half the wetlands tracts in Southwest Anchorage have been classified developable. Unlike preservation wetlands, developable wetlands do not perform essential natural functions and may be developed with appropriate foundation and utility design. A major issue in the development of these areas is effective drainage and subdivision design. The northern part of Campbell-Klatt and wetlands south of Strawberry Lake are the two largest wetland tracts in Southwest Anchorage available to development.

Conservation wetlands differ from developable wetlands in that they have certain natural features which require protection. The adopted Municipal policy does not require maintaining these wetlands in a natural state, but it does call for careful regulation of the character and pace of development. Hence, conservation wetlands may be developed if it is demonstrated that significant environmental attributes are not disturbed. Subdivision design in areas classified as conservation typically use cluster configurations in order to retain critical wetlands features. The public policy goal is to balance the need to protect conservation wetlands features with the need to provide sufficient area for population growth. This is a particularly significant issue for two reasons: [1] there is only a limited remaining undeveloped residential land supply in the Anchorage Bowl, and [2] while much of the otherwise developable lands in the Southwest area will not be provided water and sewerage within the next 5-10 years, the Klatt Bog conservation wetlands area will be serviced in the immediate future.

Klatt Bog is the only conservation wetlands in Southwest Anchorage, but its 844 acres comprise one quarter of the area's total wetland tracts. As with all conservation wetlands in Anchorage, the AWMP requires that resource information submittals regarding soils, hydrology, vegetation and wildlife habitat be submitted at the time of the preliminary plat. These resource information submittals serve to ensure that development is avoided in the more sensitive wetland areas and that natural functions are adequately protected. Of special importance is the protection of critical water retention areas. To minimize interference with natural drainage functions, clustered development and integrated storm drainage systems are essential in the Klatt Bog conservation wetlands. Unless storm drainage problems associated with residential development are fully and properly addressed, buckling and seepage will become real problems on lots and subdivisions now developing within the wetlands area.

Closely related to the issue of wetlands development is the extraction and disposal of high organic content soils which are unsuitable as foundation material. Though peat soils are not confined to wetland areas, their development invariably involves peat removal. Peat disposal has been both a private and public concern. Without suitable disposal areas, development is slowed and becomes more costly. Consequently, peat disposal has been allowed in the Sand Lake gravel pits under carefully controlled arrangements, and subject to Municipal approval, landowners have been permitted to use peat fill to improve their properties.

Groundwater

Southwest Anchorage is served by two types of groundwater systems. One is a two-tiered aquifer system of unconfined surficial water over a deeper, confined aquifer with a confining layer of clays sandwiched between. The second is a deep unconfined aquifer which is particularly vulnerable to saltwater intrusion.

The two-tiered system is common throughout the Anchorage Bowl. It is from the confined aquifer of this two-tiered system that groundwater is tapped for the Municipal water system. In Southwest Anchorage, the two-tiered system extends to the lake-belt between Campbell Creek and Knik Arm. But west of the lake-belt, from Jewel Lake on the south to Jones Lake on the north, the confining layer thins and becomes discontinuous. Sediments are thicker and more permeable leading to the presence of the unconfined aquifer.

Groundwater flow is generally toward the ocean. In the unconfined aquifer of the two-tiered system, groundwater flow is primarily controlled by topography. It is this aquifer which maintains stream baseflow, a stream's minimum discharge. The confined aquifer of the two-tiered system is less controlled and flows generally toward Turnagain Arm. West of the lake belt, groundwater flow is also toward Turnagain Arm. Wells in this area are subject to saltwater intrusion after prolonged pumping due to the general condition of the unconfined aquifer as well as the low elevation of static water levels. This is especially prevalent in the Sand lake gravel pits area. As a result, development in this area will be substantially constrained until extensions from the Municipal water system are established; a problem which is more fully addressed in the "Water" section later in this report.

Streams and Flooding

Only two identifiable drainage basins are found in Southwest Anchorage: Furrow Creek, a small channel with its mouth in John's Park and Campbell Creek (and tributaries) which drains into Campbell Lake before emptying into the Inlet. Discounting small ponded areas of standing water within the wetlands and tideflats, there are approximately thirty-five lakes in Southwest Anchorage. These range from large, manmade lakes to small, seasonal lakes. The Campbell Creek drainage and the larger lakes have been mapped to delineate the 100 and 500 year floodplains. Tideflats in the area are subject to coastal flooding.

Flooding is not in general a major concern in this area. This is attributable to three factors: [1] much of Campbell Creek has been set aside as Municipal Greenbelt and provides natural floodwater protection; [2] structure setbacks along streams are required by creek maintenance and General Permit easements; and [3] there is little development within the floodplain. What little development that does occur within the floodplain is strictly regulated under Title 21.

Wildlife

Waterfowl, wildlife, and anadromous fish abound in the Southwest's extensive wetland areas, along the coast and in the stream valleys (Figure 4). The Potter Point State Game Refuge provides a large, vital coastal wetland feeding area for waterfowl. Nesting and brood-rearing areas are also located along the stream valleys and in the large conservation and preservation areas of Connors Bog and Campbell-Klatt Bog. Development in these areas is restricted and/or mitigated by various regulatory systems designed to protect the natural environment and its vital habitat functions. Resource information submittals in conservation wetlands are required to ensure that critical habitats are not altered.

Approximately 11-16 moose reside year-round in the two large wetland areas on either side of Campbell Creek and within the Greenbelt corridor. As many as thirty resident moose are found around the Airport and within the Pt. Campbell/Kincaid Park. Other migratory or resident moose are scattered throughout the area, and there are occasional reports of black bears, which presumably wander down from the Hillside to the tidal flats.

Southwest Anchorage

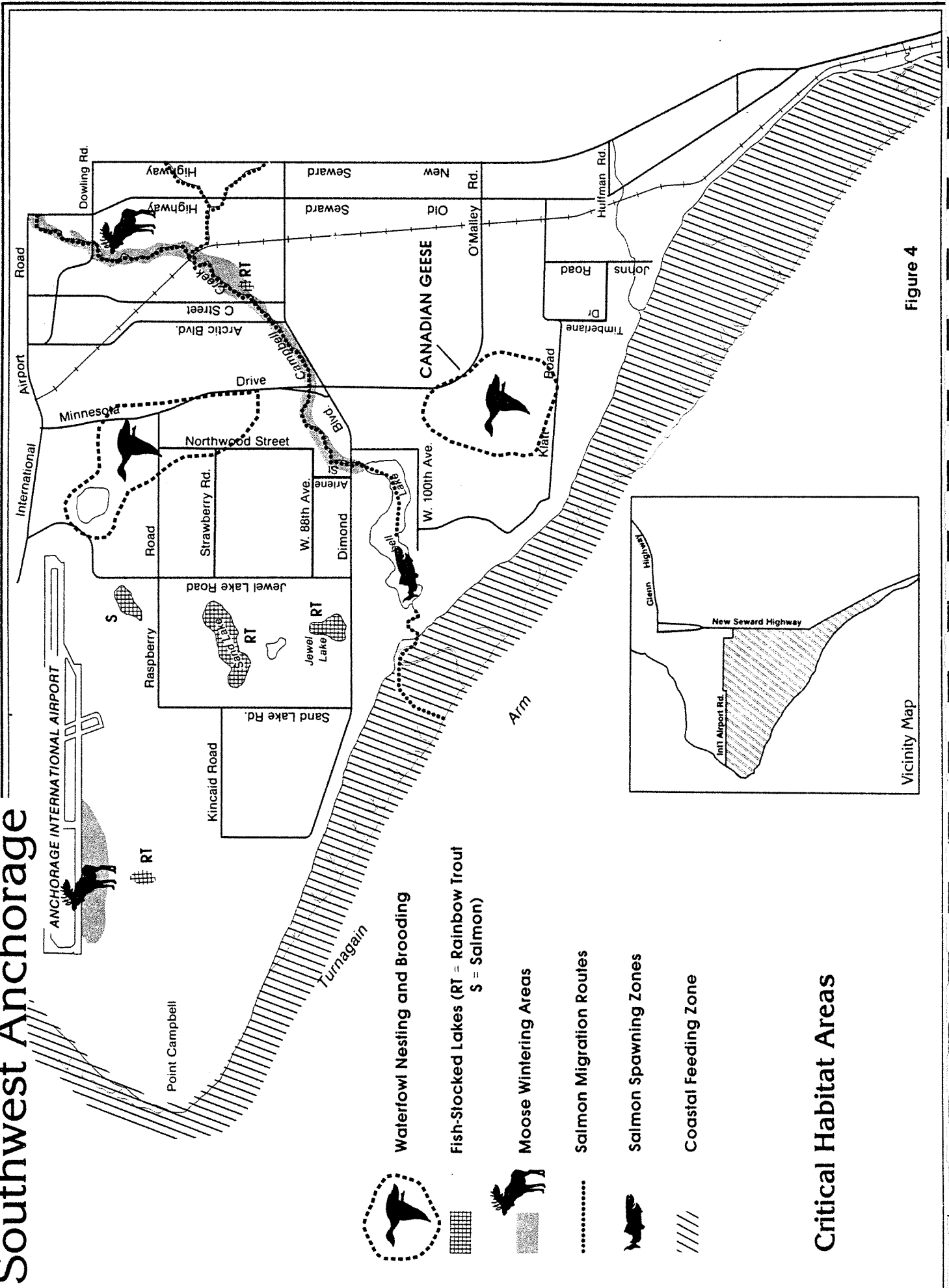


Figure 4

Anadromous fish use Campbell Creek for spawning, rearing and migration. King, Coho, Pink, and Sockeye are all found within the drainage. In addition, Little Campbell, Sand and Jewel Lakes are stocked with Rainbow Trout. DeLong and the unnamed pond between Campbell Creek and the railroad north of Dimond are stocked with Chum Salmon.

Slopes, Mass Wasting and Ground Failure

Slopes, mass wasting and ground failure susceptibility are closely related geological conditions that preclude or constrain development in limited areas of the Southwest. For the area as a whole, however, these factors are relatively minor and their effects can be mitigated within certain limits. Most of the topography in Southwest Anchorage is flat with scattered areas of gentle-to-moderate slopes, which in themselves pose few development problems. West of the lake belt, the topography is more rolling with moderate-to-steep slopes. Careful site design and construction practices are needed in these areas in order to protect the slopes and prevent erosion or increased runoff. Steep slopes in segments of the Campbell Creek stream valley and in the Sand Lake gravel pits pose development problems. Development in these areas must incorporate mitigating measures to prevent flooding, minimize erosion and preclude the obstruction of drainage systems.

The area's steepest slopes are found on the bluffs along Turnagain Arm in Pt. Campbell/Kincaid Park; the west facing bluffs in Pt. Campbell Park; and the inlet-bordering bluffs at Pt. Campbell. These steep to precipitous bluffs are all subject to mass wasting, a term used to describe areas where slopes are high and slide-prone due to low slope stability. Development is permitted in these areas but structures must be set well back from slide-prone sections and site design and engineering strictly controlled.

Potential mass wasting areas overlap high ground failure susceptibility areas. This term refers to areas most likely to "fail" in the event of an earthquake. Failure includes ground cracking and earth movement and is dependent on geology, groundwater, topography, proximity to the earthquake epicenter and the intensity and duration of the shaking. In Southwest Anchorage (Figure 5), the bluffs bordering Turnagain Arm are the most susceptible to ground failure chiefly because they are steep and consist of thick deposits of unconsolidated sediments.

Southwest Anchorage

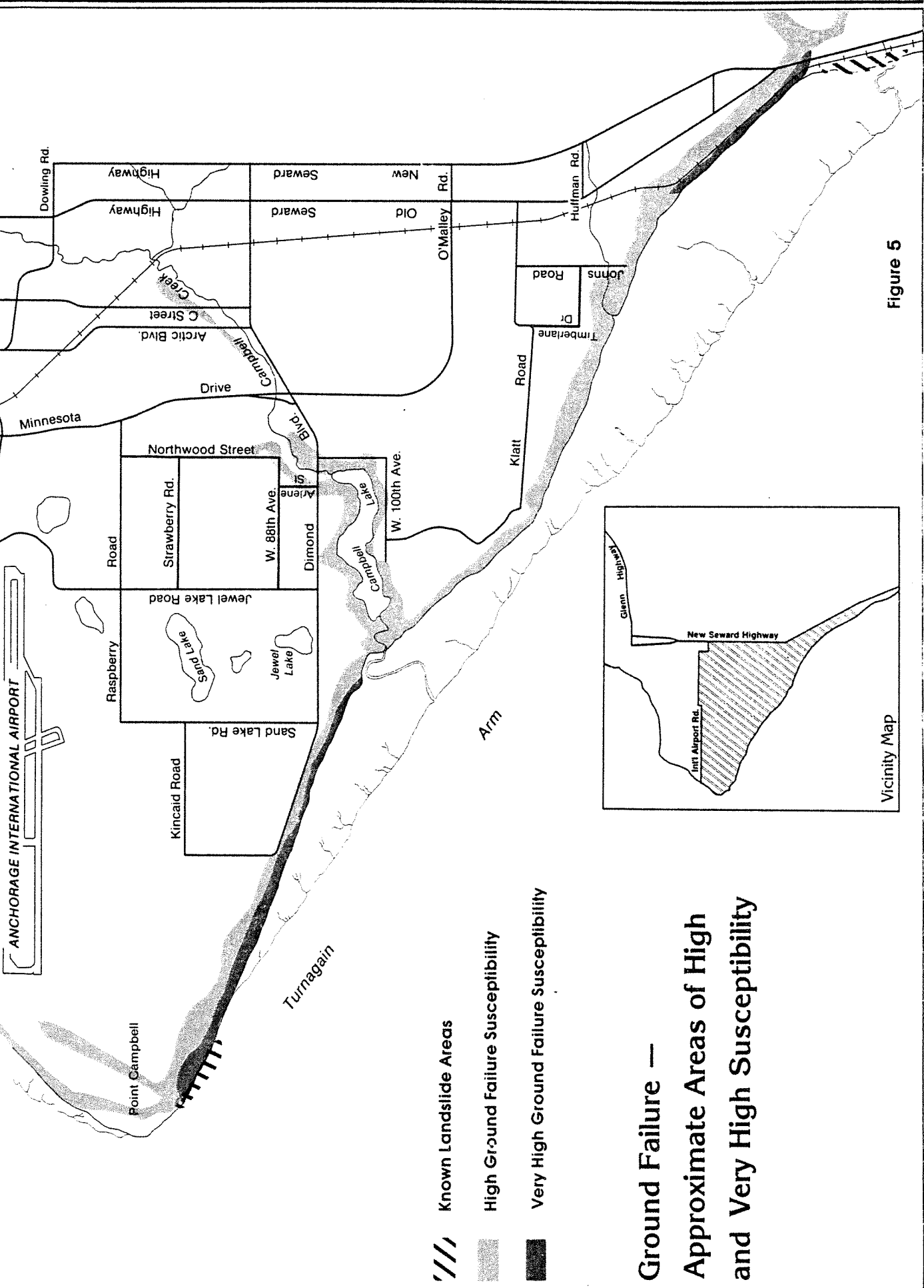


Figure 5

These bluffs are in the two highest risk categories established in the 1979 Geotechnical Hazards Assessment Study prepared for the Municipality by Harding-Lawson Associates. Some slope segments along Campbell Lake and Campbell Creek are also rated for high ground failure susceptibility.

Anchorage Coastal Management Plan

The Anchorage Coastal Management Plan (ACMP) addresses all major processes affecting the Municipality's coastal resources: surface waters, marshes, tidal flats and floodplains, hazardous land, anadromous streams; marginal lands and wetlands. Areas of special importance to the nearshore environment by virtue of their unique values or particularly fragile characteristics are designated in the ACMP as Areas Meriting Special Attention (AMSA). There are two AMSA designations in Southwest Anchorage:

Point Campbell-Point Woronzof Coastal Wetlands - These wetlands are owned by the state and are a noted nesting and feeding ground for numerous species of waterfowl. The wetlands offer excellent views of the Inlet and Fire Island and, while unsuitable for development, could accommodate a wide variety of passive recreational uses. The Municipality has requested that the Potter Marsh State Game Refuge be extended to include these wetlands. Enacting state legislation is pending.

Point Campbell Dunes and Delta - The dunes and delta are located at the extreme southern end of Kincaid Park and are owned by the Municipality. They are noted for their unique features, which clearly demonstrate the area's geological history and development. The area is currently used by hikers, hang gliders and dirt bike racers. A management plan is needed that can accommodate various uses while still preserving the area's highly valued features.

Southwest Anchorage

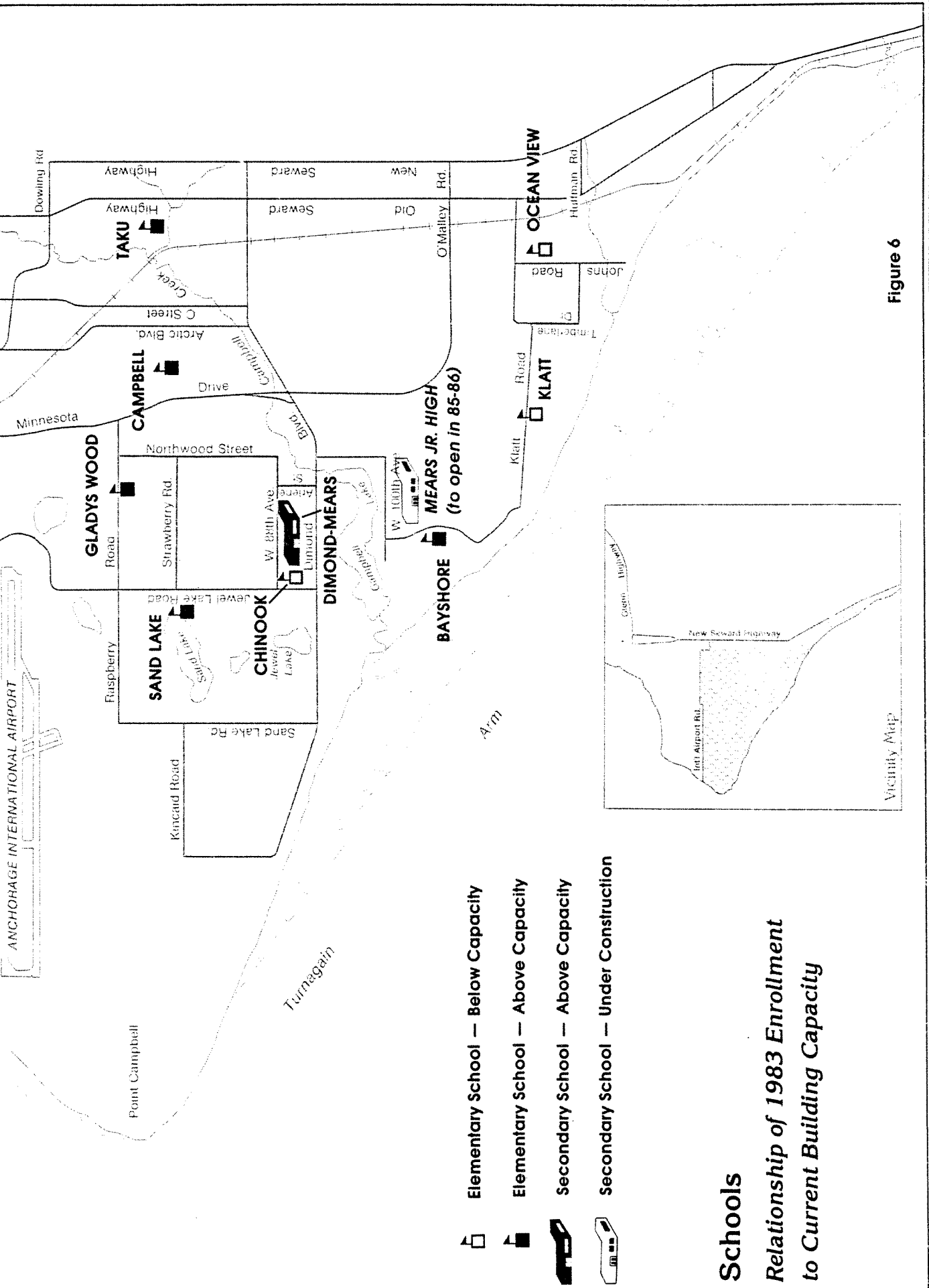


Figure 6

SCHOOLS

Southwest Anchorage is served by eight elementary schools and one junior-senior high school (Figure 6). As a result of overlapping school attendance boundaries, it additionally diverts some of its resident elementary and junior-senior students to facilities in neighboring Southeast; most notably, Service-Hanshew Junior-Senior High School.

The area is nonetheless pressed for adequate facilities to serve its growing student population. Of its eight elementary schools, three are at 94-98% capacity; and five exceed capacity by as much as 5-14%. (Table 7). Overcrowding in secondary facilities is even more critical. Dimond-Mears exceeds capacity by almost a third; and Service-Hanshew, with one attendance boundary overlapping Southwest and Southeast, exceeds capacity by a staggering 60%.

TABLE 7
SCHOOL CAPACITY AND ENROLLMENT
Southwest Anchorage
1983-84

<u>Type and Name</u>	<u>Student Capacity</u>	<u>Enrollment 9/30/83</u>	<u>Additional or Deficient Student Capacity</u>
Elementary:			
Bayshore	399	455	- 56
Campbell	420	448	- 28
Chinook	525	513	7
Klatt	504	475	29
Oceanview	504	490	14
Sand Lake	378	424	- 46
Taku	420	443	- 23
Gladys Woods	504	565	- 61
Secondary:			
Dimond-Mears	2,160	2,773	-613
Service-Hanshew*	1,908	3,093	-1,185

* Service-Hanshew is located in Southeast Anchorage but serves about one-third of the Southwest area.

Two schools are currently under construction to help alleviate the worst overcrowding problems, namely those in the secondary facilities. Hanshew Junior High will open in 1984-85, allowing Service Senior High to occupy the entire two-school complex. Similar expansion will be possible at Dimond-Mears when the new Mears Junior High School opens in 1985-86. It is expected that construction of the Mears and Hanshew facilities, together with anticipated changes in school attendance boundaries, will provide sufficient capacity for projected secondary enrollments in Southwest until the early 1990's. Shortly thereafter, the Anchorage School District anticipates that Southwest enrollments will require construction of additional junior and senior high facilities.

Overcrowding in elementary facilities will likely be a problem for the near term. Eleven classroom additions are planned for Bayshore and Sand Lake Elementary Schools but will not be completed until 1987-88. To accommodate projected growth in elementary enrollment for the 1990's, sites are now being selected and reserved for construction of two more elementary schools in Southwest Anchorage. These facilities are anticipated to open in 1988 and 1994.sw11

PARKS, TRAILS and OPEN SPACE

Overview

Establishment of a balanced parks, trails and open space system is important to maintaining the overall quality of life in Southwest Anchorage as the area undergoes rapid development. With a total of 2,225 acres of existing park, greenbelt and open space acreage, it would first appear that the area's current and future needs are already well met (Figure 7, Table 9). It is important to consider, however, that two-thirds of this acreage is dedicated to one facility, the Kincaid/Pt. Campbell Regional Park. Acreage for mini, neighborhood and community parkland is, in fact, in short supply in Southwest Anchorage and may become increasingly deficient as population grows unless steps are taken to develop a park-open space system.

Parkland needs for Southwest Anchorage are primarily based on a series of recreation standards developed by the National Recreation and Park Association in the early 1970's (Table 8). These standards relate recommended park acreage allocations to the population of an area. The Municipality has employed these standards for several years in establishing park acquisition and development needs. In this report, they are used to quantify the Southwest's current and projected parkland deficiencies (Table 10).

TABLE 8

PARK RECREATION STANDARDS

Park Type	Acreage/ 1000 People	Size Range	Population Served	Service Area	Typical Facilities	Examples
Mini Parks		2500 sf or to 1 acre	500- 2,500	Sub- Neighborhood	Swings, climbing bars, surfaced area, benches	Taku School Park, Edna M. Fisk Memorial Park
Neighborhood	2.5	5-20 acres	2,000-10,000	1/4-1/2 mi. radius	Swings, etc. paved courts play fields, benches	DeLong Lake Park, Johns Park
Community	2.5	20-100 acres	10,000-50,000	1/2-3 mile radius	Contact with nature, sports fields, tennis facilities	Taku Lake Park
Large Urban	5.0	+ 100 acres	1 per 50,000	within 1/2 hr. drive	Golf, trails, nature center, swim, sport facilities	Jewel Lake Park
Regional	20.0	+ 160 acres	Entire pop. in smaller comm.	within 1 hr. drive	Trails, camping, swim	Kincaid Park
Greenbelt	10.0	+ 500 acres	Entire pop.	1/2-3 mi. radius		Campbell Creek Greenbelt, Emerald Hills Park

Southwest Anchorage

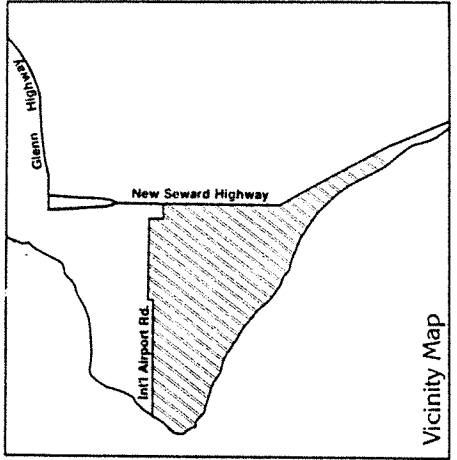
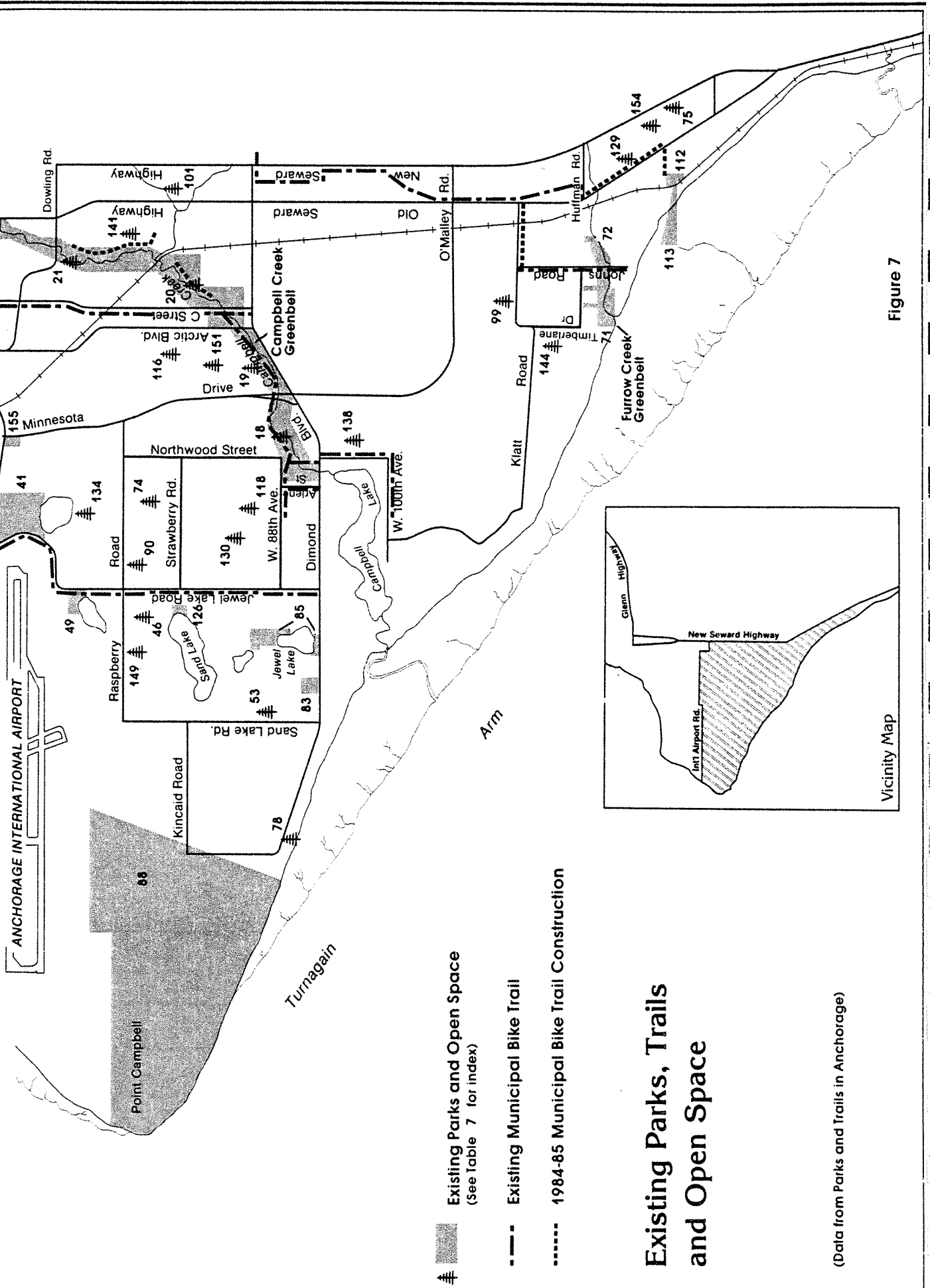


Figure 7

TABLE 9

SOUTHWEST ANCHORAGE PARKS, OPEN SPACE and TRAILS

NO.	NAME	ACRES	TYPE
18	Emerald Hills Park	64.28	N
19	Rovenna Park	60.72	OS
20	Taku Lake Park	52.92	C
21	Lynnwood Park	46.83	OS
41	Connors Lake Park	255.00	OS
46	Cutty Sark Park	0.83	M
49	DeLong Lake Park	31.09	N
53	Edna M. Fisk Memorial Park	0.62	M
71	Johns Park	58.75	N
72	Mariner Park	4.52	OS
74	Gladys Wood Park	7.84	N
75	Hamilton Park	1.69	M
78	High Tide Park	0.77	OS
83	Jade Street Park	13.94	N
85	Jewel Lake Park	30.02	U
88	Kincaid/Pt. Campbell Park	1438.40	R
90	Linden Park	4.26	M
99	Mesa Verde Park	1.68	M
101	Morton Park	0.69	OS
112	Oceanview Park	7.07	N
113	Oceanview Bluff Park	66.00	OS
116	Papago Park	1.87	M
118	Pleasant Drive Park	0.35	M
126	Sand Lake Park	5.10	N
129	Seward Highway Buffer Park	1.69	OS
130	Shady Birch Park	1.93	M
134	Southwood Park	1.29	M
138	Stonegate Park	3.72	M
141	Taku School Park	2.10	M
144	Timberlane Park	0.26	OS
149	Whitehall Street Park	0.37	OS
151	Wolverine Park	3.62	M
154	Stephenson Park	1.35	M
155	I.S.S.C. Park	36.37	C

T A B L E 1 0

PARK NEEDS BY DISTRICT NUMBER
Southwest Anchorage
1983, 2000

District Number*	1983 Population	Total Park Acreage	Existing Park Acres		Existing Shortage or Surplus Park Acreage, at 2.5 acres/1000 people		Projected Population at Saturation Level Year 2000	Projected Park and Acreage Shortage at 2.5 acres/1000 people - Year 2000	
			Neighborhood and Mini	Community	Neighborhood and Mini	Community		Neighborhood	Community
30	3,213	1521.1	25.5	0	+17.5	- 8.0	17,660	- 18.6	- 44.2
31	10,707	371.3	25.7	36.4	- 1.1	+ 9.6	18,200	- 19.8	- 9.1
32	5,826	66.5	5.7	0	- 9.1	-14.6	5,880	- 9.2	- 14.7
33	3,388	119.7	2.1	0	- 6.4	- 8.5	7,160	- 15.8	- 17.9
35	5,766	3.7	3.7	0	-10.7	-14.4	17,130	- 39.1	- 42.8
36	2,367	0	0	0	- 5.9	- 5.9	13,470	- 33.7	- 33.7
37	8,658	142.2	11.8	0	- 9.9	-21.6	10,800	- 15.2	- 27.0
TOTAL	39,925	2224.5	74.5	36.4	-25.6	-63.1	90,300	-151.4	-189.4

* Numbers refer to Transportation Districts within Southwest Anchorage. Transportation District numbers correspond to community council areas as follows: [1] Taku-Campbell, Districts 32 and 33; [2] Sand Lake, Districts 30 and 31 and the northern third of District 35; [3] Bayshore/Klatt, the remaining portion of District 35, and the northern half of District 37; [4] Old Seward/Oceanview, the remaining portion of District 37.

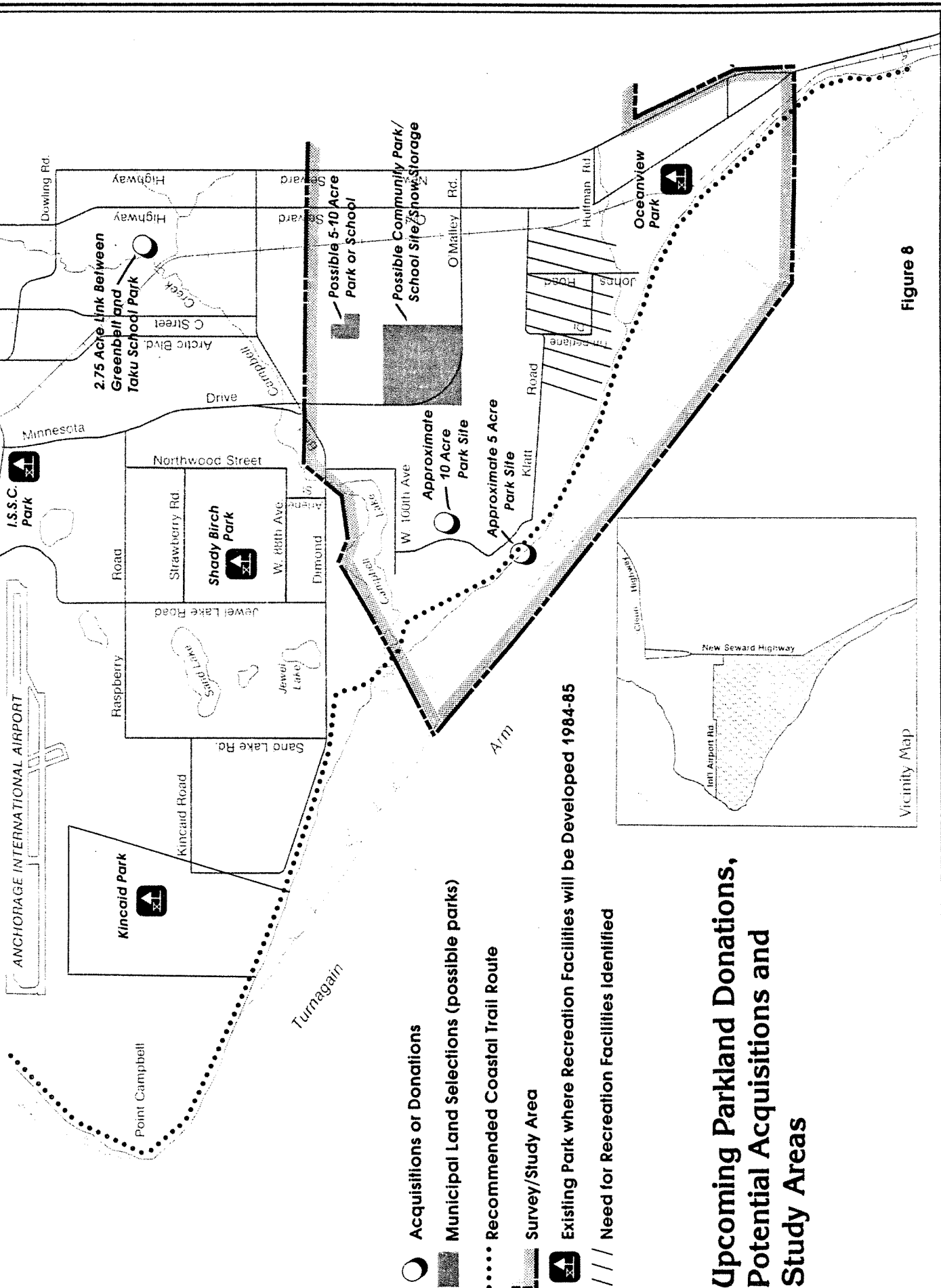
Total existing acreage for mini, neighborhood and community parks is now deficient relative to these standards in three community council areas: Sand Lake, Bayshore/Klatt, and Old Seward/Oceanview. By the year 2000, all areas will be sub-standard unless action is initiated to substantially increase park acreage. At present, total acreage for mini and neighborhood parks is three-quarters the recreation standard. Without further acquisitions, it will decline to only one-third of the standard by the year 2000. Community park needs are even greater. They currently comprise one-third the recreation standard, and will dwindle by the year 2000 to a mere sixth. Current and projected park deficiencies in the Campbell/Klatt wetlands area are particularly important. Since substantial development is expected in this area over the next 2-4 years, parkland development should proceed as rapidly as possible within the constraints of operating and capital funding.

It is important that land be assured for parks and greenbelts in the Southwest now lest the opportunity vanish. The Municipality has several programs, land acquisitions and land donations on line to help meet this need (Figure 8). Also, the Parks and Recreation Department is now surveying residents in the Bayshore/Klatt, Old Seward/Oceanview and Huffman-O'Malley Community Councils to determine their preferences and needs for parks, recreation facilities, trails, and the like. The results of this survey will help guide future park and trail acquisitions and recreation facility development.

Acquisitions and/or developments are underway in all areas of the Southwest in an attempt to meet the areas's current and future parkland needs:

- In Taku-Campbell, a 2.75 acre mini park linkage between Campbell Creek Greenbelt and Taku School Park has just been acquired.
- Four playfields in Sand Lake's International Soccer and Softball Complex will be developed as well as playground facilities at Shady Birch Park.
- Two donations of approximately 5 and 10 acres each have been acquired for neighborhood parks in Bayshore/Klatt. In addition, development of a neighborhood park and community park is recommended for two Municipal land selections in the area. Site planning and development are on hold pending litigation on the land selections. The proposed Coastal Trail crosses this area as well as neighboring Old Seward/Oceanview.

Southwest Anchorage



Upcoming Parkland Donations, Potential Acquisitions and Study Areas

Figure 8

Vicinity Map

- Further developments are scheduled in Old Seward/Oceanview, including a basketball court, ice skating pad and playground equipment at Oceanview Park. But there is a recognized need for other developed recreation facilities just south of Klatt Road.

In addition to these parkland acquisitions and developments, four projects are identified in the Anchorage Park Greenbelt and Recreation Facility Plan for Southwest Anchorage:

Sand Lake-Jewel Lake Open Space Corridor

An open space corridor is proposed to conserve the black spruce bog which runs between Sand, Sundi and Jewel Lakes, providing a recreational connection between the lakes and helping to maintain the hydrologic relationship of the wetland to the lakes. This is now a preservation wetlands area. This open space would be an extension of Jewel Lake Park.

Sand Lake Gravel Pit Restoration

The Sand Lake gravel pits are being closed over an extended period in accordance with amortization agreements. Requirements for site redevelopment plans in the area are outlined in the Planning and Zoning Commission's Sand Lake Gravel Pit Reclamation Plan. This area requires extensive modification to accommodate residential development since it is devoid of natural amenities such as woodlands and streams. The introduction of vegetation and recreation areas will help improve the barren landscape.

Two greenbelts are suggested to help establish the form of the developing residential community. Corridor widths could vary in size, widening to provide tot-lot or neighborhood park space as needed for future residents. Suggestions for one corridor of the greenbelt include a link to Sand Lake; the other would be tied to Jade Park and Jewel Lake. The corridors would join at the west end of the area and be tied to Kincaid Park. This corridor segment may be necessary in implementation of the Coastal Trail if engineering studies prove that the descent of the Turnagain Arm bluff from Kincaid Park is not feasible.

Connors Bog Corridor (From Connors Lake to Campbell Creek Greenbelt)

A major north-south open space/recreation corridor is needed in the Anchorage Bowl. Land is now coming in for subdivision and a continuous corridor is being set aside in the area north of Campbell Creek Greenbelt. This corridor would link residents of the Bayshore, Oceanview, Klatt, Sand Lake and Spenard areas with major recreation resources, including Campbell Creek Greenbelt, the Coastal Trail and Connors Lake. A wide corridor is envisioned because of the natural openness of the landscape. The trail would generally follow the vegetative edge between the small, better-drained ridges and the bog. Black spruce and birch are found only in sparse pockets, lending an open feeling to the area which would be an asset in exposing views of the Chugach Mountains.

Klatt Bog Greenbelt

Two trail corridors circling Klatt Bog are proposed. The west leg of the system is virtually identical to the trail system proposed in the master plan for Southport's future development. In the greenbelt concept, the bog itself would be conserved and a trail system would be accommodated between development and the bog. A connection to Campbell Creek Greenbelt via a corridor along the Minnesota Drive extension is also proposed.

WATER

Until its recent acquisition by Anchorage Water and Wastewater Utility (AWWU), Central Alaska Utilities (CAU) was the primary supplier of water to Southwest Anchorage. CAU's water system served the Sand Lake, Campbell-Taku, Campbell Lake, and Oceanview communities from a series of groundwater wells in the local area. With the exception of three privately owned certified water systems serving very small areas, the remaining areas in Southwest Anchorage rely on individual on-site wells or are undeveloped at present time. (Figure 9).

Areas currently tied into the former CAU system have adequate water supply for domestic use, but in some areas may lack adequate fire-flow capability. In those instances, private development is required to meet Fire Department standards through any of a variety of means (booster pumps, sprinkle systems, loop systems, and so forth). Undeveloped areas within Southwest Anchorage that are anticipated to experience accelerated development, phased with infrastructure and utility construction, are the wetland areas generally known as Klatt Bog and Connors Bog, and the Sand Lake gravel pit area west of Sand Lake Road. These undeveloped areas lack an adequate water system. The two wetland areas, however, may utilize on-site water supplies or are within reasonable proximity to the existing public water system where sufficient capacity exists to serve the areas as they develop during the next several years. Coordination among the area's private developers will be needed in order to ensure development of a proper distribution system with adequate fire flow capability.

Providing an adequate water supply and distribution system to the Sand Lake gravel pit area (west of Sand Lake Road) will be more difficult. Preliminary assessments by AWWU and the U.S. Geological Survey indicate that in order to serve development of this area at densities projected in the Anchorage Comprehensive Development Plan, water will have to be transported to the area from transmission lines located east of the Seward Highway, more than five miles away. Large-scale ground water development is not recommended in this area because of the potential for saltwater intrusion and regional ground water level declines.

Southwest Anchorage

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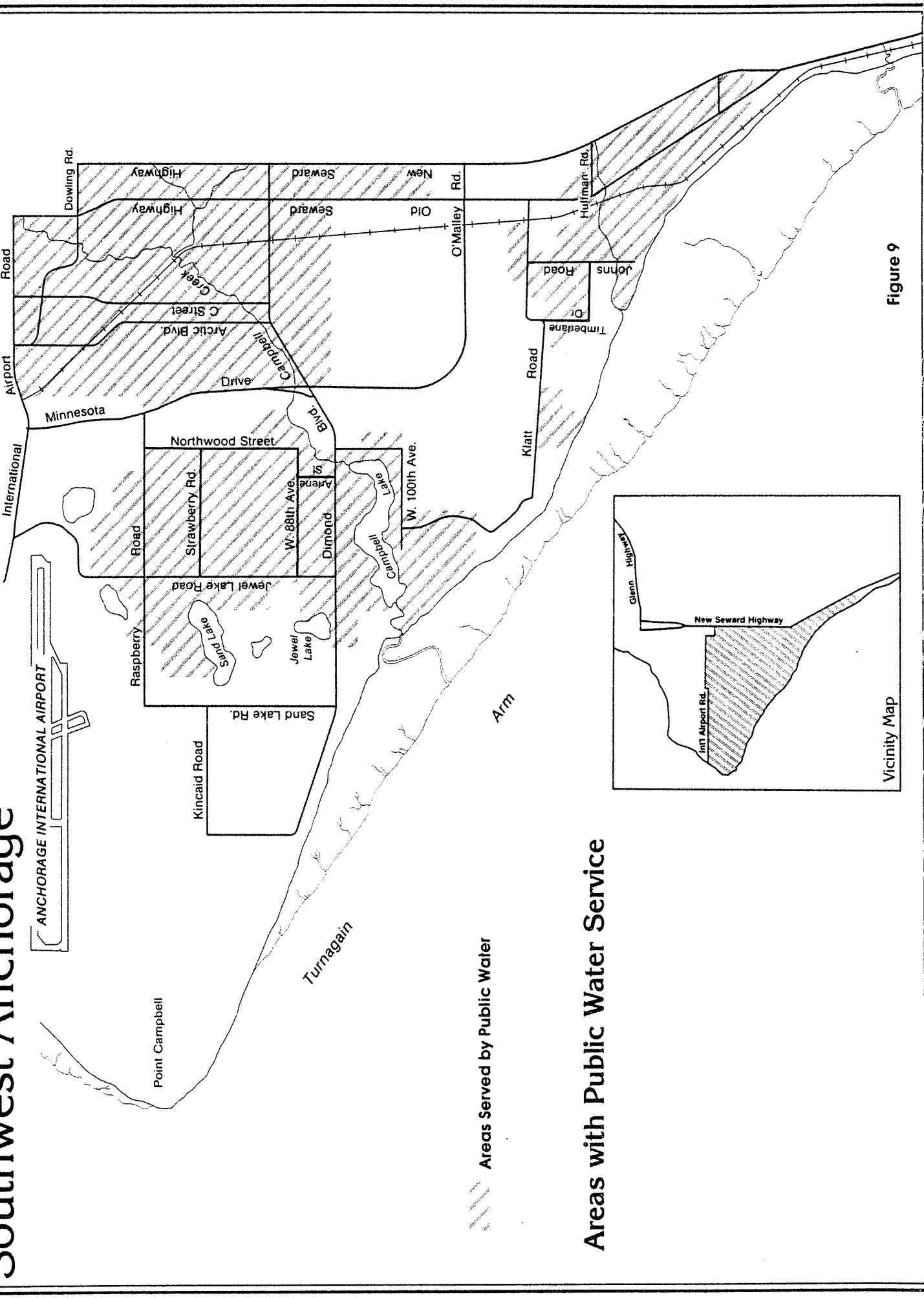


Figure 9

Vicinity Map

Areas with Public Water Service

AWWU is developing a Water Master Plan for the Anchorage Bowl. This plan will identify both detailed short-range and generalized long-range plans for Southwest Anchorage, and particularly the Sand Lake gravel pits. Following its completion next year, AWWU will be prepared to present a solution to the water needs of this area. For the time being it does not appear that a suitable public water supply will be available to this area for at least the next three to five years.

Southwest Anchorage

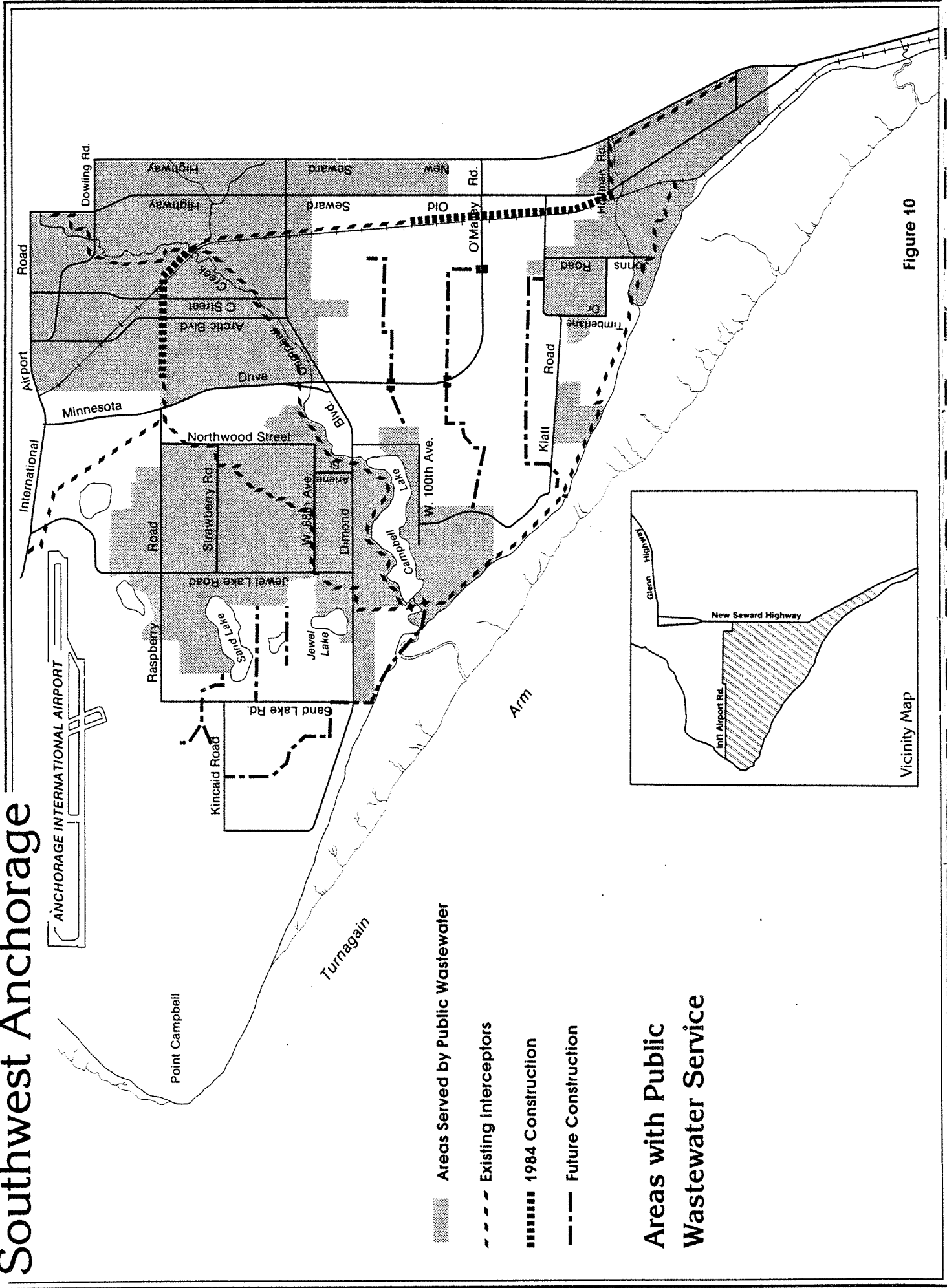


Figure 10

Vicinity Map

WASTEWATER

The wastewater collection service in Anchorage is a system of lateral, trunk and interceptor sewer pipes that feed into several pump stations around the city, all leading to the Pt. Woronzof Sewage Treatment Plant. The existing and planned wastewater collection system for Southwest Anchorage, including the areas not served (generally Connors Bog, Klatt bog, and the western Sand Lake areas), are seen in Figure 10. Southwest Anchorage is served by the Campbell Creek Pump Station and a number of trunk/interceptor systems. The most critical systems in this area are (Figure 10):

- Turnagain Interceptor (serves the southern flank from Campbell Lake to Oceanview as well as portions of Southeast Anchorage).
- Southeast Interceptor (primarily intended to serve Southeast Anchorage, and located along Alaska Railroad from Campbell Creek to Huffman Road)
- Campbell Creek Interceptor (primarily serves the Campbell Creek drainage basin)

Portions of the Turnagain and Campbell Creek Interceptors have at times encountered large flow volumes and exceeded their capacity. Two major sewer construction projects to be underway this year will alleviate this problem. This year, construction will be completed on the segment of the Southeast Interceptor between 100th Avenue and Huffman Road, providing a tie for subdivisions east of the New Seward Highway and relief to the Turnagain Interceptor.

The other major sewer construction project that will be underway this year is the extension of the West Interceptor from Minnesota Drive to Campbell Creek. Flows from the Northeast Interceptor (which extends to Muldoon) and the Southeast Interceptor will then go directly to the West Interceptor and on to the Pt. Woronzof Treatment Plant without being routed circuitously through the Campbell Creek Interceptor System. The West Interceptor will thus provide substantial relief to the Campbell Creek System, preventing dumping of raw wastewater into Campbell Creek and eventually allowing for additional flow from the Sand Lake gravel pit area.

The Sand Lake gravel pit area -- generally that area between Kincaid Park and Sand-Sundi-Jewel Lakes -- does not have wastewater collection service. The closest existing sewer line to serve this area is the C-4 trunk extending from the Campbell Creek Interceptor to the corner of Dimond Boulevard and Sand Lake Road. The C-4 trunk has the capacity to serve an additional 20,000 people. However, it is located at an elevation substantially higher than the adjoining pit areas, thus precluding extension of a gravity line off this trunk. Consequently, AWWU investigated two alternatives, either [1] constructing a major lift station to serve the whole area, with emergency storage capacity and bypass to Turnagain Arm, or [2] constructing a gravity sewer trunk from the vicinity of Dimond Boulevard and Sand Lake Road southward to the toe of the bluff overlooking Turnagain Arm. The trunk would then follow the toe of the bluff southeastward to the Campbell Creek Lift Station. With completion of the West Interceptor, the Campbell Creek Lift Station and Interceptor would have the capacity to handle wastewater flow from the gravel pit area.

Alternative two is preferred by AWWU and design and development of the project is now being programmed. Pending availability of funds, the system will come on-line between 1989-1990. In light of the complexity and difficulty of getting public sewer and water service to this area, it is not anticipated that development will occur extensively until the beginning of the next decade.

Figure 10 indicates where other sewer trunk lines are programmed for construction. Those projects are currently unfunded, however, portions of some may be built by private development, particularly in the Klatt Bog area. If this occurs, it is essential developers in this area work together in providing integrated water, sewer and drainage systems. Thus, as utilities become more readily available and with programmed construction of other public facilities (e.g., roads, schools, parks), it is anticipated that the most extensive development in Southwest Anchorage throughout the remaining portion of this decade will occur south of Dimond Boulevard and east of the Seward Highway, and between Northwood Drive and Minnesota Drive. Development at this time in this area is consistent with the Comprehensive Plan's facility phasing strategy.

TRANSPORTATION

Southwest Anchorage has been and still is experiencing rapid residential, commercial and industrial growth which is taxing the existing road network. In general, road conditions in Southwest are sorely pressed to meet the area's growing needs. Major thoroughfares are critically congested, especially during peak hours. Now and for the future, it will be critically important to coordinate the phasing of roadway improvements in this area with the other public services that are opening the Klatt Bog, Connors Bog and Sand Lake Gravel Pits areas for development. The challenges posed to Southwest by these problems, and on-going and proposed projects and programs to meet the challenges are the prime focus of the following discussion.

Road and Highway Conditions

Southwest Anchorage transportation boundaries are defined by Turnagain Arm to the south and west, the New Seward Highway to the east, and International Airport Road to the north. The major north-south thoroughfares are Old and New Seward Highways, C Street, Arctic Boulevard, Minnesota Drive and Jewel Lake Road. The major east-west roads are International Airport Road, Raspberry-Dowling Road, and Dimond Boulevard. Many smaller streets interconnect Southwest's neighborhood transportation network.

In Southwest, as throughout Anchorage, roadway conditions on these thoroughfares are principally determined by two factors: [1] the number of vehicles traveling a given segment of road during a typical day, also referred to as Average Daily Traffic (ADT), and [2] the physical parameters of a roadway (e.g. number of lanes and width per lane). Combining these two factors, it is possible to derive a relative measure of a road's ability to efficiently carry traffic, termed the Level of Service (LOS). Level of Service ratings for roadways and intersections range from A-F with 'A' the highest and most desirable condition, and 'F' the least efficient and least desirable. The photographs included here show LOS ratings for roadways, and Table 11 lists LOS characteristics for both roadways and intersections. Intersections with ratings of 'D', 'E', or 'F' are problem areas, and a 'D' rating is generally regarded the lowest acceptable level of service in urban areas.

TABLE 11

Level of Service for Roadways

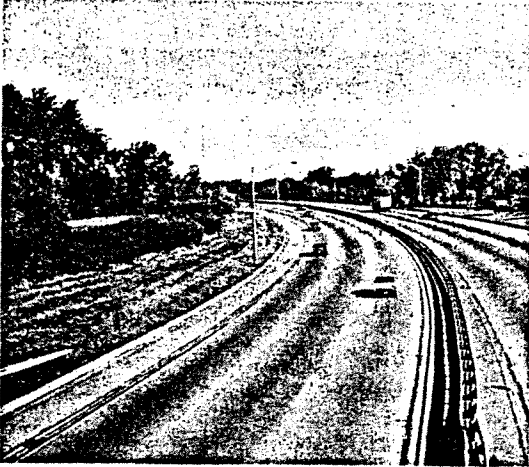
- A. Free flow with low volumes, speeds controlled by posted limits.
- B. Stable flow, drivers have reasonable freedom to select speed and lane of operation.
- C. Stable flow, most drivers restricted in their freedom to select speed or change lanes.
- D. Approaching unstable flow, with little freedom to maneuver.
- E. Capacity, unstable flow, momentary disruptions and stoppage.
- F. Forced flow, short and long stoppages, low speeds.

Level of Service for Signalized Intersections

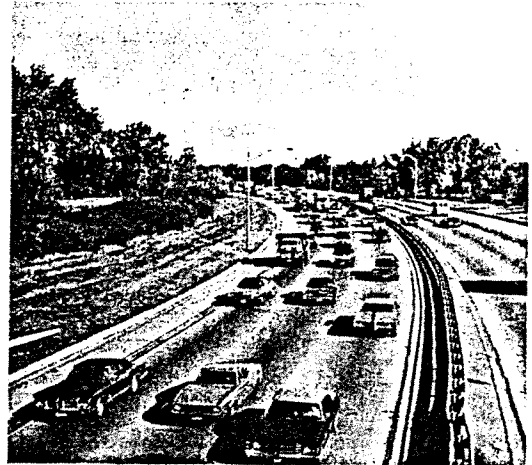
- A. No vehicle waits longer than one red indication.
- B. Occasionally the green phase is fully utilized.
- C. Occasionally drivers may have to wait more than one red indication, some backup.
- D. Approaching instability with substantial delays during short peaks within rush hour.
- E. Capacity, the most vehicles that can be accommodated, full utilization of every green phase, substantial dependence on good coordination between adjacent signals, long queues of vehicles waiting, delay may be up to several cycles.
- F. Jammed conditions, long delays.

NOTE: LOS definitions are derived from the 1982 Anchorage Area Traffic Report prepared by Alaska Department of Transportation and Public Facilities (ADOT/PF).

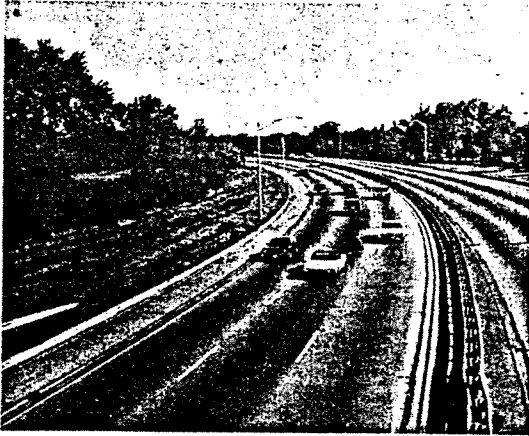
ROADWAY LEVEL OF SERVICE RATINGS



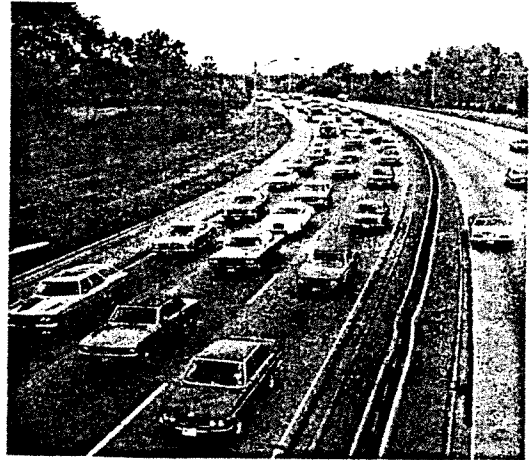
Level of service A as viewed looking up stream on a typical freeway indicating no physical restrictions on operating speeds. SOURCE: Illinois Department of Transportation.



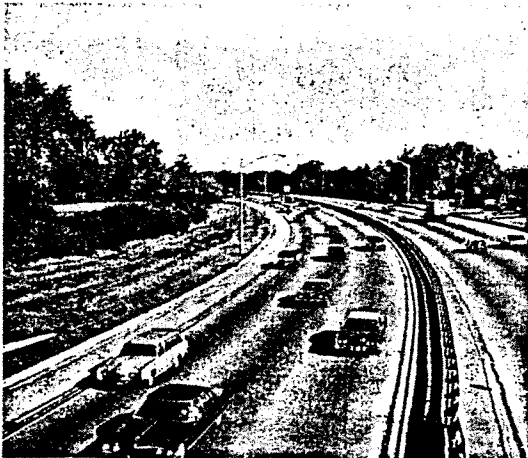
Level of service D as viewed looking up stream on a typical freeway indicating approaching unstable flow, little freedom to maneuver, and condition tolerable for short periods. SOURCE: Illinois Department of Transportation.



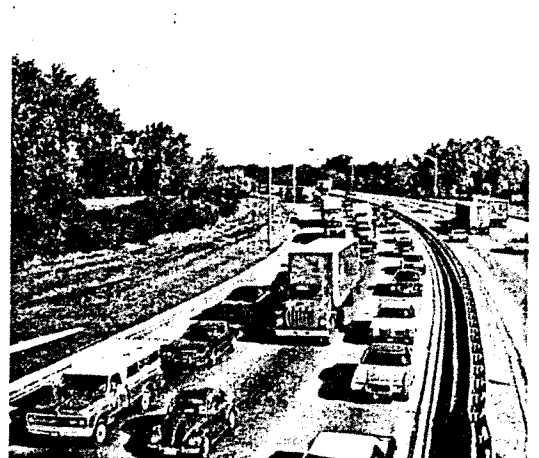
Level of service B as viewed looking up stream on a typical freeway indicating stable flow with few restrictions on operating speed. SOURCE: Illinois Department of Transportation.



Level of service E as viewed looking up stream on a typical freeway indicating unstable flow, lower operating speeds than level D and some momentary stoppages. SOURCE: Illinois Department of Transportation.



Level of service C as viewed looking up stream on a typical freeway indicating stable flow, higher volume, and more restrictions on speed and lane changing. SOURCE: Illinois Department of Transportation.



Level of service F as viewed looking up stream on a typical freeway indicating forced flow operation at low speeds where the highway acts as a storage area and there are many stoppages. SOURCE: Illinois Department of Transportation.

Average daily traffic counts in 1982 for major roadways in Southwest Anchorage are shown on Figure 11 and roadway and intersections with service (LOS) problems are seen in Figure 12. In general, traffic conditions on Southwest Anchorage's major roads are poor. The principal problem areas or deficiencies are on Dimond Boulevard east from Jewel Lake to the New Seward Highway, Raspberry Road from Jewel Lake east to Minnesota, and Old Seward Highway south from Klatt Road to downtown.

Accident frequency is also related to highway operations characteristics. According to a Municipal report prepared by the Division of Traffic Engineering, thirty-five intersections in Anchorage have a high frequency of accidents. Three of these intersections are in Southwest Anchorage: Old Seward Highway/Dimond Boulevard; International Airport/Jewel Lake Road, and International Airport/Minnesota Drive. In 1983, there were a total of 89 accidents recorded at these three locations. However, there has been a decrease in accidents compared to 1982, specifically at International Airport/Minnesota and Old Seward/Dimond, even though traffic volumes between 1982 and 1983 increased by ten percent.

Using information on current average daily traffic volumes (Figure 11), Level of Service ratings (Figure 12), data on high frequency accident locations, and projected daily traffic volumes for the year 2001 (Figure 13), two planning efforts by the Municipality attempt to resolve and prevent major transportation problems: [1] the Official Streets and Highways Plan (OSHP), and [2] the Long Range Transportation Element (LRE). Figure 14 illustrates the existing classifications for all roads in Anchorage as shown on the March 1984 draft of the OSHP.

On the basis of the OSHP and the LRE reports, a package of priority transportation projects to meet the community's current and anticipated roadway needs has been developed. This is embodied in the Anchorage Accelerated Roadway Program (AARP) (Figure 15). From year-to-year, the ability of the Municipality and/or Alaska Department of Transportation and Public Facilities - both of whom share responsibility for road operations, maintenance and improvements in Anchorage - to construct priority road projects identified in the AARP is largely dependent on funding approval from the State Legislature or Federal government. Although identified in the AARP as a pressing road improvement need, a particular pro-

Southwest Anchorage

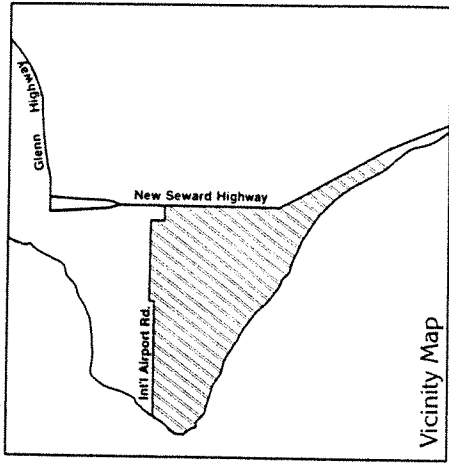
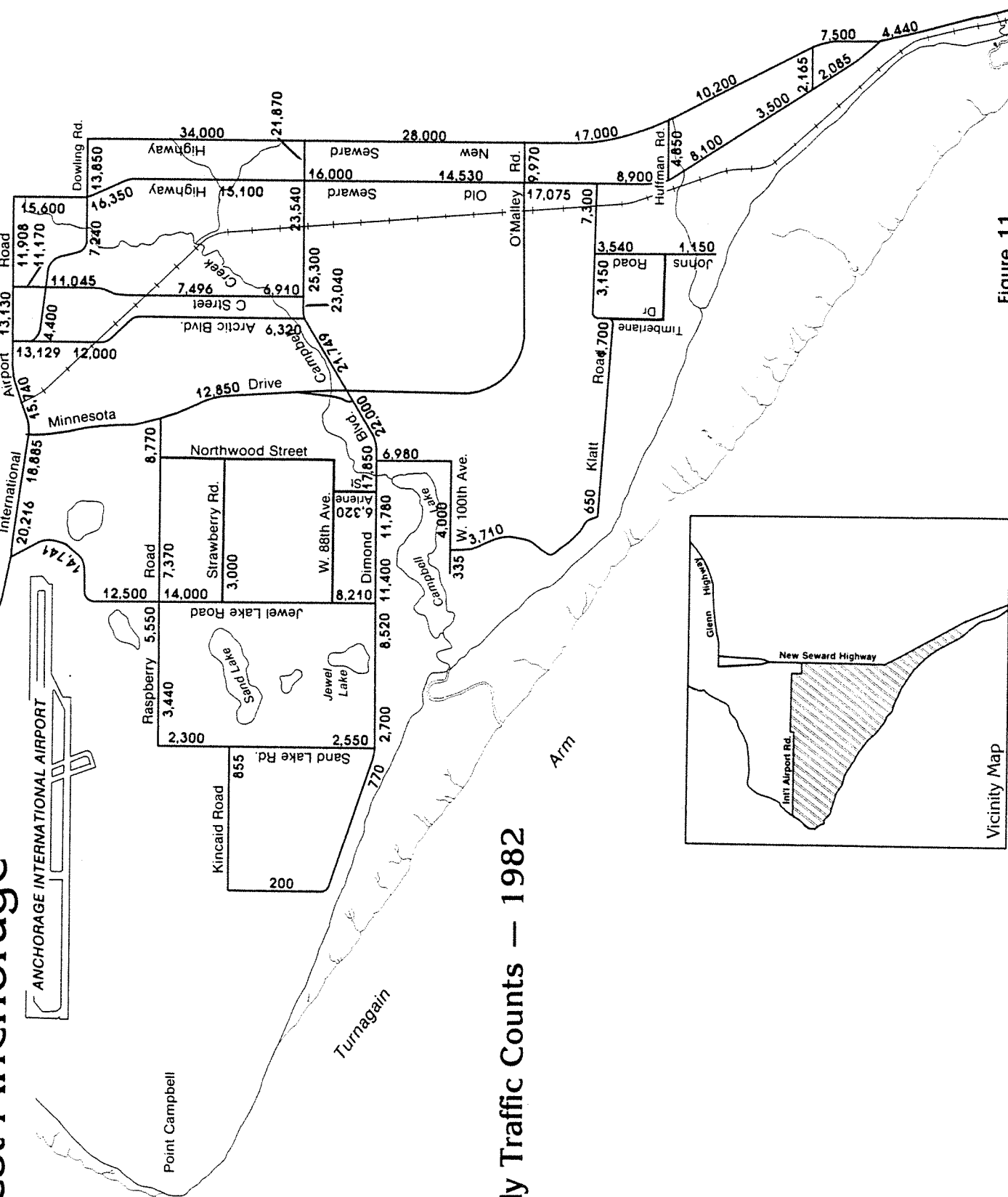
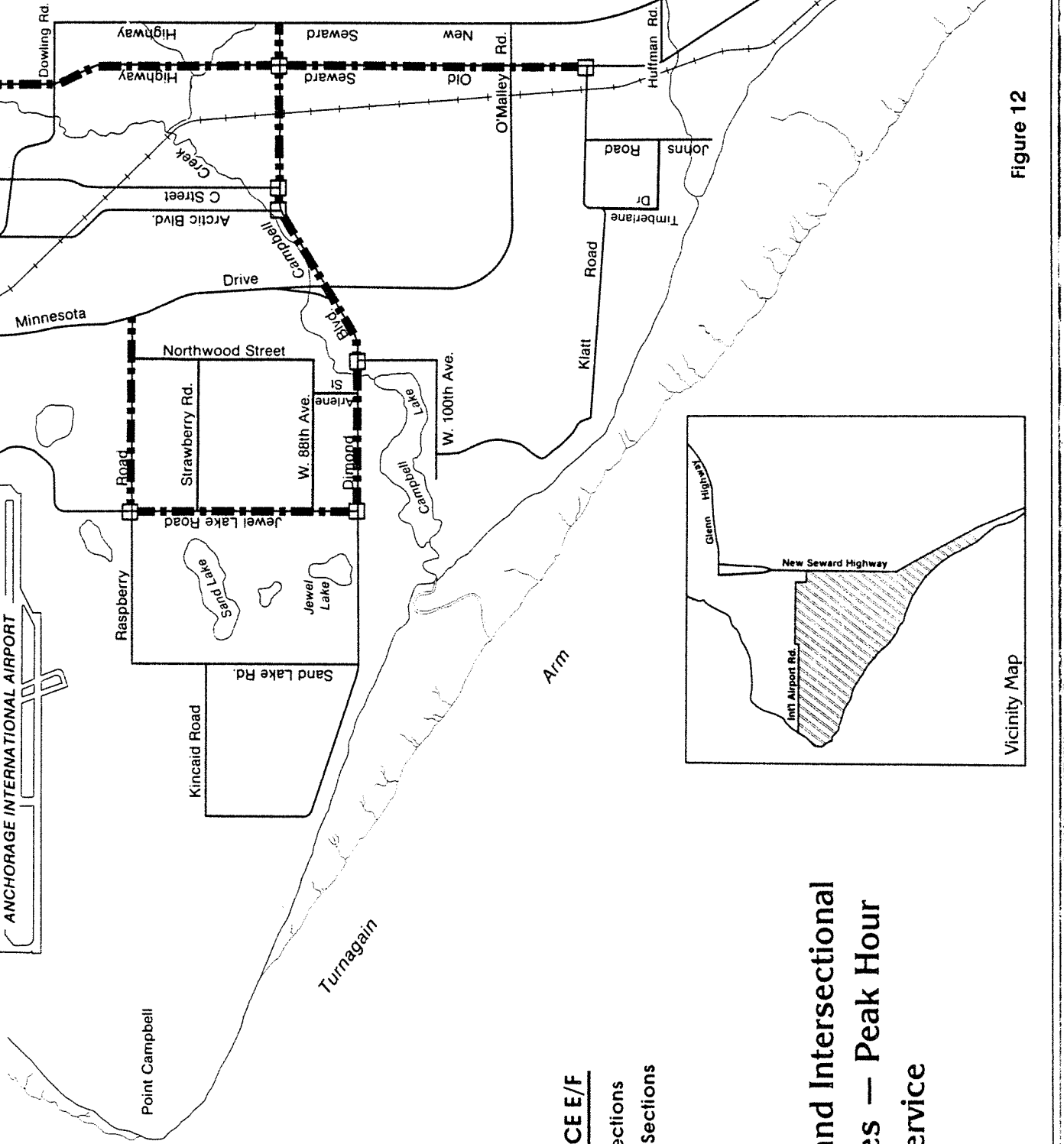


Figure 11

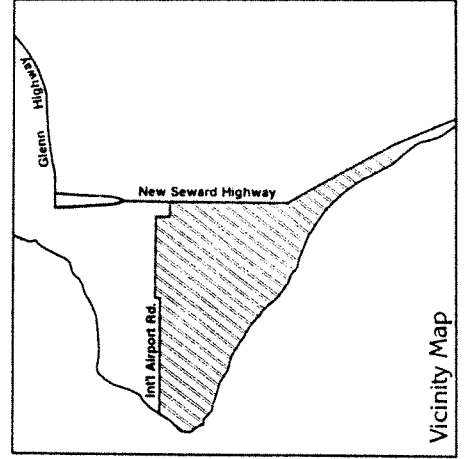
Southwest Anchorage

ANCHORAGE INTERNATIONAL AIRPORT

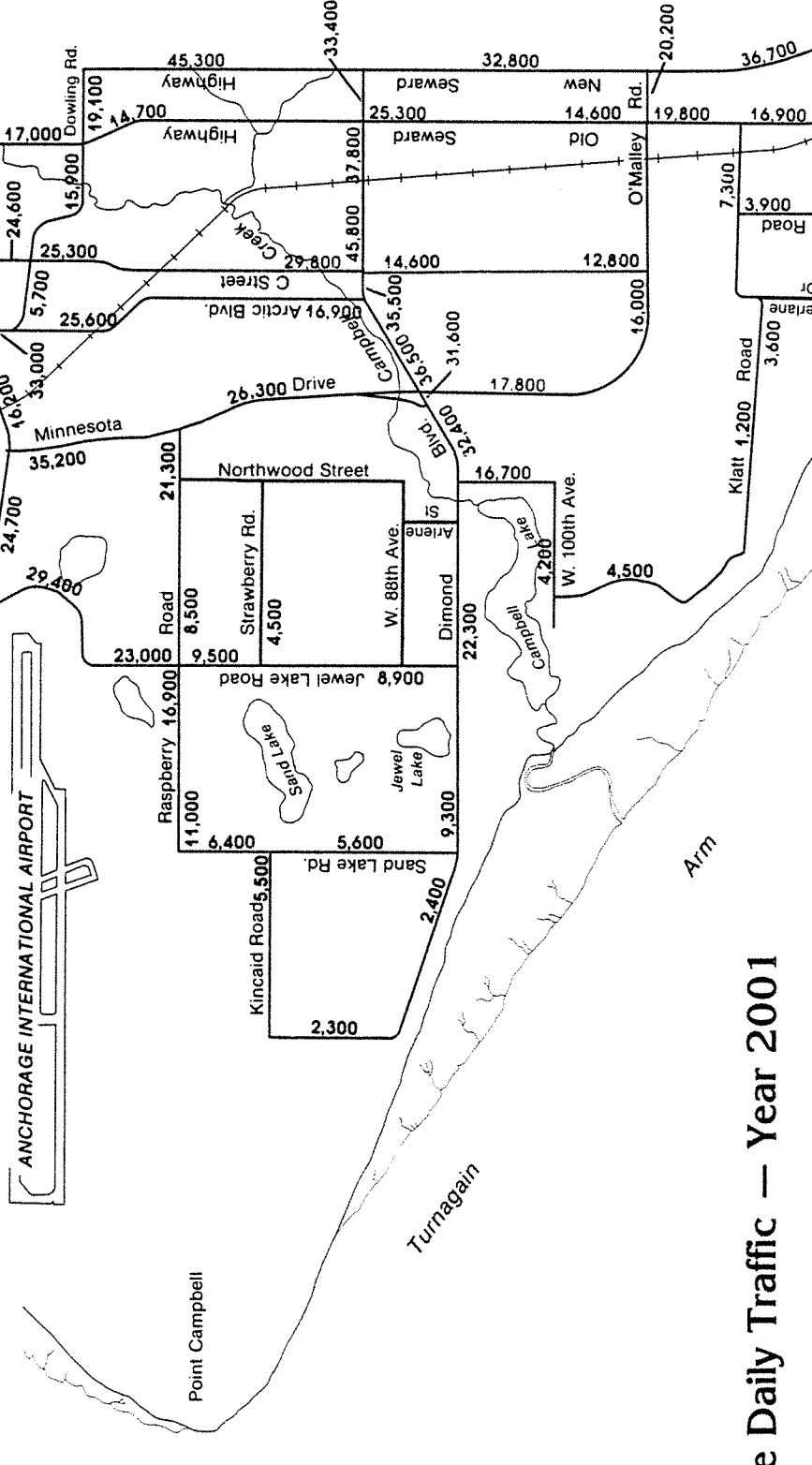


**Roadway and Intersection
Deficiencies — Peak Hour
Level of Service**

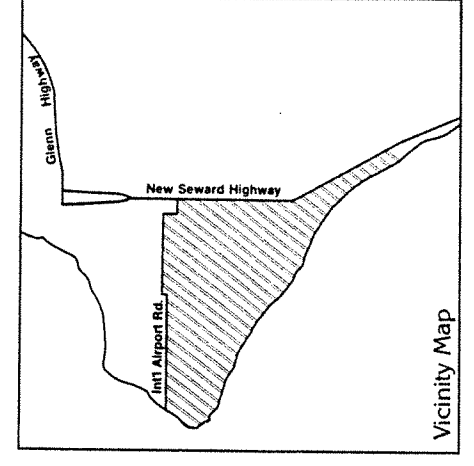
Figure 12



Southwest Anchorage

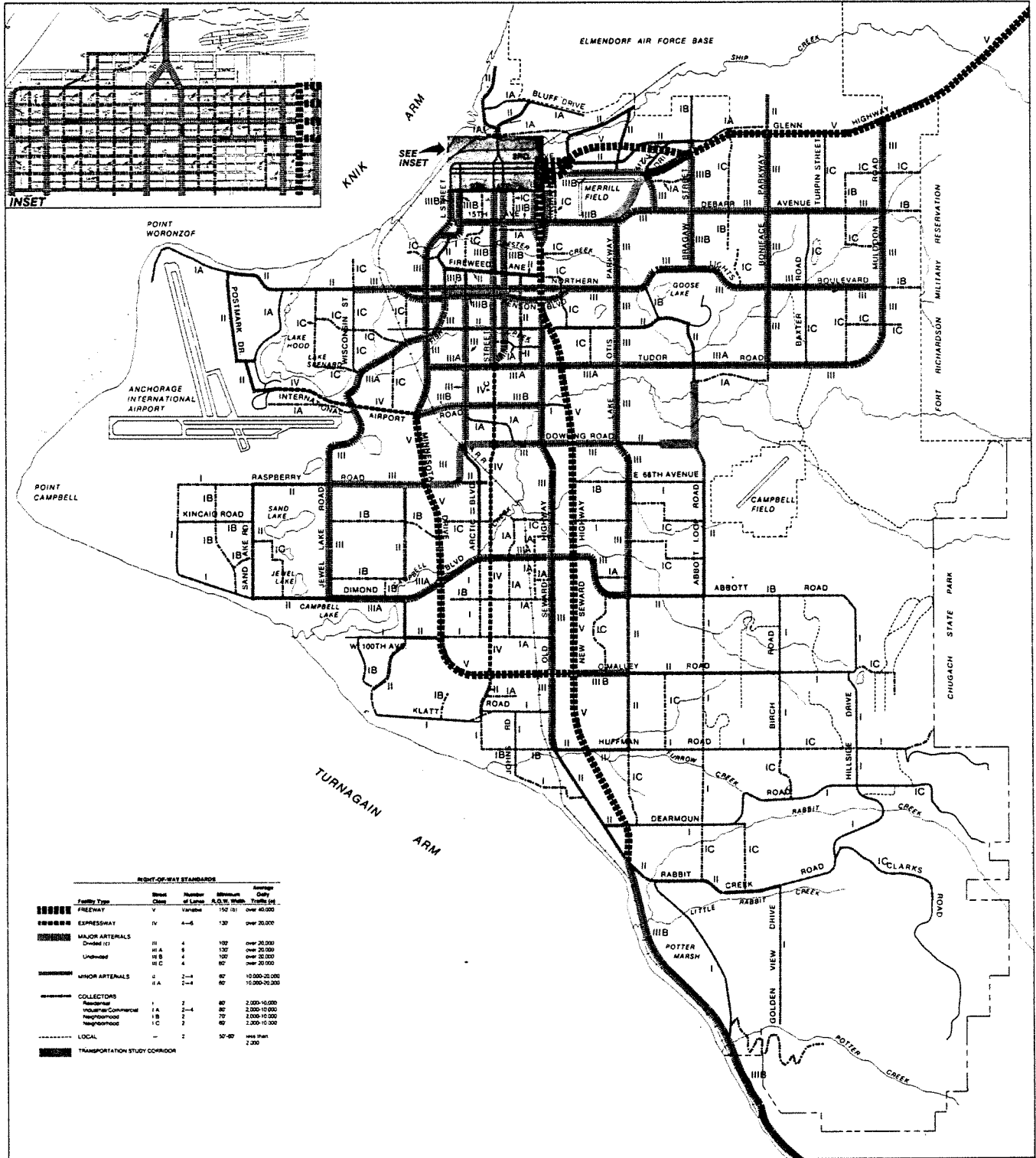


Average Daily Traffic — Year 2001



Vicinity Map

OFFICIAL STREETS AND HIGHWAYS PLAN



RIGHT-OF-WAY STANDARDS

Family Type	Class	Number of Lanes	Minimum A.D.V. (ft)	Average Daily Traffic (est.)	
FREIGHTWAY	V	Variable	152 (ft)	over 40,000	
EXPRESSWAY	IV	4-6	130	over 20,000	
MAJOR ARTERIALS	Divided (IC)	II	4	100	over 20,000
	Undivided	IB	4	100	over 20,000
	Undivided	IC	4	80	over 20,000
MINOR ARTERIALS	IIA	2-4	80	10,000-20,000	
	IIB	2-4	80	10,000-20,000	
COLLECTORS	Residential	I	2	80	2,000-10,000
	Industrial/Commercial	IA	2-4	80	2,000-10,000
	Neighborhood	IB	2	70	2,000-10,000
	Neighborhood	IC	2	60	2,000-10,000
LOCAL	I	2	50-60	less than 2,000	
TRANSPORTATION STUDY CORRIDOR					

ANCHORAGE BOWL

Figure 14

ject cannot be constructed until funds are approved by the State and/or Federal governments, or until alternative funding sources are identified. Discussed below are AARP road improvement projects for Southwest Anchorage, some of which are funded and under construction, others which are funded but not yet under construction, and finally, some which are planned for construction when future funding approval is received.

Three new road projects are part of a coordinated effort to open the Klatt Bog area for development while preventing traffic problems and relieving congestion throughout Southwest Anchorage. The Minnesota Extension is now under construction with completion targeted for 1985. Concurrent construction of 'C' Street from the Minnesota extension south to Klatt Road, and 100th Avenue west from the Minnesota Extension to Victor Street will facilitate traffic movement in this area by providing direct access to Minnesota and the Old and New Seward Highways. In addition, the Old Seward Highway, from Dowling to Huffman, is scheduled for improvements beginning the summer of 1986; and Timberlane Drive from Klatt to Huffman is programmed for improvements in 1987 or soon thereafter.

Development in the eastern portion of Sand Lake will benefit from the soon to be completed Northwood Drive extension, extending from Strawberry Road south to 83rd Avenue. All of Southwest Anchorage, but particularly the Sand Lake Gravel Pit area, will have better transportation services as Dimond Boulevard is expanded (1984-86) from the New Seward Highway to Jewel Lake Road, and as Raspberry Road is widened from Minnesota to Jewel Lake Road. To further improve the circulation system in developed areas north of Dimond Boulevard, the following projects are scheduled between 1985 and 1988: 76th Avenue from Old Seward Highway to King Street; Strawberry Road from Jewel Lake to Northwood; and Jewel Lake Road, from Raspberry to International Airport Road.

Train and gravel truck traffic pose two special problems for Southwest Anchorage. The increasing frequency of trains traveling the railroad network which dissects the community is magnifying traffic problems and delays at train crossings. Problems associated with gravel truck traffic, particularly at Klatt Road and the Old Seward Highway, are a continuing source of complaints from nearby residents. To help alleviate the problem in the Klatt area, a collector street from the Klatt gravel storage area to the new 'C' Street extension and north to the Minnesota extension is planned. This project is not currently included in the AARP, but is a priority need and will be included next year.

Southwest Anchorage

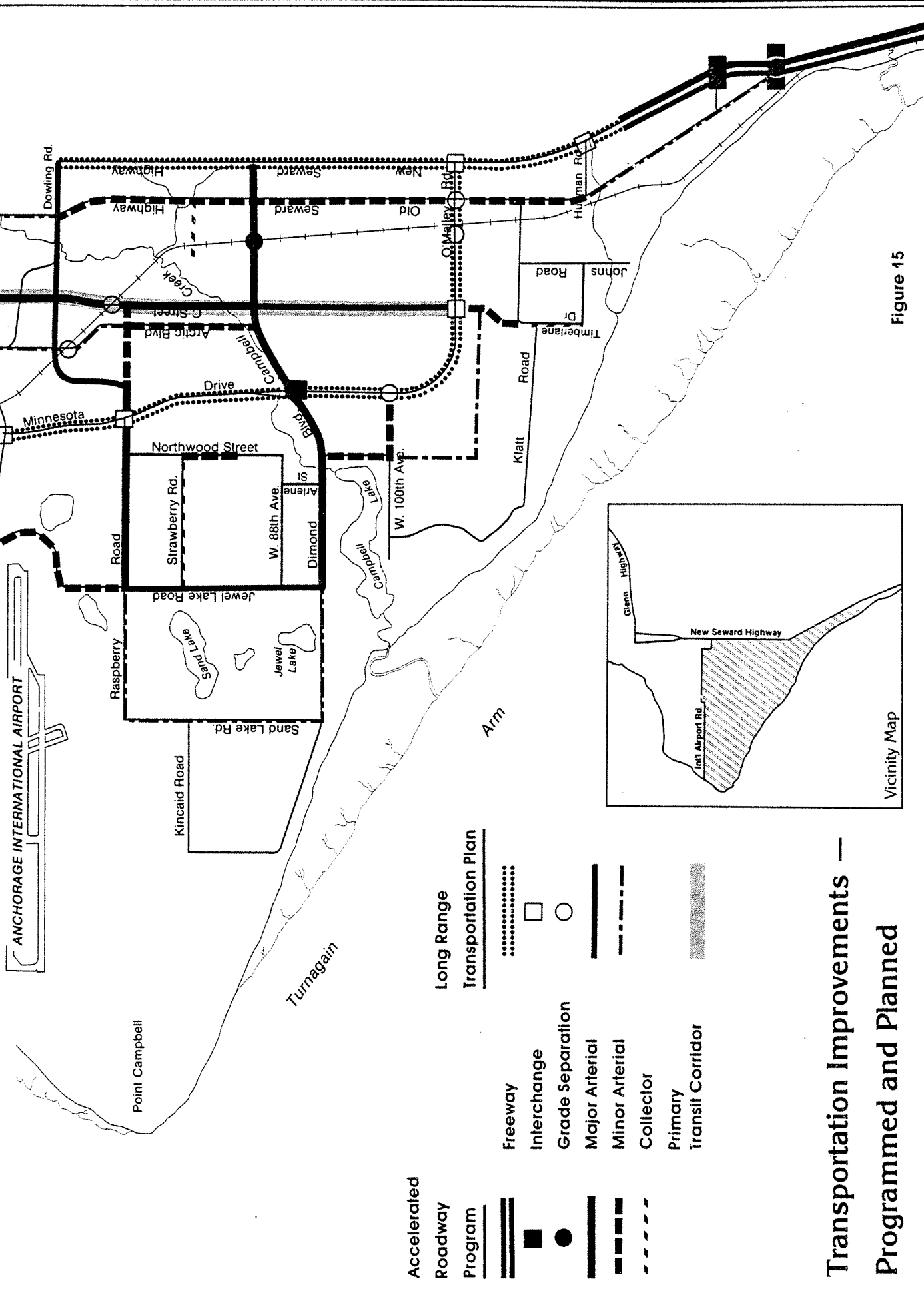


Figure 15

Vicinity Map

Further roadway improvements for Southwest Anchorage have been identified as part of the Long-Range Transportation Element Plan (LRE). These projects are also displayed in Figure 15. Although not scheduled for immediate construction, it is expected that these improvements which are inventoried in the LRE, but not yet programmed in the AARP, will be completed by the year 2001.

Mass Transportation

Eight People Mover transit routes currently serve Southwest Anchorage, providing service between residential areas and major destinations (Figure 16, Table 12). Downtown and midtown Anchorage are served by all eight routes, and five routes pass Dimond Center. Dimond Boulevard is Southwest's major east-west transit corridor. North-south service is divided between Jewel Lake Road, Arctic Boulevard, C Street and Old Seward Highway. The transit system operates weekdays from 6 AM to 10 PM. Saturday service hours are reduced (8 AM to 9 PM), and there is no service on Sundays or major holidays.

Within budget limitations, transit service in the Southwest has been expanded to meet the area's growing needs. Route 94 now provides peak hour service on Huffman Road and also provides additional service on C Street and Old Seward Highway south of Dimond Boulevard. A study evaluating sites for express and/or park-and-ride service along the New Seward Highway is underway with service tentatively scheduled to begin July, 1984.

Transit ridership per capita in South Anchorage is low and can be directly related to the area's lower density and rural pattern of land development. Since buses must travel longer and larger routes, it is often more time effective for individuals to drive cars than to ride buses. Over time, the new express bus service coupled with the growing population and an expanding road system could increase the time and cost effectiveness of public transit for the area. In addition future bus ridership depends on residential densities in the area, the availability of parking, reliability and frequency of transit service and the price of gas.

Southwest Anchorage

ANCHORAGE INTERNATIONAL AIRPORT
(To Airport)

International Airport Road

Minnesota Drive

Dowling Rd.

Highway

Highway

Creek

C Street

Arctic Blvd

Campbell Drive

Northwood Street

Strawberry Rd.

W 88th Ave

Alene St

Diamond

Jewel Lake Road

Raspberry Road

Sand Lake Rd.

Kincaid Road

Point Campbell

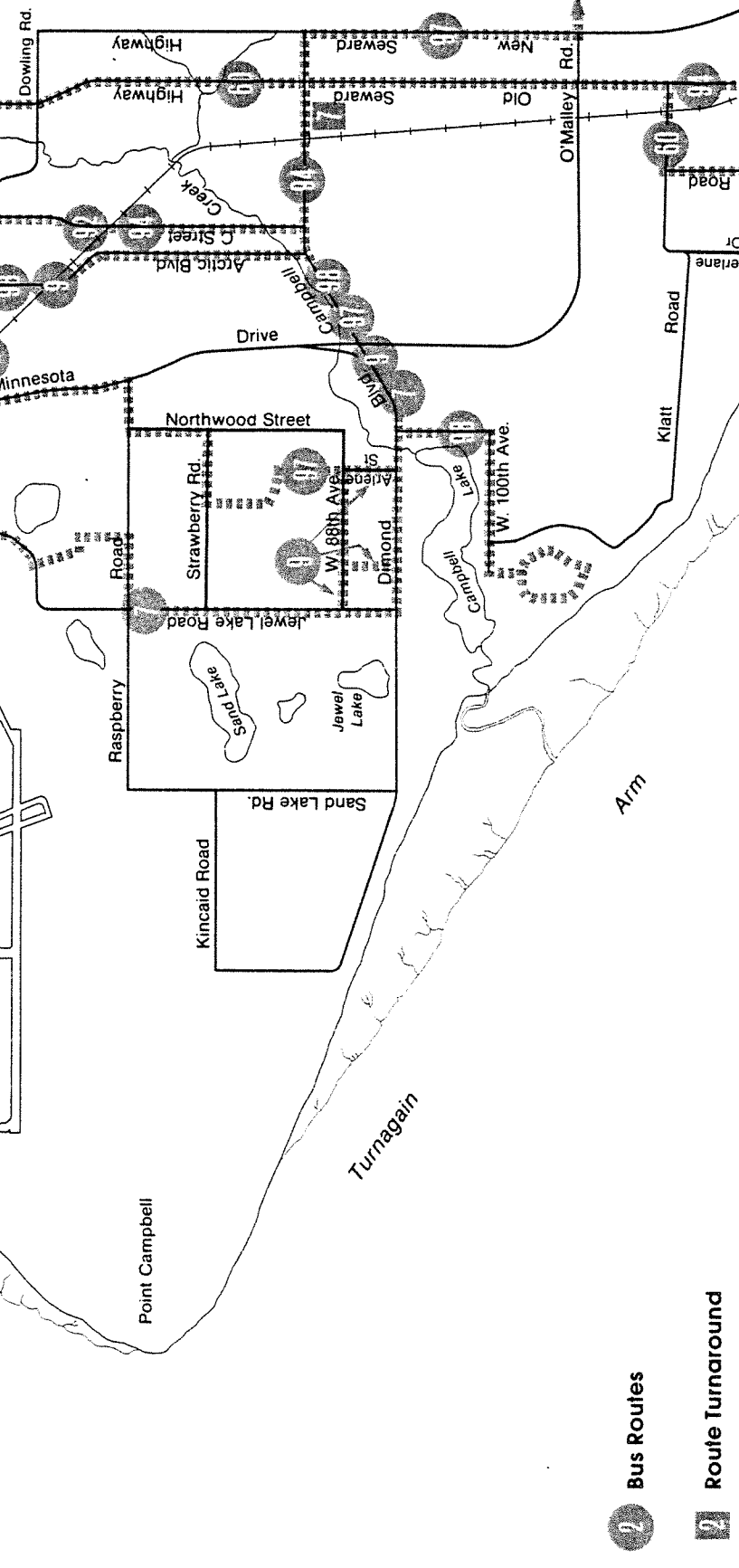
Turnagain

Arm

W 100th Ave.

Campbell Lake

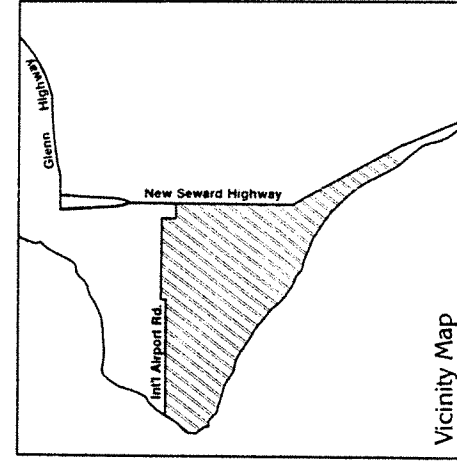
O'Malley Rd.



1 Bus Routes

2 Route Turnaround

Transit Routes



Vicinity Map

Figure 16

TABLE 12

TRANSIT ROUTES
Southwest Anchorage
1984

R O U T E	Number Of Buses		Frequency		Saturday		Major Generators Served	
	During		Between Buses		Number of Buses	Freq. Between (Min.)		
	Peak Hours	Off-Peak Hours	(Min.)					
			Peak	Off-Peak				
6	Int'l. Airport	1	1	50	50	1	50	Downtown, Airport
7	Jewel Lake	2	2	45	45	2	50	Downtown, Dimond Center
9	Arctic Blvd.	2	2	40	50	2	40	Downtown, Dimond High School
60	Oceanview	3	2	30	50	2	60	Downtown, Dimond Center
92	DeArmoun	1	1	110	120	1	120	Downtown, Dimond Center
94	Huffman	1	0	80	-	0	-	Downtown, Huffman Business Park, Dimond Center
97	Dimond Center	1	1	80	120	1	80	Downtown, Dimond Center, Dimond High School
98	Bayshore	1	0	65	-	0	-	Downtown

Carpooling is an alternative transportation option for lower density, rural areas like South Anchorage, as well as higher density areas. The Municipality's carpool program was developed as one response to growing concerns over air quality and the level of traffic congestion during peak hours. Anchorage currently has one of the worst carbon monoxide problems in the country caused by our widespread use of automobiles and preference for single occupied vehicles. Anchorage's carpooling service matches commuters with similar routes and work schedules, and is available by calling 279-8646.

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A P P E N D I X

Southwest Anchorage

ANCHORAGE INTERNATIONAL AIRPORT

84-054

Application for Rezoning
and Conditional Use

80-079-6
80-079-7

Point Campbell

707-9

83-036-2

84-067

83-028-4

81-101-2

78-068-2

1378-4

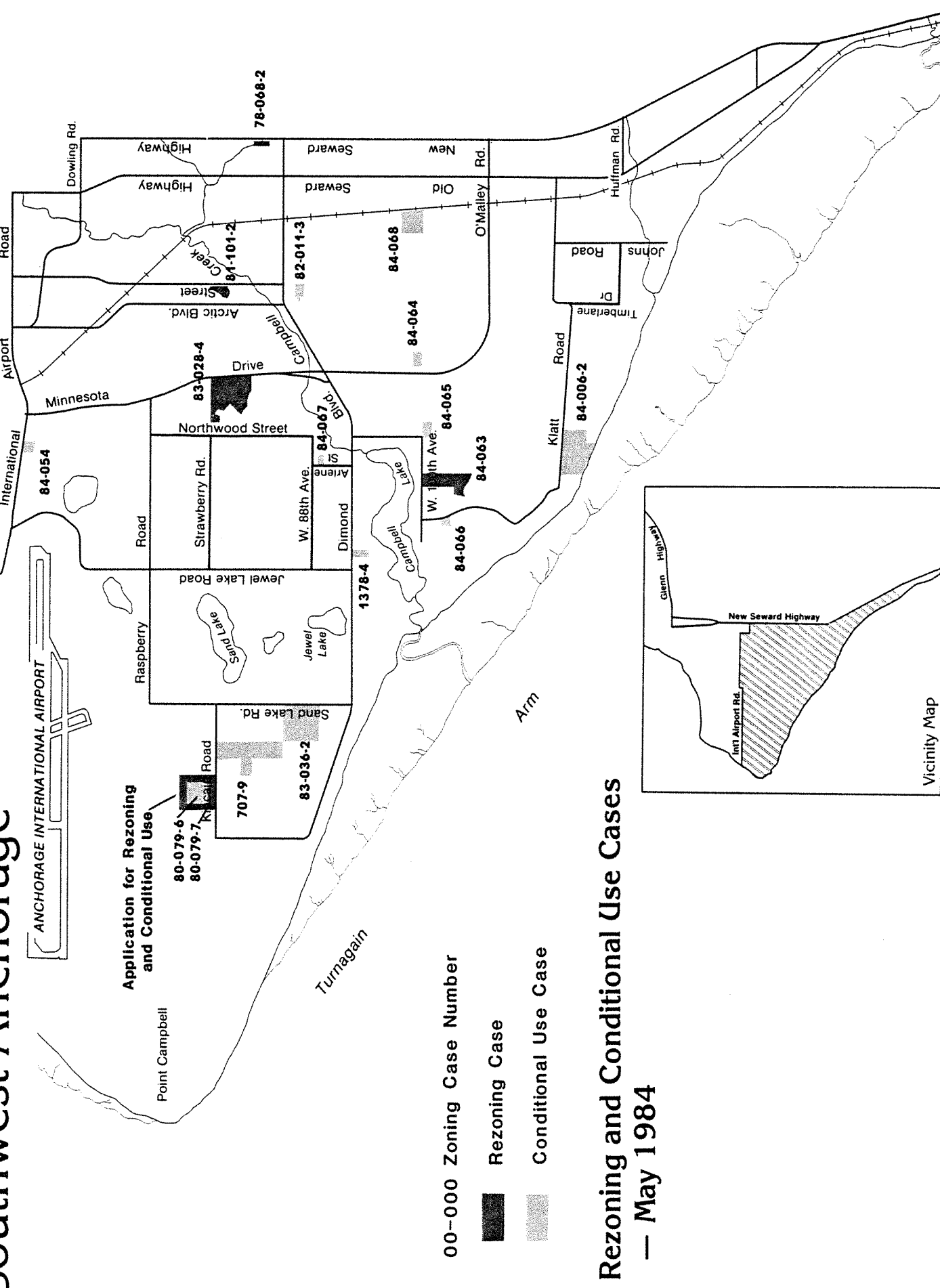
84-066

84-063


84-064

84-068

82-014-3



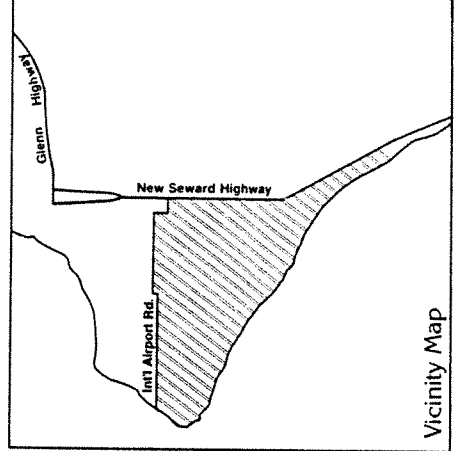
00-000 Zoning Case Number

 Rezoning Case

 Conditional Use Case

Rezoning and Conditional Use Cases

— May 1984



Vicinity Map

Do you have any suggestions for ways to improve this background information packet? Your comments or suggestions on the packet or issues in Southwest Anchorage would be appreciated.

MAIL TO:

Municipality of Anchorage
Community Planning Department
Pouch 6-650
Anchorage, Alaska 99502

