1980

A Five Year Financial Projection of Dieterich Community Unit #30

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A FIVE YEAR FINANCIAL PROJECTION

OF DIETERICH COMMUNITY UNIT #30

(TITLE)

BY

Elliott Kent Tuttle

FIELD STUDY

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
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A FIVE YEAR FINANCIAL PROJECTION OF DIETERICH COMMUNITY UNIT # 30

BY

E. KENT TUTTLE
MS., Western Illinois University, 1978

ABSTRACT OF A FIELD STUDY

Submitted in partial fulfillment of the requirements
for the degree of Specialist in Education at the graduate school
of Eastern Illinois University

Charleston, Illinois
1980

ABSTRACT

The basic purpose for this paper was to study important financial information pertaining to Dieterich Community Unit #30 School District from the recent past, and the present, and to use the data to project the financial position of the district over a five year period starting in 1978-79 and ending in 1983-84.

The paper was not intended as a true research project which used considerable statistical information but rather a project that might produce information very useful to the institution in financial areas in the next few years. The information and data used in the study were produced primarily from financial reports and audits of the district. A great amount of information was received through conversations with the superintendent of schools in the Dieterich system and other significant people. Some important information was received by completing an energy audit in the district. The energy audit gave considerable insight into overusage of electricity and possible solutions to energy problems.

The information was compiled from these financial reports and projected using the most recent government inflation estimates according to government economists. The projections were used to

complete five year financial standing in the form of school budgetary statements. These budgets, although not included in the finished paper, were totally completed and were the basis for the final estimates of the financial position of the district.

The major findings of the study were a slowly increasing debt which over a five year period could approach $900,000. Due to improved policies, spending procedures, and new sources of income, the district should improve its income during the next five years by approximately $300,000. Added to the $900,000 deficit that has been projected, the balance at the end of the five year period would show approximately $600,000 indebtedness.

These findings would offer a variety of possible solutions or partial solutions. The most reasonable would seem to be a tax referendum. If the taxpayers of the district are not willing to support the small district , it is likely the school will be absorbed by surrounding larger districts.

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THE DIETERICH UNIT UP TO 1978-79: A FINANCIAL OVERVIEW

The legislature of the State of Illinois has had a profound effect on the school districts of Illinois by changing and adding laws that alter requirements for buildings, curriculum, and staffing. In order to determine the financial ability of any school district, it is necessary to examine the variety of factors that can act upon the various funds of a district.

People who live within a district and those who pay taxes are concerned about the financial conditions of the district. A district's ability to pay or the lack of it is of utmost importance to people who send their child to a particular school. People are not in favor of sending children to a school in which they must expect an abbreviated curriculum due to the district's indebtedness.

For these reasons as an administrator in the district it has been and will continue to be of extreme importance to remain informed about the district's ability to survive financially.

This study was an attempt to help secure the future of the Dieterich School District by outlining past difficulties, noting legislative changes, and projecting the financial status of Dieterich Community Unit #30 for the next five years.

Since the late 1960's and into the 1970's, problems of how to finance schools have seemed to grow in importance. There has been, in conjunction with the growing interest in school finances, a seemingly subdued effort to reduce the number of school districts in the State of Illinois. Dr. Joseph Cronin, in a lecture at Western Illinois University in 1978, stated his plan to reduce the number of school districts in Illinois from over 1,000 to a number near 500 in the next five years. There was no threat to close schools at will, but it became obvious that his intentions were to watch the districts who could no longer be financed properly so that they might be consolidated into larger districts. It also was apparent that schools with declining enrollments were to be looked at. This year, any high school with an enrollment under 60 students will no longer be given recognition by the State of Illinois.

Dieterich Community Unit #30 is a district that could become a casualty. It is a district with slowly declining overall enrollment (see TABLE I). It is a district that has developed some financial difficulties in recent years. Dieterich is located between two larger districts that would take advantage of a larger tax base with fewer children. These districts are Newton and Effingham.

The district is made of small towns surrounded by farmland. The district could easily be dissected into parts to be grabbed up by various contingent districts.

TABLE I

Dieterich Community Unit

Projected Enrollment

1977-78	566
1978-79	560
1979-80	531
1980-81	501 (projected)
1981-82	500 (projected)
1982-83	492 (projected)
1983-84	490 (projected)

Part of student loss is expected due to loss of construction jobs in the area.

The school district that has been designated Dieterich Community Unit #30 consists of 111.39 square miles. It has two small communities, Dieterich and Montrose. They have respective population bases of 550 and 350 inhabitants. Other hamlets include Elliottstown and Eberle.

Each of these districts had a grade school until 1977-78. During that year the outlying schools, which had already been affiliated with the Dieterich Unit, came together in Dieterich at the new junior high school and elementary facilities. The high-school-age students had already been going to Dieterich for high school.

The reasons for a building program in the unit were varied. There was much opposition from some groups, and each area population had specific ideas about whether or not to build new buildings. Many did not feel they should be built at all. Some disagreement took place as to where to place the new buildings if they were built. Those from the various communities and hamlets were very reluctant to give up their own school. The school had been the center of community life in these towns for many years. Many parents had gone to those schools and wanted their children to go there as well. But there were many pressures for a new facility as well.

Since four community schools were feeding into one high school unit, it became more apparent each year that some type of curriculum coordination was badly needed. If a new school was built, all elementary children and junior high students could use the same texts and administration and faculty could develop a much stronger, coordinated curriculum.

In actuality, the buildings in use in Montrose and Dieterich as elementary buildings were condemmed by the State of Illinois. It was necessary to spend large sums of money to renovate those facilities or be forced to close the buildings. The issue passed 4 to 1 to build the new facilities after considerable ground work had convinced the people of the need for a centralized building.

The Dieterich Unit District #30 was developed as part of a county wide consolidation policy in 1949. At that time, the unit consisted of grades one through eight and a three year high school. The high school students had to be transported to either Teutopolis or Effingham for their senior year. The tuition was paid by the State of Illinois.

In 1956 a bond issue to build a unit high school was passed and a four year high school was then established.

THE BUILDING PROGRAM

The unit did not have a four year high school until the new high school building was started in 1955-56. The first graduating class was in 1957.

The second building project took place when the district decided to centralize the elementary schools near the high school rather than spend very large amounts of money renovating old schools. This building project was completed in January of 1978. It consisted of a new junior high school wing, a new gymnasium, and a new elementary school. The referenda for both buildings were not heavily contested because of the need for a four year high school in the first case and the knowledge of the high costs to renovate the old buildings. It is

questionable if they could have been fixed up enough to pass state requirements. The Boards of Education were different for both projects and, therefore, the philosophies were different. The latter building project brought with it some problems that should be noted.

The first situation to arise was the debt. The bonded indebtedness in 1976 amounted to $597,000,000.00 principal and $499,557.50 in interest. The total indebtedness was $1,085,557.50. This indebtedness was quite large for a small district. There were some fears of not being able to handle the debt as well as worries of local pressure about rising taxes.

Capital outlay and maintenance for the year 1975-76 exceeded receipts by over $16,993.00. At the time the building program was started, the other fund's excess balances were nearly gone.

1976-77 educational disbursements exceeded budget estimated by over $13,000.00. For the last several years expenditures exceeded receipts even more than the budgets depicted.

Tax rates fluxuated each year between 1971-1978. The maximum rate was not levied until 1976 for the 1977 school year. The superintendent and the board of education levied the maximum and filed early in November. For some reason the district failed to submit an amended levy when the State of Illinois changed the multiplier the following month. This transaction changed the local funds the following year by lowering the tax rate overall in the district. The State

later found that no adjustment sheet had been entered for the change in multiplier in the Dieterich district. They had overpaid the district slightly over $160,000.00. Even though the maximum had been levied the following year, the overpayment had to be paid back to the State in the 1978-79 school year. The loss of $15,000.00 per month caused an undue hardship on the district.

The tax rates during the period from 1973-1980 are shown in Table II. The above mentioned overpayment from the State of Illinois is not reflected in the tax levies as shown in the table. It should by noted that the levy for the building fund was not levied to the maximum limit until 1977-78. The tort and immunity fund was not established until 1977-78. Insurance had always been taken from the education fund in previous years.

TRANSPORTATION

Dieterich has owned and operated school buses to transport students to school and back home. After the high school was centralized in Dieterich, transportation started to become an important function in the process of educating children. There were more miles to be driven each day; therefore, costs for transportation started to rise. The junior high students as well as elementary students were brought to Dieterich in 1978 upon completion of the new facilities. These new students caused more miles to be driven. In addition, since all students were centralized, the community forced pressure to deliver students home from school after extracurricular events such as

TABLE II

TAX RATES BY FUNDS 1973-74 THROUGH 1978-79

Year	Education	Building	Trans-portation	MRF	Bonds & Interest*	Other	Fire Safety	Tort	Total
1973-74	1.4698	.2990	.1200	.0654					1.9542
1974-75	1.3498	.3000	.1200	.0644					1.8342
1975-76	1.4634	.3740	.1200	.0704					2.0278
1976-77	1.5556	.3159	.1200	.1220	.4855				2.5990
1977-78	1.6000	.3750	.1200	.1467	.3812			.0367	2.6596
1978-79	1.6000	.3750	.1200	.2105	.3552	.0500	.0500	.1106	2.8713

*The listing under "bonds & Interest" includes levies for the new elementary building and the new junior high wing.

*Figures for the school year 1979-80 unavailable as of June 1980.

basketball practice or games. The extra bus runs greatly added to the costs of transportation and were not refundable from the State of Illinois. The transportation fund has been losing more than $3,000.00 per year.

In 1977, there was a $5,989.00 deficit while in 1978, a $4,091.00 deficit. The accumulated deficit was $39,375.00 in 1977 and $43,466.00 in 1978.

The 1979 figures showed a savings over 1978 of approximately $1,000.00. Inflated energy costs during 1980 will more than consume any savings that was made during the year using conservation methods. In addition, inflation has also caused large increases in costs of transportation and the maintainence of transportation vehicles. It is estimated that even though the district eliminated one bus route and totally cut extracurricular transportation after practice, the deficit will continue to expand. During years when no additional buses are purchased, the increase in costs should be between two and three thousand dollars each year. As new vehicles are needed the increases will vary upward. It can be expected that the district will be no less than $15,000.00 further in debt in the transportation fund.

SPECIAL EDUCATION

Special education costs have become very high for all districts. Districts cannot afford to maintain or equip proper curricula, nor do they have adequate room facilities to house special education

students. Districts are forced to transport special education students to cooperative facilities many miles from the base school. The high transportation costs as well as extremely high tuition has not only hurt the transportation fund of Dieterich school but has helped to greatly delete the education fund as well.

SPENDING POLICY

As in many schools nationwide, education has been transformed slowly over the last twenty years into what is in many towns the largest business. In past years, spending procedures were often lax. Poor record keeping seemed to be manageable. As schools got larger and inflation started to increase, spending procedures should have been adjusted. In many districts they were not. Purchase orders were not used and purchases weren't approved by administration. Excess spending in some areas did not seem to be that important but over the long haul have accumulated into financial problems for Dieterich as well as other schools.

The seventies have brought inflation to education. Each year inflation rates have increased slightly. In the early part of the decade inflation rose to 5% to 6% annually. In the middle seventies, the rate moved to 7% and 8%. As 1980 arrived the superintendent of a district was looking at 12% inflation with rumors of even further increases. In order to survive, schools were forced to start changing their methods of operations.

Some schools acted quickly to make necessary changes and therefore were better able to meet the financial squeeze caused by inflation. Evidence does not show that Dieterich acted quickly. Other than keeping salaries low and an abundance of older text books that haven't been replaced, there is little evidence that a real effort had been made by the superintendent to adapt to the financial situation. The new building, which was completed in the spring of 1978, added to the problem.

It has become necessary to lay down a plan for recovery from the financial hole which Dieterich nearly found itself in. The plan should make necessary changes in overall operation that are beneficial financially to the district while maintaining and improving a quality standard of education for Dieterich students.

CHAPTER II

STEPS TO SAVE MONEY AND INCREASE REVENUES

STAFF REDUCTION

Enrollment has been dropping off slightly in Dieterich elementary school for several years. There have been opportunities to reduce staff that have not been used to the advantage of the district. Starting with the 1979-80 school year, the two first grades were combined into one class of 25 students resulting in a savings of $10,500 in 1979-80 as one staff member was eliminated. A man and wife who both teach in the elementary system planned to retire in the spring of 1980. There were plans not to replace one of those positions. The teachers did retire and one of them was replaced. The reduction of one teacher has saved approximately $12,000 from salary expenditures.

Cuts in the high school curriculum are much more difficult, due to state mandates which become more rigid each year. The desire to keep a high quality curriculum has to be considered of major importance when determining if cuts are possible in the high school curriculum. One secretarial salary was cut which resulted in a savings of $6,000. Administrators can only operate on the assumption that pennies will make dollars and dollars will make hundreds.

In the future a decision to eliminate either agriculture or industrial arts must be made. The elimination of either program could save the district approximately $15,000 per year. An overall savings of more than $30,000 could be projected if possible cuts were to be made in shop personnel during the next five years.

PURCHASING POLICIES

The district's spending policies have, at times, been lax. The past superintendent would sign blank purchase orders for some staff members. No purchase orders were used many times therefore causing problems for secretaries to keep adequate records. It was felt that improved methods of purchasing would definitely enhance the overall financial picture.

In the fall of 1979-80 the administration required all purchases to be placed on purchase orders. These orders had to be signed by either the principal or the superintendent of the district. A policy of designating certain individuals to purchase for various departments

has also worked well. There are several custodians in the system who make recommendations to the head custodian. The head custodian then makes an order request in writing through the administrative office. A final decision is made and the order is sent. A closer scrutiny of purchases has saved a considerable amount of money and in addition, has established a proper pattern by which future purchases will be more easily controlled. During a five year period, several thousand dollars may be saved because of these purchasing changes.

EXTRACURRICULAR EXPENSES

Extracurricular expenses can be reduced much more than expected. Priorities were the key to reducing these costs. Administrators required coaches to set priorities as to their needs. Coaches discussed these priorities for equipment with the principal who accepted or rejected the purchase order. The new policy has saved $1,500 in two years and can save another $2,000 in the next three years.

Travel from school has been greatly reduced. Teachers and administrators were absent too much in past years attending various programs and meetings. They must now decide which are necessary and which are expendable. Every athlete in the school was taken to the conference dinner in past years. Only those being honored are now taken. The total savings over the five year period should be nearly $1,000. In addition all athletes have been required to purchase state tournament tickets personally rather than having the paid for by the school. In five years this change will save an additional $1,500.

TRANSPORTATION COSTS

For several years transportation funds have been depleting in many schools because of the reimbursement formula used by the State of Illinois. Seldom was the maximum amount reimbursed by the state, leaving districts with growing deficits in transportation funds. Costs during the period have continued to rise with the inflation rate. The oil shortage has caused oil and gas prices to rise much faster than many other commodities. Added to this is the uncertainty that any set figure for fuel can be concluded for budgeting purposes.

In order to help in these respects, it has become necessary for buses to pay for themselves for any activity other than the delivering of children to and from school. In 1978 the calculated per mile cost of transportation was sixty one cents. Any trip other than regular or ordinary trips had to pay the equivilant of sixty one cents times the total mileage.

Students are no longer transported home after sporting games or practices. This policy alone shortened the total miles by more than five thousand.

The district used to pick up all students in the city limits that desired to ride the school bus. This practice has been dissolved as the entire city limits of Dieterich is within the one and one-half mile requirement of the State of Illinois. The saving was not large by cutting out in-town miles, but over the year, they began to accumulate.

During the next five years, if the above mentioned procedures are continued, well over $20,000 will be saved by the district. The actual figures are impossible to calculate, but by saving five thousand miles per year at only sixty one cents per mile, the estimated savings would be more than $15,000. The inflated costs will drive the per mile cost much higher during the five year span.

ENERGY CONSERVATION

Energy conservation has been a subject of importance for the past few years. Upon completion of the new Dieterich elementary and junior high schools in 1978, it became apparent that it would be necessary where ever possible to conserve energy. Natural gas bills for the first year in the new buildings were over $44,000. The cold months in winter were approximately $8,000 each. Thermostats were turned down to 68 degrees in classrooms, and venetian blinds were kept down in windows for added insulation. The heat in the buildings was turned down to a minimum temperature on weekends unless there was some activity in the building during that time.

Lights and electricity were definitely a large part of the enormous power bill. A campaign to instruct staff and pupils to turn off lights when leaving the room was started. Hall lights were turned off between classes when halls were empty. The gymnasium lights used tremendous amounts of electricity. The district now has two gymnasiums. In past years, the gymnasium had been used all week-ends and some evenings by any group who wanted to play ball.

Beginning with the 1978-79 school year, a rental of $15.00 per night was required. In 1979-80, the figure was changed to $1.00 per person. The $15.00 fee was found to be too high and the adjustment was made to be more conducive to small groups of four or five people. This fee has helped pay for the high wattage bulbs and the heating of the gym facility.

The temperature of the air in the elementary building did not rise easily due to the cold blast of outside air that was let in each time students went to the other building for physical education.

Double fire doors were installed twenty feet inside the original outside doors. These doors allowed a class to come into the building from outside without the cold air blowing down the halls. It should be noted that the area between the sets of doors allowed students to get quiet before entering the main portion of the building.

In addition, enclosed walkways have been started during the 1979-80 school year to cover the entire sidewalk between the buildings. Construction was started on an additional walkway between the high school and the shop building. These distances were 65 and 40 feet respectively. As noted in table XII, it has been estimated during the energy audit that the walkways would pay back their costs in approximately eighteen years. The cost was estimated at between $12,000 and $14,000 for the two walkways. It can be shown that nearly $1,000 per year will be saved during the next five years due to their construction.

Energy experts have notified the administration that the existing boiler in the high school building could easily handle the additional strain of heating the new elementary and the shop buildings. This could be done by running an underground pipe insulated inside a newly developed insulation pipe. The pipe would then pass through two specially built radiators which would blow the heated air into the building. The electric heat would still be used as an auxiliary or backup system.

In past years the power company would not allow the district any additional gas which would be needed to put the system into operation.

Additional gas has been acquired from C.I.P.S. by writing a series of letters to local, state and national congressmen. The allocation was not to exceed 500,000 cubic feet per month, an amount more than ample to supply the additional need. The process has been put into motion and should be finished before next school year begins. It was estimated that the cost of approximately $7,000 to change to natural gas would easily pay for itself within three years. The payback period for this expenditure has been shown in table XII.

The elementary building has cost about $2,000 per month in winter to heat during the first two years of operation. It was estimated that the change to steam heat as compared to electric heat would save approximately $3,500 a year. Over a five year period, the construction costs would be absorbed and an additional $10,000 should be saved. These figures are based on 1980 rates.

The unit filed an energy audit report with the State of Illinois in December of 1979. The principal of Dieterich High School was in charge of the report and future projections to save energy.

Some of the projections now completed have been shown in the tables. Table III illustrated average climatological data for the Dieterich area based on Effingham, Illinois figures. The number of degree heating days during a month have been shown in the table. A degree heating day equaled a standard 65 degree farenheit inside temperature minus the average daily outside temperature. The degree heating day has been established as the standard to determine heating requirements for various buildings.

Figures 2 - 5 have shown monthly energy usage broken down into heating, cooling and lighting expenditures. Table IV has shown total energy use in millions of B.T.U., and also the percentages of total usage attributed to the various categories of use. Table VII has shown the percentage of usage by type of fuel for each building. The percentage by fuel of total dollars spent on energy was given in part B. Total fuel costs per million B.T.U. for each fuel type was shown in part C.

Tables VII through XI show annual heat loss through conduction for each of the buildings. Convectional heat loss was also given in the table.

TABLE III

CLIMATOLOGICAL DATA AT
EFFINGHAM, ILLINOIS
DIETERICH ENERGY AUDIT

MONTH	AVERAGE MONTHLY TEMPERATURE	1979 1980	1978 1979	1977 1978	1976 1977
August	74.9	11	5	1	4
September	68.7	101	59	34	112
October	57.2	270	415	392	537
November	48.5	732	570	626	919
December	32.6	-	1000	1158	1220
January	29.4	-	1564	1481	1712
February	32.9	-	1331	1334	1045
March	41.5	-	760	997	573
April	54.3	-	450	339	255
May	63.9	-	200	232	68
June	73.2	-	-	14	22
July	76.5	-	2	0	0
TOTALS		1114	6356	6608	6467 *

(heating days)

* Degree Heating Days

TABLE IV

TOTAL ENERGY USE
DIETERICH ENERGY AUDIT

		ANNUAL ENERGY CONSUMPTION (Million Btu)
HEATING		
Electric (High School)		488
Electric (Elementary)		860
Liquid Propane gas (Industrial arts Building)		522
Natural gas (Jr. and High School)		5311
	(90.7%)	7181
AIR CONDITIONING		
Electric (High School)		127
Electric (Elementary)		45
	(2.2%)	172
LIGHTING & MOTORS		
Electric (High School)		192
Electric (Elementary)		90
	(3.6%)	282
HOT WATER, OVENS, ETC.		
Gas	(3.5%)	281

An estimated summary of various projected energy saving improvements and the estimated length of time necessary for the improvements to pay for themselves were given in table XII.

The improvements that can give a total payback in a very short time have been given primary consideration. Those requiring longer payback periods will be initiated as well.

The audit has only given needed changes that would save the district funds. It has also given estimated lengths of payback that can be considered by the district when determining which conservation measures to undertake. An overall amount of savings to the district can not be given at this time. Estimated costs have not been received by the district for many of the suggested conservation measures in the audit. It has been demonstrated by the few cost estimates available that a considerable amount of money can be saved each of the next five years. It can only be assumed that as each additional conservation measure has been accomplished, the savings to the district will proportionately increase.

THE OFFICE OF PROCUREMENT

The state offers governmental bodies the opportunity to participate in purchasing through their office. The savings offered are of significant value to the system. As an example an eight foot flourescent bulb cost $20,85 before the district joined the program. Under the procurement program, the district can purchase the same bulb for $1.43. Equivilant purchase savings are also made which saves the district large amounts of money on needed items.

All gymnasium and field lighting as well as regular light bulbs have been purchased by procurement. The addition of procurement plan has decreased maintainence lighting costs by more than 50% and should provide overall savings in the thousands of dollars during the next half decade. It must be noted that the longevity of such a program can not be assumed and therefore, the savings are estimated.

NEW MONIES

Sources of new money have been and are continuing to be explored for the Dieterich Unit. Title programs have been re-vamped to see if more possibility exists for funds. The gifted program has been developed and is receiving new funds.

The school has taken full advantage of the State's "free text-book" program. This program made available state monies to buy one text book for each student in a given number of classes each year. The book was actually "loaned" to the student for six years. In 1978-79, the district received over $2,000 from this source. In 1980-81 approximately $3,000 worth of texts will be received.

In 1976-77 the district changed from Strayer Haig to the resource equalizer formula for state aid. The state made this change based on the number of dollars behind each student locally. Strayer Haig had been the most advantageous for this district in previous years.

Strayer Haig bookkeeping required the money to be spent in specific funds as it came from the State of Illinois. This process required interfund loans which had to be paid back by June 30 of the fiscal year. The resource equalizer allowed usage of monies where they might be needed regardless of fund.

In past years, there had been no levy for a tort immunity or working cash fund. The tort immunity was levied at what ever rate was necessary for liability protection and workman's compensation. In the past, these monies reduced the education fund by more than $15,000. The levy for working cash became five cents and supplied the district with an additional $8,200 that can be borrowed without interest from its own funds.

The district has been attempting to receive new funds through a federal grant. The grant which has been sought by the district during the spring of 1980, would provide a special education vehicle with a special lift. The present vehicle has been driven more than 90,000 miles. The new vehicle would provide required transportation for the district that would cost in excess of $13,000.

The legislature has aids who research the government sources to find out what monies are available. These monies can often be attained if the district contacts the proper authorities. The drawback to federal grants is the large amount of paperwork and red tape involved. The handicapped transportation grant mentioned above required a 24 page application and five letters written to various organizations as a primary step toward its receipt. However, they can be an excellent source of money for a district.

Based on the number of disadvantaged students, a district can receive additional funds for vocational education. Dieterich has a weighting factor of .5 per disadvantaged student per class. This has been a good source of funds for the district. Vocational programs have produced over $1,500 per year to District #30. The district has expanded the program into the elementary school.

C E T A

The C E T A program has been and will continue to be a very good source of help. C E T A supplies workers who are sent to the district for a training experience. The entire cost has been paid for by the United States tax payers. This program allowed a district to have "free" help and saved a large amount in janitorial salaries. Green Thumb was a similar program and has been offered through the Illinois Farmer's Association. Its purpose was to suppliment a retired person's income. The program was paid for by the association. The drawback to programs of this type was the caliber or worker often was low in comparison to ordinary standards. The turnover was sometimes large; therefore, some districts do not bother using this source of help.

The most important advantage has been the savings to the district. All summer workers in the school district for the purpose of preparing and repairing the building, have been C E T A workers.

The use of C E T A workers saved the district approximately $3,000 in 1978-79. An additional $12,000 to $15,000 should be saved in labor expenses during the next few years if the C E T A helpers are available.

ANTICIPATION WARRANTS

The district was overpaid more than $100,000 in 1977-78 in state aid. The district was notified that the overpayment would be paid back in one year. Monthly state aid payments were reduced by approximately $15,000. Because of the drain on the budget, it could be deduced that the district would be out of money by early spring. The superintendent of the district got a legal opinion from Schwartz, Nicholas, Lifton and Robbins, the school's attorneys, in chicago, for the proper technique for issuing anticipation warrants. $200,000 in warrants were issued in March of 1979. These warrants were issued at 6% interest. The money was invested at 11.36% to receive a short term gain. The return on the investment brought an additional $8,041 to the district. Since that anticipation loan had to be paid off as soon as taxes were made available to the district, the district again assumed that during the 1979-80 school year, monies would be needed. The district has again sought a legal opinion as to the when the money can be borrowed.

The various methods of receiving or applying for new monies have not solved the problem for a district such as Dieterich.

In the first year these methods of receiving new monies, coupled with new spending and purchasing practices have allowed the Dieterich district to realize $101,000 net gain over the predicted totals at the start of the 1978-79 school year. The gain has been in the $8,000 interest received added to the $93,000 in savings during the past year. These practices are working to reduce the problem of indebtedness. It should be pointed out that these practices are only a beginning and must be maintained for many years if the district is to again become solvent and is to remain solvent.

The budgeting procedures that were used were based on the afore mentioned plans. They were also based on the best information available at the time estimating what the near future held for the United States economically. The budget for the 1979-80 school year was drawn using varying rates of increase due to the oil price increases of the year. The overall increase was approximately 15% over the previous year. The 1978-79 through 1983-84 budgets were figured on about 15% increase in most items with fuel related items estimated at 20%. Non fuel related items remain at 15%, while fuel related items drop to 15% the last year. The percentage of increase for 1979-80 was based on a 13% overall increase in inflation for the year based on government figures. It has been estimated by the government's economists, that the rate would level off and probably drop to some extent in 1980 and 1981.

In actuality, estimates have been projected by the government that the overall inflation rate would be closer to 18% during 1980 based on first quarter figures. Since 1980 will be an election year, it was concluded that officials would make every effort to lower inflation rates during the middle two quarters of the year.

At the same time, fuel costs are skyrocketing due to severe problems in the Middle East. The reports show a tendency toward gouging by oil companies as their profits increase by up to 150% Per year. For these reasons, a 20% increase for the first three years was used leveling off to 15% the last year.

The 15% inflation rate was used with a slight expectation that the rate would be slightly higher than the real inflation figure for 1980. A cushion effect was built into these budgets. In actuality, they may prove to be less than adequate in keeping up with inflationary trends.

The school district held negotiations for salaries for the first time for the 1979-80 school year. A result of the talks were a three year contract with a 9% increase the first year and a 7% increase the following two years. These percentages helped to stabilize the budgeting procedures because they were lower than the quickly inflating fuel and heat costs. They also were reasonably solid for three years unless very high inflation might force negotiations to reopen for higher salaries. Administrators negotiated for a three year contract that could have helped stabilize the budget. It was not granted.

Walkways have been under construction between buildings. They were the only new additions to the building. There will be other improvements in energy conservation which will undoubtedly cost some money. An energy audit was taken to determine conservation needs. The overall savings should pay for needed expenditures in time as well as improve the facilities.

The replacement for the corporation property tax will have a questionable effect on the district's budget. The loss of the tax cost the district about $15,000 per year in tax monies. The replacement for the tax produced $7,322 in 1979-80. In addition, there have been tax limiting bills proposed that limit the increase in property taxes to a given percentage per year. They are being fought by administrators, but in the next few years, they could be an important issue for Dieterich's money supply.

CHAPTER III

THE OUTLOOK 1979 - 1984

From information that has been supplied in the budget projections for 1979-84, it can be determined that the financial picture will improve and then start to worsen. The extent will be determined by the future economy. Table V illustrated total receipts in the three major funds; education, building, and transportation. Expenditures are shown along with expected differences in expenditures versus receipts.

TABLE V

Budget: Education, Building, Transportation

Receipts versus Expenditures 1979-1984

	1979-80	1980-81	1981-82	1982-83	1983-84	CUMULATIVE TOTAL
TOTAL RECEIPTS	$1,126,700	1,142,375	1,214,165	1,375,725	1,510,100	$6,369,065
TOTAL EXPENDITURES	1,194,183	1,247,425	1,422,070	1,574,310	1,839,117	7,277,105
TOTAL DIFFERENCE	(67,483)	(105,050)	(207,905)	(198,585)	(329,017)	($ 908,040)

Both receipts and expenditures include anticipation warrants issued and repaid. Working cash would equal a cumulative addition of more than $40,000 during the period. (Not shown as income.)

The improvements will take place using the before mentioned means and undoubtedly some methods yet undiscovered. There are questions in some minds as to whether some of the improvements might be or might not be ethical. The district will need funds during the 1979-80 year, but when will it be legal to actually borrow the money? The lawyers for District #30 have stated that in their opinion, money can be borrowed if the money will be needed that year. The money can be placed in the money market to draw a bigger percentage of return.

The transportation fund seems to be a problem that will not go away in future years. Even with cuts in bus routes and extra-curricular transportation, the inflated costs of gasoline will eat up the savings in the long run. Buses must be kept up to date and can only be depreciated over seven years. Although various measures have been discussed in the legislature, no improvement in transportation legislature can be seen at this time. The fund will continue to lose money. The most predominant transportation bill during the last session of the legislature dealt with the additional transportation by the public schools of parochial students within the public school's district. The measure did not pass, but presented a factor that may have to be dealt with in future years.

If inflation levels off at 12% or less in the next year, the district will slowly improve from past financial troubles. Required expenditures can be foreseen, and a plan can be developed that will keep them in balance. Power and fuel price changes can only be overestimated hoping that they will not increase more than the estimate. If they decrease, more money will be available for the school, but this is highly unlikely.

The future growth of Dieterich Unit #30 will be determined by a variety of happenings in the next few years. These have been discussed in this paper from the standpoint that policy changes have been and will be necessary for the district to continue as in the past. If the changes are taken into account, there are distinct possibilities that they might precipitate other changes. Some of those changes may be drastic and highly disputed by local citizens. Rural communities are very reluctant to change even though the changes are required for the betterment of educational processes.

ALTERNATIVES

If the previously mentioned ideas are not followed, alternative solutions will be needed to solve the problems. One alternative seems to be do nothing until absolutely necessary. Many districts in Illinois have followed this plan but most have regretted it later. Future plannings will be necessary. If the district does nothing, the transportation fund, building fund, and education

fund will continue to increase their deficit totals at the end of each fiscal year. The district will be bankrupt in only a few years.

Possible bankruptcy brings with it another alternative. The State of Illinois has more than 1,000 school districts today. There are plans to decrease that amount significantly in the next few years. A district will either pay for itself or consolidate into another district. This alternative, although quite unpalatable to local taxpayers and parents, would be the solution the State of Illinois would most like to see occur. The outcome for local tax payers would be questionable because they not only would have to pay off all old debts incurred by the previous district, but also the debts of the new district. It has been proven that there are often many years of "settling in" that must take place between consolidated districts.

Another alternative would be to totally cut all extra-curricular activities and any other extra from the budget of the district. The staff would operate at a bare minimum to support the state requirements of forty courses. All extra expenditures would be paid for by the parents. There are 57 course offerings at the present time. Although this alternative has been tried in a few districts in the state, it is the least conducive to a good well rounded education for students.

There would be an unlikely but possible alternative that the district could be broken up into four or five parts, each of which would go to a different district. The Northwest could go to Teutopolis schools. The South could go to Louisville schools. The far West and Southwest could go to Effingham schools. Jasper County which borders Dieterich to the East, would not be a probable alternative because of county lines.

Most expenses incurred by the district are fixed costs; salaries, buses, gasoline, heat, electricity, and food. State mandates require forty course offerings in the high school as well as mandating particular courses that must be offered. Reduction in the nonmandated curriculum would offer one alternative. Such areas as agriculture, welding, woodshop, drafting, home economics, cooking, sewing and art would meet this criteria. The alternative should be used only as a last resort because these courses teach the skills of the community. Approximately $45,000 in salary could be saved, but at what cost to the future citizens of the community?

Many hidden costs within these classes might be passed onto the students rather than paid for by the school as in the past.

Two elementary teachers have retired for 1980-81. The savings can amount to over $20,000 per year if neither teacher were replaced. One of the positions was replaced for the 1980-81 school year leaving the actual savings at around $12,000. If the $12,000 per year savings is maintained over the next five years, which is a definite possibility, the cumulative amount of salary saved from the one position will be $60,000.

A long term alternative would be the sale of working cash fund bonds in the amount of $200,000. Bonds have been recommended by school attorneys, experts from the State of Illinois, and by other districts who have faced similar problems. These bonds solve the immediate financial problem but place the burden back on the local taxpayer. Funding bonds were a possibility for the future and would not require a vote of the people unless an objection was lodged by 10% of the public.

The district has used anticipation warrants as the primary alternative. The district borrowed $200,000 at 6% and invested the funds at 11% until the money was needed. The transaction provided additional interest monies.

Anticipation warrants are now being used and are considered by lawyers as the best short term solution to a financial problem. In the long term, working cash bonds are becoming more accepted across the state. They are paid back by the community over a ten year period. Working cash bonds can only be used one time by a district.

A tax referendum was a distinct probability for really helping solve the district's problems. The referendum must be passed by a majority vote of the people to raise the tax rates in the district by whatever amount they desire up to the state limits.

A referendum would seem the most viable and best solution for any district with serious financial problems. A tax referendum is considered the best alternative proposed for this paper. The district needs to support itself and the type of education it desires. Referenda are difficult to pass in times of high inflation and high taxes. School taxes seem to be the only tax the local tax payer can reject, and many do. Nevertheless, it is proposed that if the methods the district is now using do not work satisfactorily within the next five years, a strong proposal for a tax referendum must be sold. It will be the responsibility of the administration to persuade the board of education of the need so that they are strongly unified before undertaking the task. The community must then be persuaded of their need for financially improving their schools. It is the opinion of the author that if the board of education can realize the necessity, the community can also be made to recognize the need. Within the next decade and quite possibly within the next five or six years a referendum will be necessary in Dieterich Community District #30.

If nothing was done to alleviate the problem, there would always be the "chance" that the State of Illinois would provide the amount of monies needed by the school district.

CHAPTER IV

THE FUTURE: CONCLUSIONS AND RECOMMENDATIONS

Tax levies have been kept at the maximum for the last few years, and additional levies for tort immunity, working cash, and fire safety have been made which will help relieve the education fund. The additional levies will increase income from taxes more than $8,000 each year based on current assessed valuation for four of the five years. The cumulative figure will be over $32,000 in the working cash and in the fire safety fund. In addition, about $15,000 per year levied at the amount necessary in tort immunity will help relieve the education fund by about $20,000 during the period.

Transportation deficits have increased and will continue to increase approximately $3,000 per year. Efforts to cut costs will only succeed in keeping the deficit at about the present rate per year. Over the five year period expenditures will total another $15,000 more than receipts in the transportation fund.

Staff reduction has been and will be an additional source of funds for the district in the next five years. One staff member had been cut for 1979-80. The savings will decrease expenditures by $10,500 each year or more than $40,000 within the time period. Another teacher has been cut for 1980-81 at a savings to the district of $12,500 or $50,000 over the period. A few additional reductions are possible, but pose a serious threat to the curriculum of the

district. There are 57 courses in the curriculum at the present time, but many are "mini" courses of only nine weeks duration. One secretary has been reduced which has saved $6,000 per year and will equal $24,000 over four of the five years.

Improved purchasing policies will definitely aid the district toward reaching the goal of becoming debt free. After two years under new administration purchasing policies, it must be concluded that the policies have been very beneficial to the district financially. It is very difficult to project true savings figures for the five year period. The new policies have not only provided incentives for buying at lower prices, but also purchases have been made in quantity when it was feasible and more econimical to do so. It is felt, based on present information, that several thousand dollars could be saved during the five year period.

Over $1,500 has been saved already through more prudent athletic buying practices and another $2,000 should be saved over the next three years. Extracurricular travel cuts have saved the district over 5,000 miles per year at sixty-one cents per mile. The figure included only after school practice transportation. The mileage amount paid out by the district has been reduced more than $1,000 for each of the last two years. The trend should continue and total mileage savings for the five year period should be nearly $20,000.

The energy audit that was completed by the district during the 1979-80 school year should provide needed information that will help save additional dollars during the next few years and many years thereafter. A minimum of $20,000 should be saved during the five year period due to better energy policies.

By taking advantage of State and Federal Government programs, the district has been able to divert possible expenses to the state rather than absorbing the total or partial amount. More than $5,000 worth of texts have been received during the first two years and similar amounts are expected for the next three years.

Additional searches for governmental grants might bring additional funds to the district. The use of C E T A workers has provided state funds to pay janitorial help that, if used, would cost the district at least $124.00 per week per employee. The district has maintained between three and five C E T A employees for the past two years. It is felt that C E T A programs have enabled the district to spend between $7,000 and $10,000 per year in areas other than janitorial salaries.

The savings and incomes to the district that have been listed are at best good estimates. They should provide a guideline for possible savings to the district during the five year period when compared with the large budgeting deficit of $908,000 shown in

table V, Total savings and increases to the school district during the 1979-1984 period should be over $301,000 as shown in table VI. In contrast to the larger deficit in the budgets, the $301,000 will still have approximately a $600,000 deficit at the end of the period.

TABLE VI

YEARLY AND PROJECTED ESTIMATED TOTAL
FIVE YEAR SAVINGS

INCOME/SAVINGS	YEARLY	FIVE YEAR ESTIMATED TOTAL
Working Cash	$ 8,000.00	$ 32,000.00
Tort Immunity	15,000.00	70,000.00
Fire Safety	8,000.00	32,000.00
Staff Reduction	29,000.00	100,000.00
Transportation	4,000.00	20,000.00
Free Texts	2,500.00	12,500.00
C E T A	7,000.00	35,000.00
	$73,500.00	$301,500.00

The financial structure for Dieterich Community Unit #30 has been scrutinized by first reviewing the past, analyzing the present and finally, projecting the future.

The financial projections tend to be slightly misleading because the budgets were purposely prepared with slightly less income than might actually be received. Expenditures were proposed at a slightly higher rate than was projected. This budgeting procedure would give a somewhat dimmer financial picture than should really exist. Inflation rates have continued to rise during the preparation of this study and are near 18% at the present time according to government figures. If these rates do not drop as projected to near 12% annually, Dieterich schools will be in more serious condition than now projected.

Within the next five years, Dieterich will need to pass a tax referendum to meet financial needs. At the present time, cuts in federal monies to states are expected. These cuts will affect education in Illinois immediately and could cause severe financial difficulty even sooner than expected. It is recommended that the seeds be planted within two years for a projected referendum. In a time of tax cuts, proposition 13, and new proposals limiting tax raises, one can only hope the importance of children's education will rise above the sacrifices that may be required in order that good education may remain a reality.

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School Budget Form, 1979-80 Dieterich Community Unit #30.

A P P E N D I X A

ENERGY AUDIT TABULAR DATA

TABLE VII

SPACE HEATING ENERGY CONSUMPTION
DIETERICH ENERGY AUDIT

A. SPACE HEATING ENERGY CONSUMPTION (PERCENTAGE BY FUEL/BUILDING)

FUEL/BUILDING	PERCENTAGE
Gas	73.9
Electric/Elementary	12.0
Electric/High School	6.8
Propane/Industrial Arts Building	7.3
	100.0%

B. SPACE HEATING DOLLARS (PERCENTAGE BY FUEL/BUILDING)

FUEL/BUILDING	PERCENTAGE
Gas	40.4
Electric/Elementary	33.8
Electric/High School	19.2
Propane/Industrial Arts Building	6.6
	100.0%

C. FUEL COSTS

FUEL	COST ($/MILLION BTU)
Gas	2.23
Electric	3.71
Liquid propane gas	11.49

TABLE VIII

HEAT LOSS - DATA SHEET (ELEMENTARY SCHOOL)
DIETERICH ENERGY AUDIT

A. GENERAL PARAMETERS

1. Year built - 1977
2. Ventilation - dampers with variable settings from 3 to 15% fresh air (dampers completely closed in the winter)
3. Two electric furnaces with in-line electric heaters in each classroom
4. Degree heating days - 6500

B. CONDUCTION HEAT LOSS

	AREA	COMPOSITE	COEF. OF CONDUCTANCE(U) Btu/hr-ft^2-F	ANNUAL HEAT LOSS (Million Btu)
1.	Wall(5400 ft^2)	6 in. cinder block(filled with granular insulation + 4 in. brick veneer)	0.19	160
2.	Ceiling(14400 ft^2)	2 to 8 inches of insulation	0.111	210
3.	Floor(14400 ft^2)	carpet + 8 inches concrete	0.23	85
4.	Windows(270 ft^2)	double glazed	0.56	24
			ANNUAL CONDUCTION HEAT LOSS	479

C. CONVECTION HEAT LOSS (INFILTRATION)

	ITEM	DESCRIPTION	ANNUAL HEAT LOSS
1.	Windows, walls, etc	Volume of infiltrating air equal to a change of 50% of inside air in one hour	243
2.	Door openings	200 door openings/day assumed	138
		ANNUAL CONVECTION HEAT LOSS	361

ANNUAL HEAT LOSS 860

TABLE IX

HEAT LOSS - DATA SHEET (NEW GYM LOBBY)

DIETERICH ENERGY AUDIT

A. GENERAL PARAMETERS

1. Year built - 1977
2. Heated by two electric heating units
3. Degree heating days - 6500

B. CONDUCTION HEAT LOSS

	AREA	COMPOSITE	COEF.OF CONDUCTANCE(U) Btu/hr-ft^2-F	ANNUAL HEAT LOSS (Million Btu)
1.	Wall (750ft^2)	6 inch cinder block + 4 inch brick veneer	0.392	46
2.	Ceiling (3150 ft^2)	acoustic tile + 16 in.air space + wood sheathing + tar paper + tar coatings	0.24	118
3.	Windows (750ft^2)	single glazing	1.1	129
4.	Floor (3150 ft^2)	8 inches of concrete + linoleum tiles	-	28
			ANNUAL CONDUCTION HEAT LOSS	321

C. CONVECTION HEAT LOSS (INFILTRATION)

	ITEM	DESCRIPTION	ANNUAL HEAT LOSS (Million Btu)
1.	Windows, walls, etc	Volume of infiltrating air equal to a change of 50% of the inside air in one hour	53
2.	Door openings		
	a.	To Industrial Arts Buildings	30
	b.	To the outside	44
		ANNUAL CONVECTION HEAT LOSS	127
		ANNUAL HEAT LOSS	488

TABLE X

HEAT LOSS - DATA SHEET (NATURAL GAS)
DIETERICH ENERGY AUDIT

A. GENERAL PARAMETERS

1. Year built - 1939 (Old gym); 1956 (High School); 1977 (Jr. High); 1977 (New Gym)
2. Old gym, High School, and Band area are heated by steam lines from central gas boiler
3. Jr. High School and new gym are heated by forced hot air fueled using gas
4. Degree heating days - 6500

B. CONDUCTION HEAT LOSS

AREA	COMPOSITE	COEF. OF CONDUCTANCE(U) Btu/hr-ft^2-F	ANNUAL HEAT LOSS (Million Btu)
1. Old gym			
a. Wall(8370ft^2)	12 inches of concrete	0.392	512
b. Ceiling(10,324ft^2)	wood sheathing + tar paper + tar coating	0.20	322
c. Floor(10,324ft^2)	8 inches of concrete + wood flooring	-	20
2. New Gym			
a. Wall(7650ft^2)	6 in. cinder block (filled with granular insulation) + 4 inch brick veneer	0.19	227
b. Ceiling(11,160ft^2)	2 to 8 inches of insulation	0.08	139
c. Floor(11,160ft^2)	8 inches of concrete + wood flooring	-	20
3. Jr. High			
a. Wall(2500ft^2)	6 in. cinder block (filled with granular insulation) + 4 inch brick veneer	0.19	74
b. Ceiling(8120ft^2)	2 to 8 inches of insulation	0.111	141
c. Windows(284ft^2)	double glazing	0.56	25
d. Floor(8120ft^2)	8 inches of concrete + linoleum tiles	-	25
4. High School, band room, teachers lounge, and cafeteria			
a. Wall(6410ft^2)	8 inches cinder block + 4 inch brick veneer	0.392	392

TABLE X

HEAT LOSS - DATA SHEET (NATURAL GAS)
DIETERICH ENERGY AUDIT

AREA	COMPOSITE	COEF. OF CONDUCTANCE(U) Btu/hr-ft^2-F	ANNUAL HEAT LOSS (Million Btu)
b. Ceiling(17,640ft^2)	acoustic tile + 16 in. air space + wood sheathing + tar paper + tar coatings	0.24	660
c. Windows(4274ft^2)	single glazing	1.1	733
d. Floor(17,640ft^2)	8 inches of concrete + linoleum tiles	-	54
		ANNUAL CONDUCTION HEAT LOSS	3344

C. CONVECTION HEAT LOSS (INFILTRATION)

AREA	DESCRIPTION	ANNUAL HEAT LOSS (Million Btu)
1. Old gym	Volume of infiltrating air (forced & natural) equal to a change of 75% of the inside air in one hour	196
2. New gym	Volume of infiltrating air (forced & natural) equal to a change of 75% of the inside air in one hour	218
3. Jr. High		
a. Windows, walls, etc.	Volume of infiltrating air equal to a change of 25% of the inside air in one hour	68
4. High School, band	room, teachers lounge, and cafeteria	
a. Windows, walls, etc.	Volume of infiltrating air equal to a change of 50% of the inside air in one hour	297
b. Door openings		126
5. Furnace Losses	Furnace is assumed to be operating at 80% efficiency, therefore, the heat loss to flue gas is equal to 20% of the heat consumption	1062
	ANNUAL CONVECTION HEAT LOSS	1967
	ANNUAL HEAT LOSS	**5311**

TABLE XI

HEAT LOSS - DATA SHEET (INDUSTRIAL ARTS BUILDING)
DIETERICH ENERGY AUDIT

A. GENERAL PARAMETERS

1. Year built - 1974
2. Forced hot air furnace fueled by liquid propane gas
3. Degree heating days - 6500

B. CONDUCTION HEAT LOSS

AREA	COMPOSITE	COEF. OF CONDUCTANCE (U) Btu/hr-ft^2-F	ANNUAL HEAT LOSS (Million Btu)
1. Wall (6480ft^2)	4 inches of insulation	0.077	78
2. Ceiling (8000ft^2)	4 inches of insulation	0.077	96
3. Floor (8000ft^2)	8 inches of concrete	-	30
		ANNUAL CONDUCTION HEAT LOSS	204

C. CONVECTION HEAT LOSS (INFILTRATION)

ITEM	DESCRIPTION	ANNUAL HEAT LOSS (Million Btu)
1. Windows, walls, etc	Volume of infiltrating air equal to a change of 25% of inside air in one hour	101
2. Door openings		60
	ANNUAL CONVECTION HEAT LOSS	161

D. FURNACE LOSSES

1. Flue gas	Furnace assumed to be operating at 70% efficiency, therefore, heat loss to flue gas is equal to 30% of heat consumption	157
	ANNUAL HEAT LOSS	522

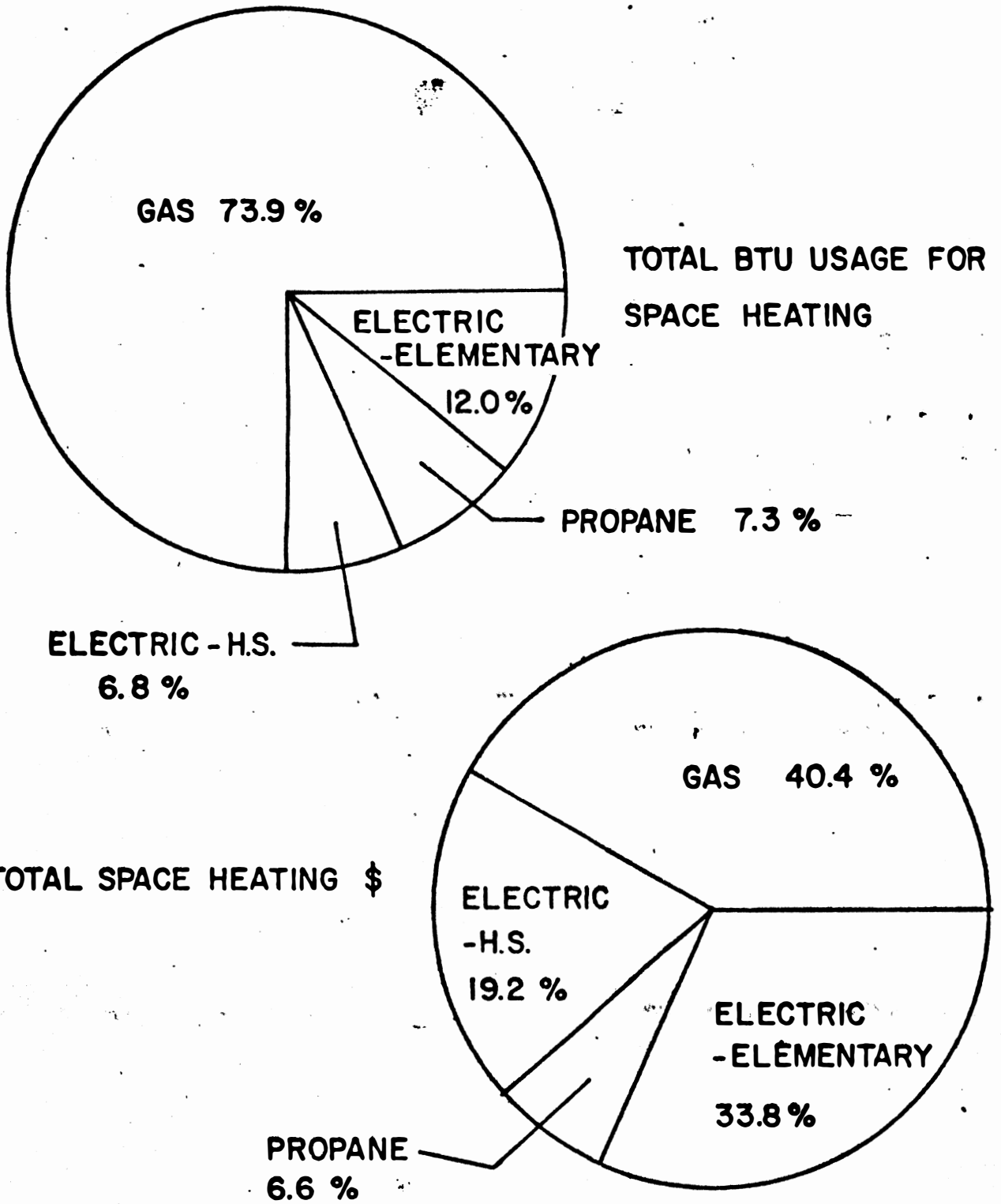
TABLE XII

SUMMARY OF ENERGY CONSERVATION MEASURES
DIETERICH ENERGY AUDIT

		PAYBACK PERIOD(yr)
ELEMENTARY SCHOOL		
1. Conversion of electric to steam heat		2
2. Construction of walkway (elementary to high school)		18
3. Added ceiling insulation		19
HIGH SCHOOL		
1. Improve furnace efficiency		1
2. Roof insulation (high school)		8 to 12
3. Wall insulation (old gymnasium)		11
4. Roof insulation (old gymnasium)		12
5. Insulating window panels		14
6. Recycling of warm air from old gymnasium ceiling		10 to 20
JUNIOR HIGH		
1. Improve furnace efficiency		1
2. Conversion of electric to gas (gymnasium lobby)		2 to 5
3. Vestibule	(electric)	8
	(gas)	40
4. Added ceiling insulation		19
5. Recycling of warm air from new gymnasium ceiling		10 to 20
INDUSTRIAL ARTS BUILDING		
1. Improve furnace efficiency		1
2. Install automatic thermostat setbacks		1
3. Construction of walkway (Industrial arts building to gymnasium lobby)		20
4. Added ceiling insulation		22
5. Added wall insulation		23

A P P E N D I X B

ENERGY AUDIT: GRAPHIC DATA



FIGURE

PERCENTAGE OF BTU USAGE AND COSTS BY FUEL TYPE

DIETERICH ENERGY AUDIT

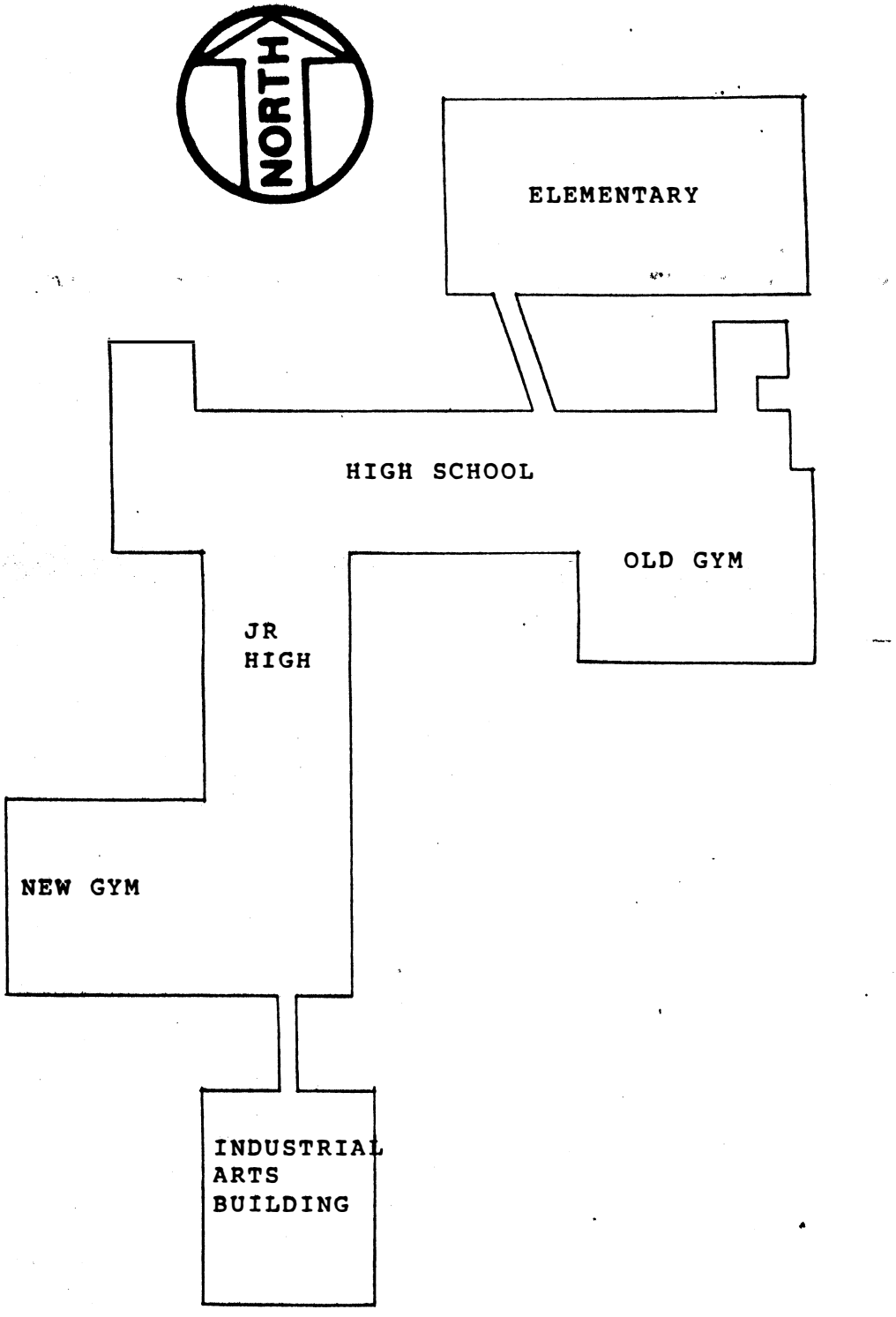
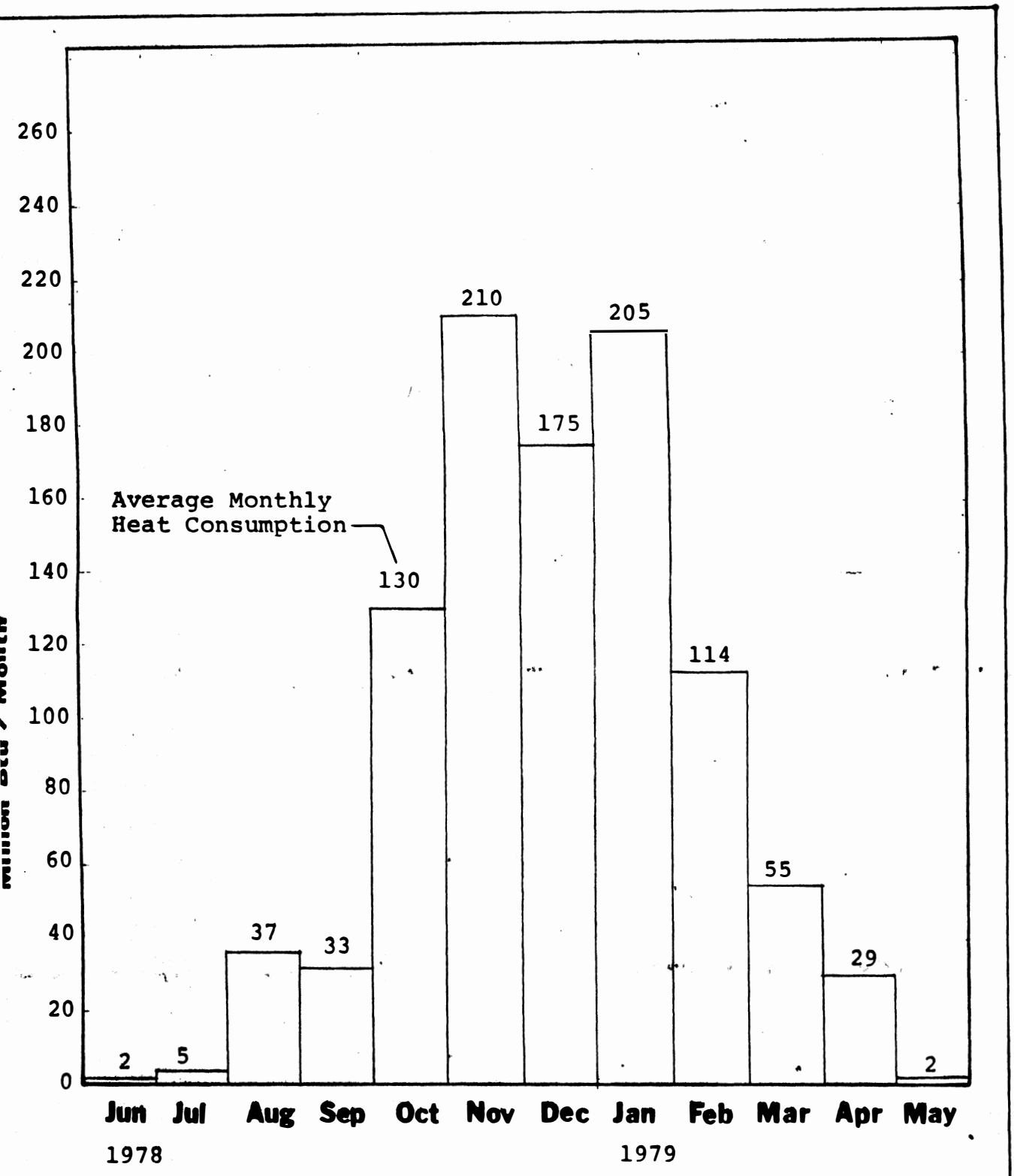


FIGURE 1

DIETERICH COMMUNITY SCHOOLS

BUILDING DIAGRAM



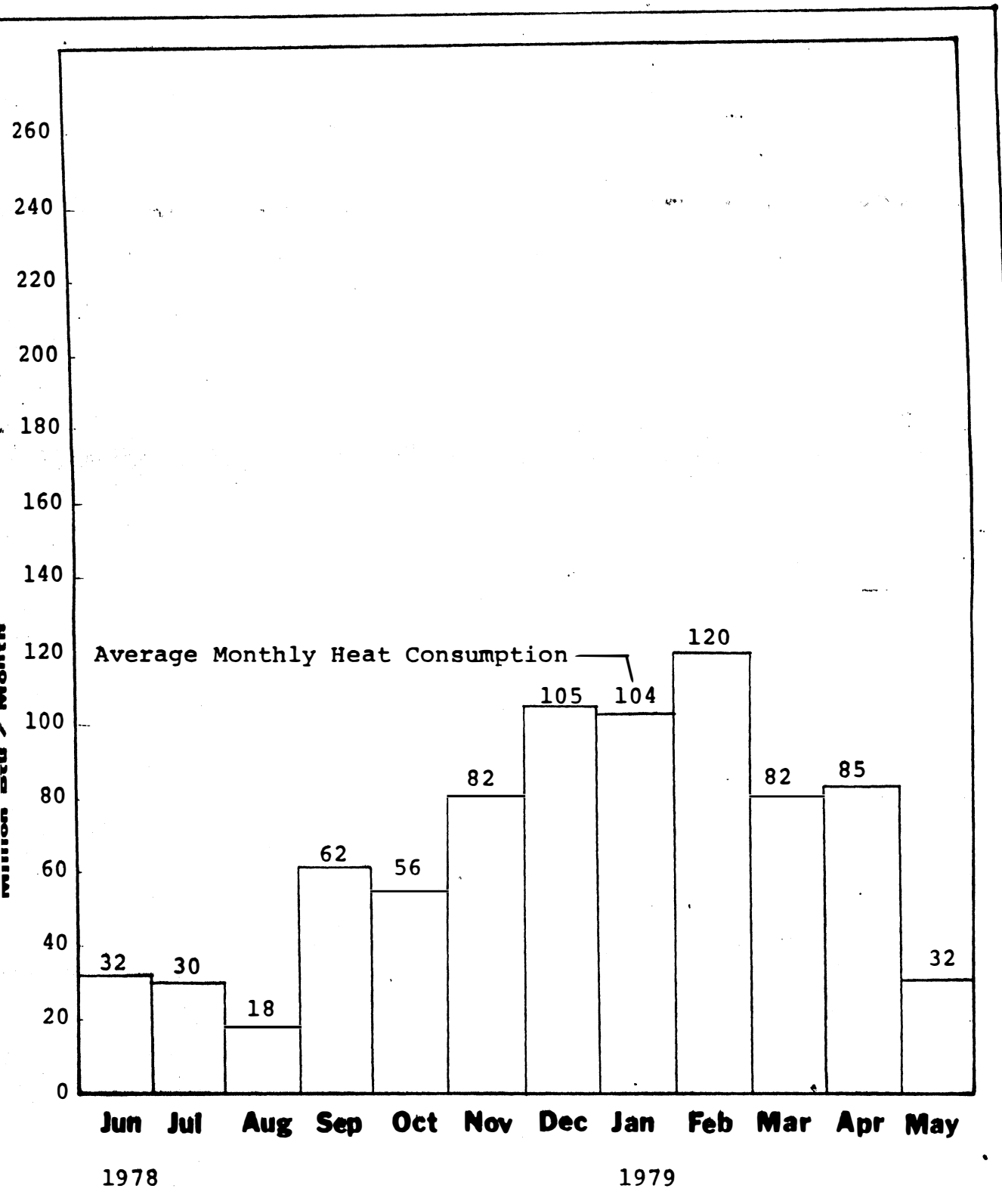
TOTALS

Space Heat	860 Million Btu
Air Conditioning	46 Million Btu
Lighting, etc	91 Million Btu

FIGURE 2

MONTHLY ENERGY USAGE
ELEMENTARY (ELECTRIC)

DIETERICH ENERGY AUDIT



TOTALS

Space Heat	488 Million Btu
Air Conditioning	128 Million Btu
Lighting, etc	192 Million Btu

FIGURE 3

MONTHLY ENERGY USAGE

GYMNASIUM LOBBY (ELECTRIC)

DIETERICH ENERGY AUDIT

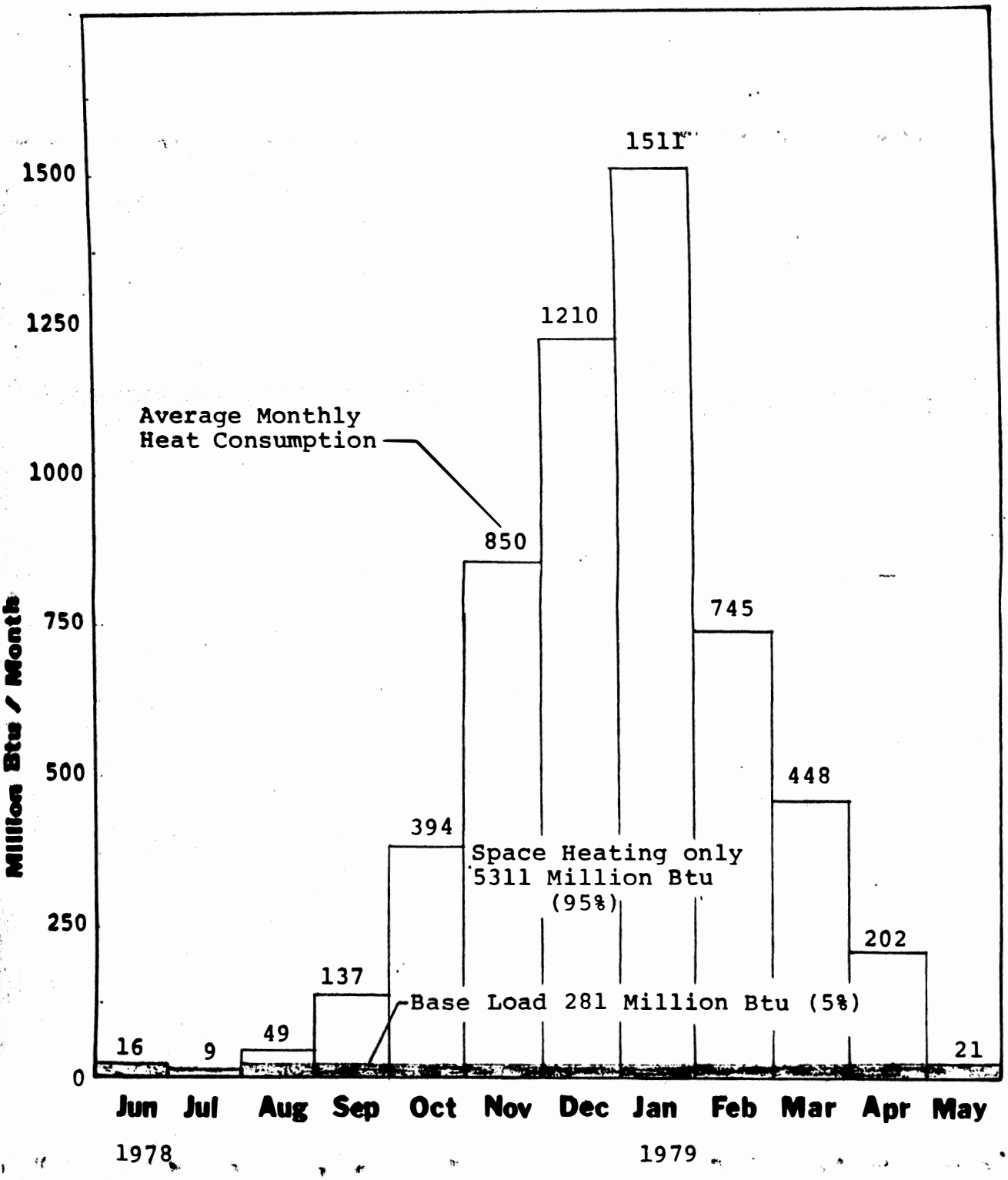


FIGURE 4
MONTHLY ENERGY USAGE
NATURAL GAS

DIETERICH ENERGY AUDIT

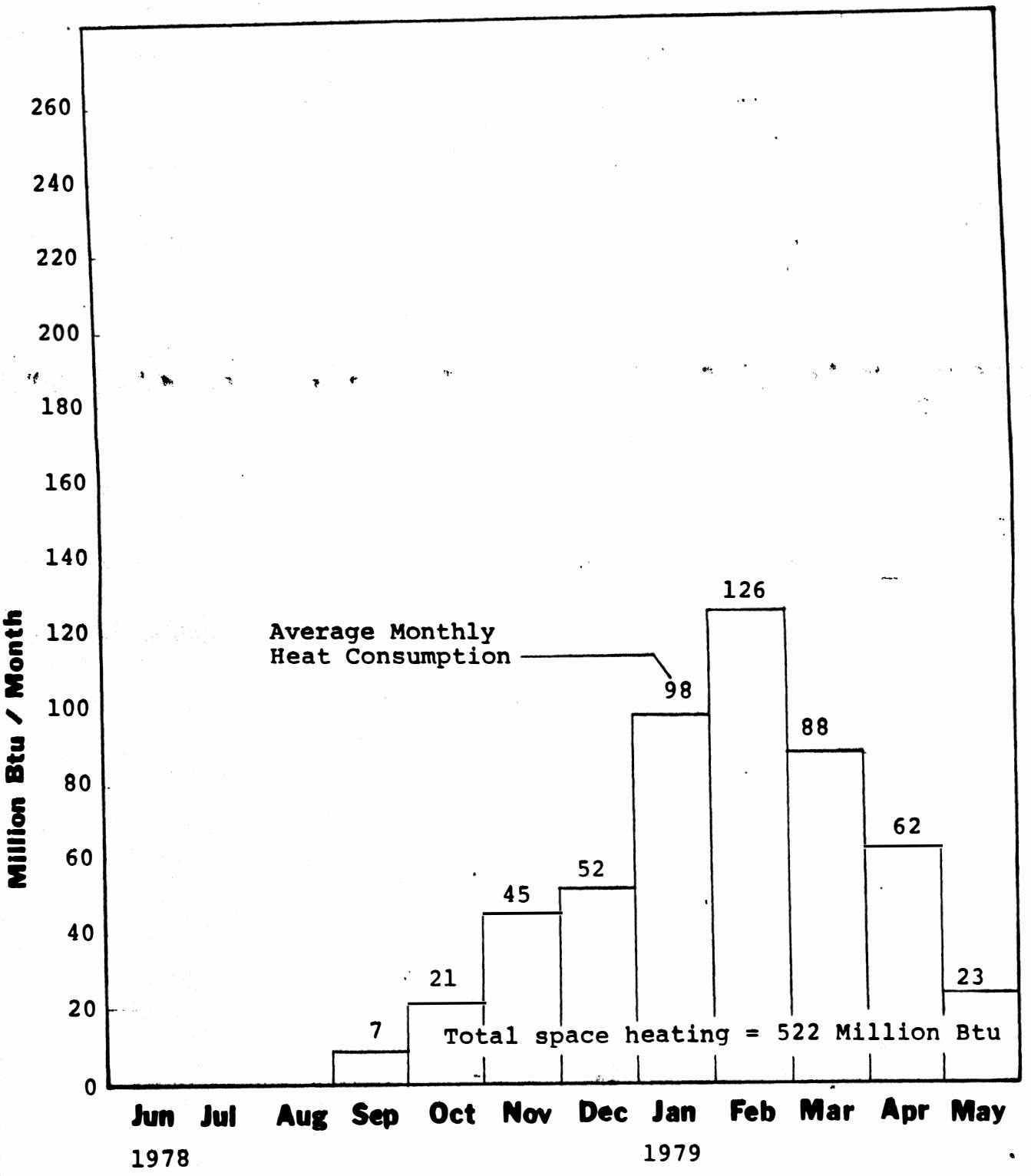


FIGURE 5

MONTHLY ENERGY USAGE

INDUSTRIAL ARTS (PROPANE)

DIETERICH ENERGY AUDIT