

FINANCING THE PROGRAM

Metropolitan Area Considerations

The Anchorage Metropolitan Area General Plan requires provision for \$541,280,000 in public works and capital outlays over the next 20 years of metropolitan area growth. Approximately \$134,820,000 would be needed in each of four five-year periods to achieve this level of public improvements. Not all of this would be required in cash alone. A substantial amount would be contained in land values which are presently in public ownership and would be expected to remain so.

The City of Anchorage would be expected to extend services and improvements into the metropolitan area beyond the City limits, in relation to the City's capacity to pay for such improvements. Other public agencies would be expected to contribute their share of physical improvements in the form of cash, grants-in-aid, land transfers to other public agencies, labor and services.

The Anchorage Independent School District would be a substantial producer of new public improvements in the form of schools and related recreation, community and adult education facilities.

Private developers and individual property owners would provide their share of the total costs in terms of special district formation for street improvements and sewer installations.

Private organizations, (such as religious groups) would aid through the continued development and expansion of building and improvement programs. An outstanding example is the Alaska State Methodist University, the only four year college in the metropolitan area.

The capital improvement projects listed in the foregoing section of this report have been programmed through 1965 in accordance with the ability of the City's residents to finance them. The entire program calls for the construction from 1961 to 1965 of 133 projects valued at \$17,901,900. A portion of this will be financed during the five year planning period; other large projects have been financed over a 20 year period.

The analysis relating to the economic feasibility of financing these projects is contained in the following pages of this report. In the analysis, the budgets of the General Fund, Electric Utility Fund, Telephone Utility Fund, Water Utility Fund, and Port Revenue Fund have been separately examined. This examination was aimed at determining balanced relationships between total budget expenditures, expenditures for capital projects, and debt service which could be expected to occur during the next five years. Consideration has also been given to past trends in the per capita cost of municipal government, and current debt limitations.

Past Trends in the City of Anchorage Tax Base

In the past decade, the City of Anchorage tax levy per capita has increased steadily (with respect to its 1952 level) as a result of sustained and enormous population increases, accompanied by equal gains in commercial and industrial development. (Figure 1)

The estimated true value of all taxable property in the City has grown from \$84,209,366 in 1952 to \$277,130,643 in 1961—an increase of 229.1%. This growth of taxable property has kept pace with the expansion of the City's population which has increased since 1952 by 221.4%. Tax value per capita has remained stable in this time period, increasing by 2.3%.

In this same period, total tax levies have shot from \$404,205 in 1952 to \$2,133,906 in 1961; this increase (427.9%) has necessitated a raise in the tax levy per capita of 66.8%. Total tax levy per capita, therefore, has gone from \$28.9 in 1952 to \$48.2 in 1961. While the tax rate within the City has remained relatively stable during this decade (approximately 8 mills) the tax burden per person has increased by two-thirds (because of higher valuation of property). These relationships are set forth in Figure 1.

Past Trends in City of Anchorage Revenues and Expenditures

Figure 2 sets forth generalized revenues and expenditures for 1957 and 1962 of the City of Anchorage General Fund Budget, and the four budgets of the City-owned utilities and the port. In general, total revenues (or expenditures) have grown from approximately \$8,380,000 in 1957 to \$13,600,000 in 1962. For budgetary purposes certain funds may be shown in more than one classification; therefore the totals exceed actual cash flow. The working budgets of the water utility, electric utility, telephone utility, and port revenue funds have assumed an ever larger share of the total, increasing from 57% in 1957 to 63% in 1960.

Figure 1

TRUE VALUES, TAX LEVIES, AND POPULATION
CITY OF ANCHORAGE
1952-1961

Year	Estimated* True Value	Population	True Value Per Capita	Tax Levy	Tax Levy Per Capita
1952	\$ 84,209,366	14,000	\$6,020	\$ 404,205	\$28.9
1953	110,877,983	16,400	6,760	665,268	40.6
1954	111,925,163	24,400	4,590	671,551	27.5
1955	145,987,249	28,000	5,210	875,924	31.3
1956	167,131,333	29,000	5,770	1,002,788	34.6
1957	174,412,166	31,000	5,630	1,046,473	33.8
1958	190,315,666	31,700	6,000	1,141,894	36.1
1959	203,873,633	33,100	6,160	1,355,566	40.1
1960	261,454,433	44,237	5,910	1,882,472	43.3
1961	277,130,643	45,000	6,158	2,133,906	48.2
Percent Change 1952-1961	229.1%	221.4%	2.3%	427.9%	66.8%

Source: Compiled from City of Anchorage, Alaska,
Financial Report, 1961

* Estimated true value of all taxable property in the City, as defined in City of Anchorage
Financial Report, December 1961.

Figure 2

REVENUE AND EXPENDITURES
CITY OF ANCHORAGE BUDGET

1957 and 1962

1957						
	REVENUES		EXPENDITURES			
	Total	Total	Operating Expense	Capital Improvements	Debt Service	Other*
General Fund	\$ 3,632,583	\$ 3,632,583	\$2,244,426	\$ --	\$ 440,010	\$ 948,147
Water Utility Fund	740,064	740,064	392,293	105,348	236,378	6,045
Electric Utility Fund	2,271,960	2,271,960	1,564,940	379,876	4,350	322,791
Telephone Utility Fund	1,735,238	1,735,238	920,363	228,856	496,438	89,581
Port Revenue Fund	--	--	--	--	--	--
TOTAL	\$ 8,379,845	\$8,379,845	\$5,122,022	\$ 714,080	\$ 1,177,176	\$1,366,567
1962						
	REVENUES		EXPENDITURES			
	Total	Total	Operating Expense	Capital Improvements	Debt Service	Other
General Fund	\$ 5,081,690	\$ 5,081,690	\$3,822,610	\$ --	\$ 1,259,080	\$ --
Water Utility Fund	1,466,250	1,466,250	733,380	80,000	571,440	81,430
Electric Utility Fund	2,975,200	2,975,200	1,951,290	536,270	--	487,640
Telephone Utility Fund	3,649,780	3,649,780	2,068,660	483,080	777,570	320,470
Port Revenue Fund	428,930	428,930	202,880	--	226,050	--
TOTAL	\$13,601,850	\$13,601,850	\$8,778,820	\$1,099,350	\$ 2,834,140	\$ 889,540

*Includes primarily contributions to the General Fund; school payments and unappropriated balance are minor considerations.

Source: 1957 and 1962 City of Anchorage Budget.

General Fund Expenditures

In the past five years, General Fund expenditures have fluctuated from approximately \$2,900,000 in 1958 to a high of \$5,000,000 in 1962. This has been accomplished by increasing the tax burden on local property, and by larger contributions to the General Fund from City-owned utilities.

The principal increases in General Fund expenditures have been necessitated to a large extent by raising debt service. Due to lack of available funds in the General Fund Budget, no provision has been made in 1962 for any new major capital project.* Indeed, the 1962 Budget was "prepared on an austerity basis" because of growing financial stringency resulting from lack of municipal revenues. The Special Revenue Study** undertaken for the City of Anchorage and the Anchorage Independent School District by Ernst and Ernst urged the adoption of a sales tax to provide an additional source of revenues. This proposal has not had the support of City and metropolitan area residents.

A summary of estimated General Fund expenditures for 1962 (listed by relative size) is shown in the following table:

Figure 3

1962 GENERAL FUND EXPENDITURE SUMMARY CITY OF ANCHORAGE BUDGET

	1962 Expenditure	
	Total	Percent
1. Public Safety	\$1,435,950	28.3%
2. Debt Service	1,259,080	24.8%
3. Highways	759,310	14.9%
4. General Government	572,945	11.3%
5. Sanitation & Waste Removal	515,055	10.1%
6. Other Service Departments	375,280	7.4%
7. Miscellaneous	164,070	3.2%
TOTAL GENERAL FUND	\$5,081,690	100.0%

Source: City of Anchorage 1962 Budget

* p. 111 1962 Budget
** Ernst & Ernst, op.cit.

Public Safety, which includes police and fire protection, accounts for the largest share of the General Fund budget (28.3%), followed by Debt Service (24.8%), and Highways (14.9%). The last four items account for the remaining 25% of the budget.

The 1962 budget, estimated at slightly over \$5,000,000, has increased approximately 1% from the 1961 level. This results in a \$113 per capita cost of Anchorage City government. Of this, \$28 is for debt service, and \$85 for operation and capital outlay.* This compares favorably with the higher cost of operation in 1952 of \$121 per capita (\$10 for debt service and \$111 for operation).

The 1962 budget is based on the estimate that assessed value of taxable property within the City is \$200,000,000 computed at 70% of current market value. This property tax will provide approximately 43% of all general fund revenues, and will be supplemented by revenues from City owned utilities (26%), service charges (15%), licenses and permits (12%), and miscellaneous revenues (4%).

A principal increase in expenditures in the 1962 general fund budget is attributed to debt service, which in 1962 was estimated at \$1,259,000 an increase over the 1961 level of approximately \$200,000. Because of the growing debt service burden, and lack of municipal revenues, no provision is made for any new major capital project in the 1962 budget. In general, very few capital projects have been financed for the City within the past ten years from general fund expenditures.

* 1962 Budget, p. 11

The Financing of Capital Improvements

Capital improvements within the City of Anchorage scheduled for the next five years require the possible expenditure of \$17,901,900. Of this amount, approximately \$15,000,000 will come from the City's three utility companies, and \$6,000,000 from the General Fund. The three utility budgets (and the new port revenue fund) have been treated separately in the following pages.

Approximately \$7,000,000 of needed improvements must be financed (totally or in part) from the General Fund budget. These projects include: sanitary sewers, storm drainage, fire protection, police protection, streets and highways, parks and recreation, libraries, parking facilities, airports, public buildings, and urban renewal. Not included in this list are water, municipal light and power, telephones, and schools, which are payable from other budgets, and general fund operating expenditures.

Unfortunately the City's delicately balanced budget cannot withstand the additional burden of much more debt service. It also has not been able in the past to finance any but the smallest projects from annual revenues—a procedure which must be continued within the next five years. (Refer to Figure 2.)

As a consequence, virtually all of the \$7,000,000 in construction must be supported by additional bonding programs, consistent with the City's ability to support them. An upper limit for the support of bonding programs (including principal and interest payments) has been judged to be 25% of annual General Fund expenditures (see following section on bonded debt). This will restrict the number of projects that can be programmed, but will assure a balanced workable budget supportable by the community's resources.

Figure 4 illustrates the relationship between a safe debt load and the City's General Fund revenues. General Fund revenues for 1961 and 1962 are actual figures from the City Controller; estimates for the following years are taken from the Ernst & Ernst Special Revenue Study.*

* Op.Cit., Exhibit C. These estimates in Figure 4 are projected revenues; projected expenditures for the same years are \$340,000 to \$484,000 higher, but based on the consideration (subsequently defeated by Anchorage voters) of a City Sales Tax.

Figure 4

DEBT SERVICE RELATED TO GENERAL FUND REVENUES
CITY OF ANCHORAGE

1961-1965

	1	2	3	4	5	6
Year	Projected General Fund Revenues	Maximum Allocation for Debt Service (25% of Col. 1)	Annual Debt Service +	Funds Avail- able for Annual Debt Service (Col. 2 minus Col. 3)	Net Avail- able for Additional Annual Debt Service	Maximum Additional Bonded In- debtedness++
1961	\$4,994,169*	\$1,248,542	\$1,068,695	\$180,000	\$ --	\$ --
1962	5,081,000*	1,270,250	1,259,080	11,000	--	--
1963	5,266,000**	1,306,500	1,272,390	34,000	34,000	452,000
1964	5,462,000**	1,365,500	1,223,789	142,000	108,000	1,440,000
1965	5,671,000**	1,417,750	1,161,788	256,000	114,000	1,520,000

* Actual Figures from City Controller.

** Projected revenues as estimated by Ernst & Ernst, op.cit., Exhibit C.

+ Data Supplied by City Controller; includes interest on General Purpose and Assessment Bonds, principal payment on General Purpose Bonds, and the General Fund's share of principal payment on Assessment Bonds.

++ Present worth additional funds tabulated in Col. 5. Also see Figure 5.

Source: City Controller, December 31, 1961.

The 25% factor applied to estimated future revenues minus outstanding annual debt service payments yields (in column 4) the potential additional funds available each year for new debt service. This already is close to the 25% maximum allocation.

It can be observed, however, that some annual funds can be used; in 1963, for example, there is available \$34,000; in 1964, \$142,000; and in 1965, \$256,000. The small amount available in 1962 precludes early bond programs, leaving 1963, 1964, and 1965 as years for major construction.

The conversion of the above figures into a possible bond program is shown in Figure 5. Bonds totaling \$3,412,000 can be issued in the last years of the program. The actual value of improvements will be greater than \$3,412,000 due to the partial support of assessment bonds and other partially self-supporting programs from General Fund debt service payments. This can be seen in Figure 6, from the fact that some special assessment bonds issued for water, sanitary sewers, storm drainage, and street programs are partially supported by General Fund expenditures (see following section).

Figure 5

AN ILLUSTRATIVE BOND PROGRAM FOR FINANCING
CITY OF ANCHORAGE CAPITAL IMPROVEMENT PROJECTS

1961-1965

Total Program	1961	1962	1963	1964	1965
\$ 452,000	--	--	\$ 34,000	\$ 34,000	\$ 34,000
1,440,000	--	--	--	108,000	108,000
1,520,000	--	--	--	--	114,000
	Annual Cost		\$34,000	\$142,000	\$256,000
\$3,412,000	Total Bond Issues				

Note: Figure 5, and columns 5 and 6 in Figure 4, represent an illustrative bonding program supported by safe annual general fund debt service payments through 1965 for general obligation bonds issued at 4-1/4% for 20 years with equal annual payments. The calculations serve only to illustrate the magnitude of this type of general obligation bond that can be issued with net additional debt service from the general fund. The projects listed in the second section of this report will of course require many types of bond issues with varying amortization periods. The importance of Figure 4 and Figure 5 is the estimation of maximum annual funds available for additional debt service of all types that must be financed from the general fund. The additional debt burden on the general fund issuing from the combination of bonding programs used to finance the individual projects in Section II does not exceed those amounts spelled out in Figure 4 and Figure 5.

Figure 6

NORMAL TYPES OF PROJECT FINANCING
CITY OF ANCHORAGE

Projects	General Fund Revenues	Service Charges	Utility Revenues	Revenue Bonds	General Obligation Bonds	Special Assessment Bonds	Special Assessment Bonds, with partial General Fund Financing	Special Assessment	Reserve Funds	Federal Funds	State Funds	Miscellaneous
	GFR	SC	UR	RB	GOB	SAB-1	SAB-2	SA	RF	FF	SF	Misc.
1. Water	X	X		X	X	X	X	X				
2. Sanitary Sewers	X				X	X	X	X				
3. Storm Drainage	X				X	X	X	X				
4. Municipal Light & Power		X	X	X					X			
5. Telephones			X	X					X			
6. Fire Protection	X				X							
7. Police Protection	X				X							
8. Streets & Highways	X				X	X	X	X				
9. Parks & Recreation	X				X							
10. Libraries	X				X							
11. Parking	X			X			X					
12. Port Facilities		X		X			X					
13. Airports	X	X			X							
14. Public Buildings	X				X							
15. Urban Renewal	X						X					

* These symbols represent abbreviations for column headings, and have been used in the second section of this report starting on page 9.

Bonded Indebtedness

The rapid growth within Anchorage during the past decade has necessitated installation of major public improvements at all service levels. The need to finance major capital improvements at a relatively large scale has required the sale of sizable amounts of municipal bonds. The City's eminently successful policy of developing short term bond programs as a basis for accelerating needed capital improvements has resulted, however, in major annual expenditures for increased debt service.

The 1962 City budget reflects the enormous impact of present debt service flowing from these needed capital improvement programs. Debt service presently requires 24.8% of the 1962 General Fund expenditure appropriations* and is becoming relatively burdensome. It is generally considered that the ratio of interest and principal requirements to the annual budget should not exceed 25%**; based on an examination of past Anchorage budgets, this principle does in fact hold true.

In 1956, General Fund debt service expenditures constituted \$345,257; in 1962, it is estimated that the debt service will increase to \$1,259,080, or by 265%. Much of this increase is accounted for by interest costs payable from the General Fund. For example, interest costs payable from General Fund revenues have increased during the past eight years from \$30,000 to \$469,880 during 1962.+ One of the major factors responsible for this increase is the legal requirements in Alaska that provide that all interest on both general purpose and special assessment bonds must be repaid from General Fund revenues. In other cities, interest costs on special assessment bonds are paid by property owners as cost of the total improvement.

Figure 7 lists the total direct, overlapping, and net debt payable by the City of Anchorage in 1962. Net debt has been calculated by subtracting from the City's direct debt (including all general obligation and revenue bonds) in the amount of total bonds that are self-supporting or self-repayable, and available redemption reserve funds. Net direct debt, therefore, within the City in 1962 stands at approximately \$7,873,000. Added to this net direct debt is the over-lapping net debt coming from the Anchorage Independent School District. In 1962, the City was required to pay

* 1962 Budget, p. VIII.

** International City Managers' Association, Local Planning Administration, p. 284.

+ 1962 Budget, p. 147.

Figure 7

CITY OF ANCHORAGE
 DIRECT AND OVERLAPPING DEBT PAYABLE
 December 31, 1961

DIRECT DEBT

General Obligation Bonds		\$17,787,000
General Fund	(\$4,491,000)	
Special Assessment Fund	(\$8,139,000)	
Telephone Utility Fund	(\$1,440,000)	
Water Utility Fund	(\$3,717,000)	
Revenue Bonds		\$12,074,000
Telephone Utility Fund	(\$4,227,000)	
Water Utility Fund	(\$1,647,000)	
Port and Terminal Facilities Fund	(\$6,200,000)	
		<hr/>
<u>Gross Direct Debt</u>		\$29,861,000

Less:

Revenue Bonds		\$12,074,000
Self-Supporting General Obligation Bonds		9,666,217
Redemption Reserve Funds		247,438
General Obligation Bonds	(\$ 247,438)	
Revenue Bonds	--	
		<hr/>
<u>Net Direct Debt</u>		\$ 7,873,345

OVERLAPPING NET DEBT

School District	(\$14,511,000)*	<u>\$12,537,247</u>
<u>Net Overall Debt</u>		\$20,410,592

* City share of total is 70.9%, less pledged State Tobacco Tax funds to the School District.

Compiled from: 1961 Financial Report

approximately 70% of the Anchorage Independent School District's total debt requirements, which amounted to approximately \$12,500,000. The sum of the net direct debt (\$7,873,000) and the overlapping net debt from the school district (\$12,500,000) constitutes the net overall debt burden now faced by the City of Anchorage.

According to the City's Charter, "The outstanding general obligation indebtedness of the City incurred for all public purposes shall not at any time exceed 15% of the assessment value of all the real and personal property in the City."* As can be seen from Figure 7, current debt from general obligation bonds amounts to \$12,074.00. The current estimated assessed value of taxable property within the City is \$200,000,000.** Approximately 15% of the current assessed valuation is \$30,000,000—the current debt limit on General Obligation bonds for the City. The City, therefore, could issue additional \$18,000,000 in General Obligation bonds under the existing debt limit. Care should be exercised, however, in not burdening future municipal budgets with annual debt service charges in excess of 25% of General Fund expenditures.

All of the above analysis has been based on 1962 Anchorage dollars. Assuming an annual average inflation factor of 3%***, the \$17,901,900 worth of improvements would in fact cost \$19,000,000, if programs were equally distributed over the five year interval. Because of the uneven spacing of projects necessitated by different financial programs, this total figure will vary. Further, the shifts in project needs of priorities and the usually unexpected additions of new projects render the above estimate susceptible to variation.

* "City of Anchorage, Anchorage Municipal Charter," p. 28.

** 1962 Budget, p. 111

*** As estimated by Ernst & Ernst, op.cit., p. 4.

Electric, Telephone, and Water Utility Funds, and the Municipal Port

The three utilities and the port have been treated as a separate part of the City's improvement program. Each of these departments acts as a separate organization within the City, contributing a part of its annual revenues to the General Fund, and also transferring payments in lieu of taxes. In 1957 the total contributions (excluding payment in lieu of taxes), from the three utility funds amounted to approximately \$418,000. In 1961, they supplied an estimated \$1,273,698, (\$862,496 in contributions and \$411,202 in lieu of taxes). This amounted to approximately 25% of all General Fund revenues.

In terms of size: the Electric Utility Fund contributed in 1960 approximately \$457,000 to the General Fund. This was followed by the Telephone Utility Fund with \$329,000; and then by the Water Utility Fund with about \$77,000. The Port Revenue Fund made its first appearance in the 1961 Budget and, because of its recent opening, is not scheduled to transfer funds to the City for another year.

These three utility funds plus the new City of Anchorage Municipal Port will continue to contribute a substantial proportion of General Fund Revenues. The special revenue study for the City of Anchorage and the Anchorage Independent School District by Ernst and Ernst has estimated that contributions by these four sources will approximate \$1,274,000 in 1961 and approximately \$1,300,000 in 1965.* This constitutes approximately 21% to 26% of the City's projected revenues.

* Ernst & Ernst, Op.cit.

The Electric Utility Fund

Electric Utility Fund expenditures in 1961 are expected to total approximately \$2,848,000. Total electrical energy purchased and generated for Anchorage residents in 1961 is an estimated 96,000,000 kilowatt hours.

Because the City service area is limited by the Military on the north, Knik Arm on the west and by the rural cooperative to the south and east, the Electric Utility will not expand beyond its present service jurisdiction. Future growth, therefore, of the Electric Utility will come from more concentrated use of available land within its service area, and especially from vertical growth in the City.

In 1961, almost \$518,000, or 18.2%, of total Electric Utility Fund revenues, were expended for capital improvements. A five year projection of future electrical energy requirements made by the electric utility estimates the need for 127,000,000 kilowatt hours in 1965. A ten year load forecast and a five year forecast for future distribution installations have also been made.

Present power production for the City comes from two sources: City owned diesel generation plants, and purchased power from the Eklutna Project. It is anticipated that power will also be purchased from the Chugach Electric Association.

Existing capacity from the Eklutna Project is 16,000 kilowatts, plus an additional 6,500 kilowatts supplied from the City diesels. Power projection estimates by the electric utility indicate that this present total of 22,500 kilowatts will be severely taxed in the 1962-1963 winter, pointing out the need for additional 15% power reserve. This power reserve is expected to come from the Chugach Electric Association.

Future amounts available for capital improvements from the Electric Utility Fund budget have been calculated from Figure 8. An estimate of total power that will be purchased and generated by the system in 1965 is contained in the 1962 Budget. Total revenues, therefore, from the utility have been projected to 1965 based upon the relationship historically established between total revenues and total power purchased and generated by the system. This has been expressed in a Revenue Co-efficient (Figure 1), or the ratio of the Electric Utility Fund's total revenues to total power purchased and generated by the plant (multiplied by 100).

Figure 8

SELECTED ELECTRIC UTILITY FUND EXPENDITURES AND PROJECTIONS
CITY OF ANCHORAGE

1956-1965

Year	Energy Purchased and Generated (000 KWH's)	Total* Revenues	Revenue Co-Efficient**	Annual Service on Outstanding debt	Capital Improvement Expenditures	CIE as a Percent of Total Expenditures
1956	61,976	\$2,312,925	3.7	\$4,350	\$626,447	27.1%
1957	72,400	2,299,600	3.2	4,350	379,876	16.5%
1958	75,000	2,383,731	3.2	4,350	447,297	18.8%
1959	79,000	2,546,808	3.2	3,263	468,913	18.4%
1960	89,000	2,694,305	3.0	--	493,400	18.3%
1961	96,000	2,847,770	3.0	--	517,928	18.2%
1962	104,000	2,975,200	2.9	--	536,270	18.0%
1963	111,000	3,219,000	2.9	--	576,201	17.9%
1964	119,000	3,332,000	2.8	--	589,764	17.7%
1965	127,000	3,429,000	2.7	--	603,504	17.6%

* As estimated in yearly budgets.

** Ratio of Total Revenues to Total Power Purchased and Generated time 1,000.

+ All figures below horizontal chart line are projections. Figures for 1962 are 1962 City of Anchorage Budget estimates, and subject to revision.

Source: Compiled from City of Anchorage Budgets, 1957-62;
City of Anchorage, Alaska, Financial Report,
December 1960.

In the past five years, capital improvement expenditures for electric utility improvements have constantly increased from approximately \$380,000 in 1957, to \$518,000 in 1961. This of course has come from an expanding electric system, necessitated by heavy demands placed by new areas of population growth. While the total annual sums for capital improvement expenditures have been growing, capital improvements as a percent of total expenditures have remained relatively at the same level. As can be seen from Figure 8, this has remained at the 18% level.

Projecting a percent share of total expenditures for capital expenditures to 1985 yields the total sums of money available in the next 4 years for capital improvement expenditures that can be financed out of annual non-operating revenues. From 1962 to 1965, this would amount to \$2,305,739. This is approximately 25% of the total amount necessary to pay for the estimated \$10,000,000 worth of improvements to the electric utility needed by 1965.

Most of the remaining 75% can be obtained through debt financing. The electric utility has no outstanding bond payments to repay at the present time. As can be seen from Figure 8, annual debt service has been exceptionally light in the past decade. In 1956, it amounted to \$4,350 and in 1959, \$3,263. Note that no debt service has been carried since 1959.

To provide for necessary construction items in the Electric Utility Fund, debt financing seems necessary within the next five years. Since past annual expenditures for debt service have not even approached a threshold of limitation, additional bonded indebtedness must be closely related to absolutely necessary expenditures. From an inspection of proposed improvements of the system, it appears that major items within the program are gas and steam turbines totaling \$2,900,000. The priority years for these projects are 1962 and 1964. (See pages 21 to 23.)

A bond program related to the financing of these two major projects would be as follows:

	<u>Total Cost</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>
6,500 KW Gas Turbine & diesel plant conversion	\$1,700,000	\$127,870	\$127,870	\$127,870	\$127,870
6,500 KW Gas Turbine	1,200,000	_____	_____	<u>90,260</u>	<u>90,260</u>
Annual Cost		\$127,870	\$127,870	\$218,130	\$218,130

This assumes bonds issued for 20 years at 4-1/4% and equal annual payments. It is not certain at this time if the first project (6,500 KW Gas Turbine and diesel plant conversion) is needed; this depends on the availability of purchased power. The second project is a definite need.

A third project—a 22,000 KW Steam Turbine—cannot be recommended at this time due to the 1965 limitation of this report; its economic feasibility can only be evaluated by a projection of revenues to 1973 and beyond. As a safety factor, the first two projects are financially programmed; they appear not to place an excessive annual debt service burden on the utility. Of course, it is possible that the first 6,500 KW Turbine will not be needed at all.

The Telephone Utility Fund

Telephone Utility Fund expenditures will approximate \$3,000,000 in 1961. This provides for the operation of 23,500 stations in the City.

In 1961, 7% of the total budget (\$210,000) was spent for capital improvements. In 1962 it is expected that \$483,080 of the depreciation reserve will be used to construct additional plant facilities, boosting the system's immediate expansion.

A 1962 construction program and a five year expansion program for the City's telephone service were outlined by the Telephone Utility Manager in the 1962 budget statement. Top priority 1962 projects include the BRoadway, FAirfax, FEderal, and Diamond exchanges for which \$203,000 has been scheduled. These are "bare bones" projects and represent less than 20% of the actual needs of the system in 1962.*

The envisioned five year program would provide for the functioning of 35,000 stations in the City. In 1961 a \$4,000,000 bond issue—the starting point of the program—was rejected by the voters. According to the budget report "The defeat of the bond proposal seriously hampers the efforts of the Telephone Utility to meet its primary mission . . . "**

Future sums available for plant expansion have been calculated from Figure 9. The number of stations in service have been projected to 1965 by the Telephone Utility. Total revenue per station was then projected based on past rates of growth, yielding (with stations in service) total annual utility revenues.+ Annual debt service and annual capital improvement expenditures were then analyzed in terms of the total (operating and non-operating) budget.

* City of Anchorage 1962 Budget, p. 164.

** Op.Cit., p. 167.

+ This assumes that past functional relationships will not vary; a change in the cost basis toll settlement agreement currently in effect might be a significant consideration.

Figure 9

SELECTED TELEPHONE UTILITY EXPENDITURES AND PROJECTIONS
CITY OF ANCHORAGE

1956-1965

Year	Stations Connected (Annual Average)	Total Revenue* Per Station (Annual Average)	Total** Revenue	Annual Service on Outstanding Debt	ASOD as a % of Total Revenue	Capital Improvement Expenditures	CIE as a % of Total Revenues
1956	13,600	\$117.70	\$1,600,895	\$420,994	26.3%	\$221,883	13.9%
1957	15,400	120.30	1,852,214	466,438	25.2%	279,504	15.1%
1958	16,900	128.20	2,166,955	643,139	29.7%	292,884	13.5%
1959	18,200	138.50	2,521,426	716,654	28.4%	304,701	12.1%
1960	21,700	121.70	2,640,837	686,560	26.0%	342,607	13.0%
1961	23,500	127.80	3,003,000	674,653	22.5%	210,139	7.0%
1962	25,500	143.10	3,649,780	666,028	18.2%	483,080	13.2%
1963	28,000	144.00	4,032,000	647,524	16.1%	504,000	12.5%
1964	31,000	151.00	4,681,000	648,788	13.9%	585,125	12.5%
1965	35,000	159.00	5,565,000	624,958	11.2%	695,625	12.5%

+

* Includes operating and non-operating revenues.

** As estimated in yearly budgets.

+ All figures below horizontal chart line are projects. Figures for 1962 are 1962 City of Anchorage Budget estimates, and subject to revision.

Source: Compiled from City of Anchorage Budgets, 1957-62;
City of Anchorage, Alaska, Financial Report,
December 1960.

Since 1956 annual debt service has generally increased from \$420,000 to \$660,000 (almost 37%); however, annual payments as a percent of total revenues have steadily dropped from 26.3% (1956) to 18.2% (1962). As debt service becomes an even smaller part of the annual budget, the potential for incurring additional bonded indebtedness may be expected to increase. From past experience, a feasible limit appears to be between 22% and 26% of total annual expenditures.

Using 25% as a limit for revenues that can safely be applied for debt service, the difference between outstanding debt service and 25% could support additional bonding programs. This would amount in 1963 to \$360,000, in 1964 to \$521,000, and in 1965 to \$766,000. Converted into a bonding program for the Telephone Utility (20 year bonds at 4-1/4% with equal annual payments), this would mean \$4,786,000 available for capital improvements in 1963, or \$6,926,000 in 1964, or \$10,183,000 in 1965. Any combination could also be used.

Relating additional bonding capacity to specific telephone projects is beyond the scope of this report. Projects which cannot be financed out of annual non-operating expenditures, such as the \$2,000,000 item for central office equipment, should be examined in terms of appropriate financing procedure and voter acceptance.

Regarding annual non-operating expenditures for capital improvements, an inspection of Figure 9 reveals that since 1956 this has averaged \$275,000, or 12.5% of annual expenditures. This figure is expected to rise in 1962 due to the application of the depreciation reserve for construction purposes. Using an average factor of 12.5% of total expenditures for capital improvements, approximately \$2,267,830 could be spent from 1962 to 1965 for major project construction. This is not sufficient to provide for all items originally considered.

Total project costs to 1965 have been estimated at \$3,265,000. Of this, \$2,267,830 could be financed from annual revenues, leaving \$997,170 to be debt financed. This is well within the capacity of the Telephone Utility, and could be supported by telephone revenue bonds issued in 1963.

The Water Utility Fund

Water Utility Fund expenditures in 1961 are expected to total \$1,430,700. The sizeable work program during 1961 is expected to serve all new customers in the next year without further construction.

Of the 1961 Water Utility Fund budget of \$1,430,700, approximately \$167,000 has been designated for capital expenditures. No five year projection of future needs has been included in the budget statement by the water department.

Current procedure for obtaining water service inside the City calls for complete payment of installation (excavation) charges by the property owner plus a one-third contribution for the construction (extension) of water mains. In general, installation charges amount to \$290 per lot (\$110 for 3/4 inch connection plus \$180 contribution for construction of mains). Approximate construction costs to the City are therefore \$220 per average residential lot.*

During 1961 the City Council established the policy of actively creating assessment districts for water main extensions, which supplements voluntary application procedures. This innovation is expected to (as the 1961 Budget puts it) "have a positive effect on justifying the economic feasibility of these extensions since collection of connection charges is guaranteed through property assessment without having to wait until voluntary application for service is made." (p.190)

Future sums available for capital improvements from the Water Utility Fund Budget have been calculated from Figure 10. The number of customers served by the department has been projected through 1965 based upon the past rate of growth; at the same time total revenues per customer (generally increasing) were also projected, yielding an estimate of annual total revenues for the Water Utility Fund.

Two basic expenditure items—for capital improvements and debt service—were then analyzed in terms of their percent of total expenditures since 1956. An average expenditure of 15% was taken as indicative of an appropriate percentage of total revenues to be expended for capital improvements; the range had varied from 5.5% in 1962 (estimate in 1962 Budget) to 29.3% in 1959. Total revenues available, therefore, from 1962 to 1965 for capital improvements are \$945,550.

* "What Your City Can Do For You," League of Women Voters (Anchorage, 1958).

Figure 10

SELECTED WATER UTILITY FUND EXPENDITURES AND PROJECTIONS
CITY OF ANCHORAGE

1956-1965

Year	Number of Customers (Annual Average)	Total Revenue per Customer (Annual Average)	Total** Revenue	Annual Service on Outstanding debt	ASOD as a % of Total Revenue	Capital Improvement Expenditures	CIE as a % of Total Revenues
1956	6,432	\$104.0	\$ 668,694	\$ --	--	\$ 96,846	14.5%
1957	6,469	118.9	769,252	217,538	28.3%	105,348	13.7%
1958	6,325	95.2	601,960	219,882	36.5%	122,970	20.4%
1959	6,664	156.7	1,044,140	208,385	20.0%	306,130	29.3%
1960	7,511	144.0	1,086,969	319,336	29.4%	106,769	9.8%
1961	8,100	176.6	1,430,700	472,703	33.0%	167,020	11.7%
1962	8,750	167.6	1,466,250	464,137	31.7%	80,000	5.5%
1963	9,000	187.0	1,683,000	457,625	27.2%	252,450	15.0%
1964	9,800	198.0	1,940,400	446,192	23.0%	291,060	15.0%
1965	10,400	209.0	2,173,600	444,514	20.5%	326,040	15.0%

* Includes operating and non-operating revenues.

** As estimated in yearly budgets.

+ All figures below horizontal chart line are projections. Figures for 1962 are 1962 City of Anchorage Budget preliminary estimates and subject to revision.

Source: Compiled from City of Anchorage Budgets, 1957-62;
City of Anchorage, Alaska Financial Report, December 1960.

The same procedure was used in analyzing available funds for debt service. Debt service as a percent of total expenditures has varied from 20.0% to 33.0%, with the average since 1957 at 29.8%. Annual debt service has been increasing in absolute amount, but since 1961 has declined slightly as a percent of total expenditures.

Assuming that 30% (29.8% rounded) of total revenues can safely be applied for debt service, the added difference between outstanding debt service (as a percent of total revenues) and 30% could be applied, or could support, additional debt programs. This would amount in 1963 to approximately \$47,000, in 1964 to \$136,000, and in 1965 to \$206,000. Converted into a bonding program (20 year bonds at 4-1/4% with equal annual payments), this would mean \$625,000 available in 1963 for capital improvements, or \$1,808,034 in 1964, or \$2,739,000 in 1965.

In the priority list of water projects, \$1,800,000 is needed for a new water treatment plant—the largest single need in the water utility system. This can be financed, according to the above analysis, in 1964 or 1965; the plant has been programmed for 1964 to assure an early start on the project. A residual capacity for additional bonds of almost 3/4 of a million dollars has not been allocated in 1965, to be used for unexpected projects or as a reserve.

Most of the other items needed are smaller projects for the extension of water service, and do not have to be financed through bond programs. A total of \$1,122,500 has been appropriated through 1965 for these projects.

This is consistent with the availability of annual expenditures, except for the 1962 planning year; while the water department indicated it needed to spend only \$80,000, a real need for \$195,000 worth of improvements exists. This latter amount represents approximately 13% of the budget, and can be accommodated in 1962.

Port Revenue Fund

The Port Revenue Fund made its first introduction in the 1961 City Budget Statement. Just getting into operation, the estimated annual total expenditures for the Port constituted approximately \$225,000 in 1961. Of this, approximately \$200,000 went for operating expense and \$25,000 for debt service. The estimated budget for the Municipal Port in 1962 amounts to \$429,000, over half of which goes for debt service.

Since the five year needs of the Municipal Port are provided for under current program, no additional financial analysis is necessary. The Port facility is the focus of the Transportation Center as outlined in the General Plan. The facility is equipped with modern high speed luffing gantry cranes to facilitate loading under 40 foot tide variation in Knik Arm, and can handle 2,000 tons of cargo a day. The new port facility will help spur domestic trade; and bolster Anchorage's position as an important supply and distribution center for central and southern Alaska.