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Business Administration

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1968
A CRITICAL EXAMINATION OF EXISTING REAL ESTATE TAXATION VALUATION PROCEDURES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Robert Jerry Weiler, B.S., M.A.

* * * * * *

The Ohio State University
1968

Approved by

Adviser
Department of Business Organization
ACKNOWLEDGMENT

I wish to thank the independent real estate appraisers who have generously given of their time in assisting with the empirical study. Although it sounds trite, this paper could not have been completed without their full assistance. I mention by name those men who were given four to seven parcels to appraise and fulfilled my request in a most cooperative manner: Roy Boyd, John Garvin, Mario Gelonese, Donald Hambleton, Donald Kelley, Thomas Kohr, George Little, Anthony Mollica, Cecil Neff, Jean Poisson, James Powers, Richard Royer, Charles Rowland, Gary Seckel, and James Smith.

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appreciation. For typing the rough drafts and the final manuscript and helping with the secretarial work, my thanks go to Barbara Hart and Wanda Nelms.
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April 22, 1935 Born - Columbus, Ohio

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CHAPTER I

INTRODUCTION

The assertion has been frequently made that real estate located in the downtown areas of cities is excessively appraised for taxation purposes. The implication is that the appraised value of downtown properties is proportionately higher in relation to market value than properties located in the outlying areas of the city and in the county. These views might be dismissed as being biased statements of those who have an interest in properties in the downtown area. However, this writer felt intuitively that real differences may exist between assessments on properties located in the downtown area compared with properties in other sections of the metropolitan area. Some of the sources of this feeling are identified below:

1. The Robert Weiler Company has recently been involved in the sale of downtown properties which were
arm's length transactions at prices substantially less than the assessor's so-called true values. In contrast, sales of commercial and light industrial properties in outlying areas in which The Robert Weiler Company had participated were generally at prices well in excess of the assessor's true value. From these few situations there was the suggestion that the downtown properties were over assessed.

2. During the past several years many commercial buildings in the downtown area have been razed. Several of these parcels have since been improved with high rise office buildings, new banking facilities, retail stores, medical buildings, and parking lots. One large section of the downtown Columbus area has recently been completely razed and redeveloped in an entire new urban renewal complex. Buildings which were razed were on the real estate tax duplicate for a considerable amount. Although physically not totally deteriorated, many of the buildings were functionally and economically worthless.

3. The downtown buildings are typically much older than the commercial and industrial buildings in the
Therefore, it is likely that the older commercial and industrial buildings in the downtown area have experienced a greater amount of functional and economic obsolescence than the newer structures in outlying areas.

4. The real estate assessor normally uses the cost approach in estimating the market value for tax purposes. One of the steps in the cost approach requires an estimate of the depreciation which has taken place on the building. If the appraiser relies on this method in estimating a property's value for tax purposes, he may tend to underestimate the functional and economic elements of depreciation which are not so readily identified as the physical deterioration. This difficulty is compounded with the use of less experienced appraisers. The result may be a higher appraised value for the downtown properties which frequently are in excess of 50 years of age, have experienced drastic functional and economic obsolescence, but remain physically sound.

The reasons stated above lend support to the suggestion that inequities might exist between the
appraised values for taxation purposes of commercial and light industrial properties located in the downtown area compared with properties in outlying sections of the metropolitan area. The null hypothesis tested statistically in Chapter V is that there is no differences between the ratios of assessed value to market value in the downtown area and outlying areas.

The following is a brief summary of this dissertation. In Chapter II, background information is supplied on the method of real estate valuation for taxation purposes. Included in this chapter is the financial significance of the property tax and a brief discussion of the benefits versus ability to pay theories. In Chapter III, economic conditions currently prevailing in the City of Columbus and Franklin County, Ohio are discussed. In this chapter the appraisal methods for assessment purposes that are applicable to Franklin County are presented. Much information was provided by Mr. Ralph Bare, Assistant Production Manager of Cole-Layer-Trumble Company which is responsible for the valuing of real estate for assessment purposes in Franklin County.
Chapter IV outlines the difficulties and limitations that exist in valuing real property for assessment purposes. The three basic methods to value, the cost, income, and market approaches, are reviewed in depth. One of the basic limitations of the cost approach involves its application to older structures which are no longer in demand for their original use. In many instances, it becomes difficult, if indeed possible at all, to employ the cost approach. The advantages of the income and market approaches follow the discussion on the cost approach.

The hypothesis of this dissertation was tested statistically in Chapter V. One hundred properties zoned commercial or light industrial were selected at random from the City of Columbus and Franklin County. Each of these properties was appraised by one of 15 independent real estate appraisers in an effort to estimate the market value. The market value estimates were then compared with the true value estimates for the individual parcels. The 15 people who assisted in the estimate of market value are regarded by this writer as the most competent real estate appraisers in
Columbus and their valuations are considered to be an accurate value estimate within a range of 10 percent.

Two statistical tests were applied to the ratios of true value to market value. In these tests the level of confidence exceeded 99 per cent for rejecting the null hypothesis. The conclusion from these two tests is that the properties situated in the Columbus, Ohio, downtown area are probably valued for taxation purposes at a higher true value to market value ratio than properties located outside the downtown area.

Chapter VI is, in part, a reconciliation of the results found in the empirical test. The alternative approaches to value, namely the income and market approaches, appear to be better guides to value for commercial and light industrial real estate. The case for the income approach was demonstrated and also a discussion of the favorable legislation for implementing the market approach was considered.

Chapter VII provides suggestions of areas for future research on the subject of real property valuation procedures for taxation purposes. Included in
this chapter is a discussion of the need for similar studies in other metropolitan areas. Also advocated is the requirement that professional appraisal standards for real estate assessors be upgraded.

The final chapter is the conclusion and summary. The major conclusion of this dissertation is that property located in the downtown area is probably appraised for real estate tax purposes at a higher value in relation to market value than properties located in other parts of the metropolitan area. The reason for this over assessment may be due to either the inherent difficulties of the cost approach in appraising older, income producing properties, or the lack of appraising competence by the real estate assessor.
CHAPTER II

HISTORY OF THE METHOD OF REAL ESTATE EVALUATION FOR TAXATION PURPOSES

At first, property taxes in the United States were imposed upon selected types of properties, and the amount of tax was often based upon arbitrary schedules of property values. Different rates applied to the various types of properties.¹ Taxation by this method had the advantage of being easy and convenient to administer. While all types of land uses were regarded as equally valuable, this technique proved quite satisfactory.²

When Ohio became a state, its income was derived mainly from the classified land tax. Location

²Ibid.
of land was not a factor in estimating its value for assessment purposes. The value was based upon three grades of soil quality. Since agricultural uses were the major commitment of real estate, this valuation procedure applied to the degree of agricultural productivity of the land.

During the 1820's, a property's assessed value pertained to both real and personal property. Although personal property was excluded later from the assessed valuation, the amount of revenue generated from the property tax increased drastically during the latter 1800's to the present time.

**Financial Significance of the Property Tax**

The Federal Government derives no revenue from the property tax. Some cities and a great many states have supplemented their revenue from property taxes with other forms of taxation such as the sales tax, business tax, income and payroll tax, etc. Notwithstanding this additional source of financing through taxation, over 50 per cent of all taxes received by state and local governments is obtained from the property tax.
In recent years, the most substantial support for local municipal finances has been derived from the property tax. The fiscal importance of the yield of the property tax is indicated by the fact that collections from that source amounted to about one billion dollars of revenue for the State of Ohio and local governments during the year 1962. The property tax has been the chief source of income for local governments throughout the United States for the last ten years.

This revenue was approximately $102.00 per capita for the State of Ohio in 1962. In this same year, property taxes in Franklin County, Ohio, in which Columbus is located, resulted in $59,031,000.00 of revenue or nearly 80 per cent of all taxes received by the local government.\(^3\)

In Ohio, the property tax is administered by the county. In Franklin County, the rate which applied to the City of Columbus and the various school taxing

\(^3\textit{Ibid.}, \text{ p. 43.}\)
districts within the county are shown on Table 1. Individual rates have with exception increased continuously.

**Benefits Versus Ability to Pay Theories**

The equitable distribution of the cost of government has historically been a difficult problem. Two broad principles have generally been applied to all taxes. These are: the benefit received theory and the ability to pay theory. The property tax is not related directly to the benefits received since every property owner is taxed to pay for those services from which, theoretically at least, everybody within the taxing jurisdiction benefits. To illustrate the point, the major beneficiary of the property tax is the local school district in which the commercial property owner may have little concern.

It might be argued, however, that to the owner of commercial and industrial properties, the benefit of additional services such as police and fire protection are in proportion to the value of the owner's investment.

The amount of real estate tax is determined solely by the value of the real estate. Owners of more valuable
12
Table 1. - 1966 TAX LEVIES, FRANKLIN COUNTY, OHIO
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86.

Count; School
Rate
Rate
C IT Y O F C O L U M B U S ________________ 6.90 27.86
G ra n d v ie w H ts . S . D .................... ............... 6.90 17.00
H a m ilto n S . D ............. ...... ............................... 6.90 19.30
J e f f e r s o n S . D ......... ............... ...... ............... _ 6.90 •26.40
M a d iso n S. D . ........ ........................................ 6.90 *30.30
M if f lin S . D .
.......................... ................... 6.90 27.80
R e y n o ld s b u rg S . D . ......... .......................... 6.90 •33.50
S o u th w e s te rn S . D . .... ............................ 6.90 26.60
U p p e r A r lin g to n S . T». ..
.................... 6.90 32.40
W a s h in g to n S . D ......... .............. ................... . 6.90 29.30
W e s te rv ille S . D ............................................. 6.90 32.70
W o r th in g to n S . D . ..... ....... ........................ 6.90 29.00
C IT Y O F B E X L E Y ____________________ 6.90 30.65
C IT Y O F G R A N D V IE W H E IG H T S ........ 6.90 17.00
C IT Y O F G R O V E C IT Y ........ ...................... 6.90 26.60
C IT Y O F H I L L IA R D ................................... 6.90 30.80
C IT Y O F R E Y N O L D S B U R G ...................... 6.90 •33.50
C IT Y O F U P P E R A R L IN G T O N ...... ...... 6.90 32.40
C IT Y O F W E S T E R V I L L E .............. ............ 6.90 32.70
C IT Y O F W H I T E H A L L ...................... ......... 6.90 •30.80
C IT Y O F W O R T H IN G T O N .......................... 6.90 29.00
B L E N D O N T O W N S H IP .................................... 6.90 32.70
M if f lin S . D ....................................................... 6.90 27.80
P l a i n S . D . ..................................................... 6.90 28.70
M in e rv a P a r k C o rp ......................................... 6.90 32.70
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F R A N K L IN
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........................... 6.90 26.60
Cols. I n d . S . D . ............................................... 6.90 27.86
S e io to -D a rb y S . D ........................................... 6.90 30.80
M a rb le C lif f C o rp .................. ........................ 6.90 17.00
V a lle y v ie w C o rp . ............ .........................
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H A M IL T O N T O W N S H IP ............................... 6.90 19.30
L o c k b o u rn e C o rp ................................................ 6.90 19.30
O b etz C o rp . ..................................................... 6.90 19.30
O b etz C o rp .-M ad iso n S . D ........................... 6.90 •30.30
JA C K S O N T O W N S H IP ................................. 6.90 26.60
U r b a n c r e s t C o rp .........................................
6.90 26.60
L ic k in g H ts . S . D .-L ic k in g C o u n ty __ 6.90 23.55
R e y n o ld s b u rg S . D ........................................... 6.90 •33.50
G a h a n n a C o rp ..................................................... 6.90 •26.40
M A D IS O N T O W N S H IP ............................... 6.90 •30.30
C a n a l W in c h e s te r S . D ..............................
6.90 *23.80
P ic k e r in g to n S . D .- F a irf ie ld C o u n ty .... 6.90 23.50
T e a y s V a lle y S . D .-P ic k a w a y C o u n ty .... 6.90 20.00
C a n a l W in c h e s te r C o rp ................................. 6.90 *23.80
C a n a l W in c h e s te r C o rp .-M a d iso n S . D . 6.90 •30.30
G ro v e p o rt C o rp ................................................. 6.90 *30.30
O b etz C o rp . ......... ....... ................................... 6.90 *30.30
M I F F L I N T O W N S H IP .....................,
6.90 27.80
J e f f e r s o n S . D .................................................... 6.90 *26.40
W e s te rv ille S . D .............................. ............... 6.90 32.70
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N O R W IC H T O W N S H IP ............................... 6.90 30.80
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real estate are most likely in a position better to afford the tax burden. On the surface at least, the property tax would be included under the ability to pay classification although the debate does not end there.

**Need for Appraisal Guidelines for the Real Estate Assessor**

Until the early part of the twentieth century, little, if any, training in appraisal practices was necessary for the valuation of real property. In the mid 1930's the professional assessor's organization known as the National Association of Assessing Officers was formulated. The objectives of this organization were to improve appraisal practices and to upgrade the quality of assessment administration as well as establish the equalization of assessments. Prior to the formation of this organization, the valuation of improved real property for taxation purposes was based entirely upon the cost approach which is an estimate of the value of the land to which is added the replacement cost less depreciation of the improvement. This method of property valuation is in use today in a modified form and has resulted in
considerable criticism as pointed out in Chapter IV of this dissertation.

In Ohio the function of completing the appraisal is undertaken by the County Auditor. In many other states, the assessment is performed by officials acting in ex-officio capacity. The Franklin County Auditor usually appoints deputies to assist him. Assessments are required to be revised every sixth year at which time the entire county is appraised. Frequently the County Auditor makes revisions to the appraisal reports in intervening years.

Authority of the County Board of Revision

The County Auditor, Treasurer, and President of the County Commissioners constitute a County Board of Revision. This Board has the power to review and revise the value as determined by the appraisal company, both on complaint and on its own motion. Appeals from its decision may be taken to the State Tax Commission which also serves the function of standardizing individual property valuations. This equalization of standardizing property valuations extends in scope to adjustments as among cities and
villages by statutes, and is limited in practice to changes in county aggregates.\textsuperscript{4}

\textsuperscript{4} Throckmorton's Annotated Code of Ohio, 1930, and Supplements, sec. 5613. Letter from Mr. Quincy A. Davis, Chairman of the Ohio Tax Commission, under date of June 13, 1934.
CHAPTER III

FRANKLIN COUNTY REAL ESTATE TAX SITUATION

Franklin County, which includes the City of Columbus and many suburbs, is situated near the center of the State of Ohio. Columbus is the largest city in Ohio, area-wise, and second only to Cleveland in population. Over the past decade the city has experienced an aggressive annexation program which has greatly reduced the unincorporated area remaining in Franklin County. Most of the properties that have not been annexed, although in many instances being farmed, possess development potential because of their proximity to the City of Columbus. There remains very little land in the county which is presently selling at farm prices.

Background Information of Columbus

Columbus, the capital of Ohio, enjoys diversification of employment with excellent industrial balance
and governmental occupations. It is the home of the Ohio State University. Columbus is often used as a model city for various facets of research. The empirical test used in this dissertation is being conducted in an area considered well representative of cities in the 500,000 to 1,000,000 population range. The Chamber of Commerce boasts that Columbus is within 550 miles of over one-half the population in the U.S.

Aided by large growing industries within Columbus, the city has experienced an expanding real estate tax base over the years. The population growth over the past decade has been the most rapid of Ohio's major cities and has resulted in increasing property values. Since 1962, seven large office buildings have been constructed in the downtown area, several high rise apartment buildings have been built in the outlying areas, and three major urban renewal projects have been placed under construction.

**Tax Rates in Ohio**

The 1966 Columbus tax rate of 37.30 mills is considerably less than Cleveland's rate and ranks fifth among the largest cities in the state with populations
The State of Ohio has the lowest millage property tax rate of the twelve major industrial states. Columbus' per capita revenue from the property tax and the one per cent income tax of $39.94 is the lowest among the eight largest cities in the state. Dayton's comparable figure of $80.61 is highest among the eight cities, and Cleveland, which has no income tax, has a per capita property tax revenue of $66.90 which is third from the highest.\(^1\)

Selection of Company for Valuation of Real Estate

The Franklin County Auditor selects the company which is to reappraise all properties in the county. Bids from other companies are not required in Franklin County. The Cole-Layer-Trumble Company is a large, well established firm with vast tax appraisal background. Nevertheless, anybody who owns a clipboard can go into the tax appraisal business. Furthermore, many new firms have entered


\(^2\)Ibid, p. 2.
the real estate tax appraisal field throughout Ohio. The auditor in many counties requires little specific educational training or experience in appraisal practices from the firm employed. The company must be capable of completing appraisals on a prescribed form within the time allotted.

**Appraisal Methods Applicable to Franklin County**

Franklin County was recently reappraised for taxation purposes in compliance with the requirement to value all real estate in the county every six years. When a major zoning change has taken place or there has been a drastic change in the character of a neighborhood, the county auditor may, at his discretion, request a re-appraisal of an area in any given year. The Cole-Layer-Trumble Company, 1472 Grandview Avenue, Columbus, Ohio, whose employment has extended to nearly all Ohio counties and into over twenty states throughout the country, was responsible for the reappraisal of Franklin County and their tax valuations are being used in the sample of 100 properties analyzed in Chapter V.

In addition to the six year reappraisal assignment, the Cole-Layer-Trumble Company values annually all
newly constructed properties that are commercial, residential of four families or more, and industrial. New single family dwellings and less-than-four apartment units are appraised by the Franklin County auditor's staff. In 1963 there were a total of 10,000 improved commercial parcels out of 227,000 parcels in Franklin County.

An interview with Mr. Ralph Bare, Assistant Production Manager of Cole-Layer-Trumble Company, disclosed the following approaches used by his company for the valuing of real estate for assessment purposes. The three approaches to value, the market approach, the replacement cost less depreciation approach, and the income approach are used when considering commercial income producing properties. Pertinent data for these approaches are often obtained from management companies, Realtors, and property owners. Two of the approaches, cost and income, are completed on forms similar to the one shown in Table 2.

Mr. Bare indicated that the appraisal for assessment purposes is based upon the existing land use without regard for anticipated usage of the land. When rural property is bought for an amount in excess of farm prices, these sales are disregarded. The result is that many
### TABLE 2

**SAMPLE FORM - COST AND INCOME APPROACHES**

<table>
<thead>
<tr>
<th>PROPERTY COST DATA</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Characteristic</td>
<td>Cost to Repair</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Use</td>
<td>Building Material</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease Data</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Statement Fiscal Year Ending</td>
<td></td>
</tr>
<tr>
<td>Building Name</td>
<td>Tax District</td>
</tr>
<tr>
<td>Address</td>
<td>Map Number</td>
</tr>
<tr>
<td>Parcel Number</td>
<td>Lot Number</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROSS INCOME</th>
<th>BUILDING OPERATING EXPENSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Floor Tenants</td>
<td>-</td>
</tr>
<tr>
<td>Annual Rent</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
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<tr>
<td></td>
<td>-</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>INCOME</th>
<th>EXPENSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Income</td>
<td>-</td>
</tr>
<tr>
<td>Other Income</td>
<td>-</td>
</tr>
<tr>
<td>Total Income</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

**PLEASE DO NOT WRITE IN SPACE BELOW - FOR APPRAISER'S USE ONLY**
unimproved properties in outlying areas are on the tax duplicate at only a small fraction of their sale price.

**Appraisal of Rural Properties**

Farm assessed valuation was considerably less than the individual sales prices as early as 1920 according to a study conducted by Whitney Coombs. He noted that special investigations have been made to determine the relation between the assessed value and sales values of farm property. A major consideration for the possibility of assessed values being considerably lower than sales price is that the past or current income of farm property is less than an adequate return on the sale price. Therefore the property has failed to generate income to justify the price paid. Land which has speculative value or potential use other than farming, yet which is utilized at the time of tax valuation for agricultural purposes, will necessarily indicate a lower market value if the income approach is applied to past or present income streams.

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The problem of valuing farm land based upon its income potential without regard to other uses has resulted in considerable discussion and legislation.

Mr. John H. Keith, Chief of the Division of Assessment Standards, California Board of Equalization, in an article in *The Appraisal Journal*, discussed the provisions of the Assembly Constitutional Amendment 4 passed in the 1961 session of the California Legislature regarding the increasing taxes on land used for farming purposes. In Mr. Keith's opinion, the provisions are in the sole interest of the farmers who can not retain their farms when demands for higher uses encroach on their farm property.

The provisions of the Assembly Constitutional Amendment 4 are the following:

1. That special treatment be given property used exclusively for agricultural purposes.

2. That it be so used for two successive years prior to the lien date of the year for which special treatment is to begin.

3. That in assessing agricultural land the assessor shall consider no factors other than those relating to such use.

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4. That the fee simple owner must make application for special treatment in writing.

5. That the assessor, after considering these factors, determines whether or not it meets the requirements of exclusively agricultural use.

6. That it remains under the provisions of the amendment for special treatment until there is a new application from the fee owner or an actual change in use.

7. That if diverted to some other use the owner or purchaser must pay back taxes for a period not to exceed seven years for such special consideration as it may have had.

8. That the legislature is to provide by statute for the collection and distribution of additional taxes and interest.

9. That the amendment is only operative for a county after the county board of supervisors has passed an ordinance providing therefor, and in a city where the city council has provided for such special treatment by ordinance.\(^5\)

Mr. Keith writes that frequently the assessor has been blamed for increases in a farmer's land taxes which force the property owner to sell. The major effect of the Constitutional Amendment, which is stressed by Mr. Keith, is the public's willingness to pay an amount which exceeds

\(^5\text{Ibid, pp. 392, 393.}\)
farm prices is the reason for the increase in taxes, not
the assessor's valuation, per se. The assessor is fol-
lowing the market and reporting the increase in value in
an effort to equalize assessment according to the valua-
tion of the property.

Valuation of Economically Worthless Improve-
ments - The Misimprovement Factor

The rules and regulations of the Board of Tax
Appeals require that replacement value, less depreciation,
be used on all improved properties. A dollar assignment
is recommended for all buildings, even those improvements
which are not contributing to the land value. The result
is identified as a misimprovement. A misimprovement
factor is applicable for valuing property when the total
value is represented by the land. An amount is placed on
the tax duplicate for building and an equal amount is de-
ducted from the land value so that the total value of the
property is consistent with neighboring vacant properties.
A misimprovement factor is, therefore, a penalty placed on
the land to satisfy the requirement of assigning a value
for buildings which have physical remaining life, but do
not possess economic utility.
The purposes for the misimprovement factor are (1) buildings that are a hazard should be demolished. By having a dollar amount assigned to the structure, the property owner is often encouraged to raze the improvement to avoid the taxation on the worthless structure.

(2) Whenever a property owner razes his building, he immediately feels he is entitled to, and expects a reduction in his taxes. This reduction can be effected on a temporary basis. The land value may be increased in later years, but there is, at present, an immediate short term relief.

Complaint Procedure

If an owner in Franklin County is dissatisfied with his property's assessed valuation, he may register a formal complaint in the auditor's office on a prescribed form. A completed request for reduction of taxes appears in Table 3. This form must be submitted during the first half of the tax collection year. After the form is signed by the property owner, and notarized, it is filed with the Franklin County auditor. The property owner is advised of the time at which his case will be heard before the county board of revision, which is
TABLE 3

SAMPLE - REQUEST FOR REDUCTION OF TAXES

NOTICE: Please read instructions on the other side before filling out this complaint.

COMPLAINT AS TO THE ASSESSMENT OF REAL PROPERTY

Complainant: Martin, L. & Betty Licklieman, Attorney or Agent for Complainant, if any
Address: 416 South 8th Street, Suite 150
City: Columbus
Telephone: 221-4286

TO THE FRANKLIN COUNTY BOARD OF REVISION:

TAX YEAR 19-68

COMPLAINT respectfully represents

That the Real Property described below, situated in Franklin County and taxing district thereof is entered on the tax list for the current year in the name of Louise Carroll.

<table>
<thead>
<tr>
<th>PRIMARY</th>
<th>PARCEL NO.</th>
<th>ORIGINAL</th>
<th>USD OF</th>
<th>Taxable</th>
<th>LAND</th>
<th>BUILDING</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5022</td>
<td></td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
</tr>
</tbody>
</table>

Last Year's Assessed Value

- Land: $6,770
- Building: $140,000
- Total: $147,770

Current Assessed Value

- Land: $6,770
- Building: $140,900
- Total: $147,670

Taxable Value Claimed

- Land: $6,770
- Building: $68,230
- Total: $75,000

Decrease Asked

- Land: $0
- Building: $72,670
- Total: $72,670

PARTICULARS

PROPERTY PURCHASED (date): 2/25/67

Purchased from: Leon, Alvin, Jerome

If sale involved a trade, give full details on separate sheet such as location, mortgage, insurance, rents and type of traded property.

MORTGAGES:

Original amount of Mortgage: $140,000

Did you make application for a FHA insurance loan? Yes

What did you represent the property to be worth in your application? $140,000

If application granted, what is the amount of loan? $140,000

OTHER MORTGAGES:

I. DESCRIPTION OF EXPLANATION OF DEDUCTION FOR DEPRECIATION CLAIMED

2/25/67

If the property is income producing, attach a statement of income and expense for each of the past years up to five years that the property was so used. Complainants should also submit a copy of the latest Federal Income Tax Statement.

OTHER FACTS:

June-Dec. 1963, sold for $25,000, in

SIGNED AND ACKNOWLEDGED IN PRESENCE OF:

(Signed)

Sworn to and subscribed in my presence this 22nd day of December, 1967
comprised of the County Auditor, County Treasurer, and Chairman of the County Commissioners. The property owner may enter any evidence accompanied by professional opinion including legal advice, if needed, at the time of the hearing. If Cole-Layer-Trumble Company made the appraisal of the property in question, a representative will attend this hearing. Shortly after the hearing, the property owner is notified of the board's decision. If the property owner is dissatisfied with the outcome, he may then take the case to the County Board of Tax Appeals or into Common Pleas Court.
CHAPTER V

DIFFICULTIES AND LIMITATIONS OF PRESENT METHOD OF VALUING REAL PROPERTY FOR ASSESSMENT PURPOSES

Educational Requirements of the Assessor

Real estate assessment techniques have drawn criticism for many years. In the 1930's, Walter W. Pollock, President of The Manufacturer's Appraisal Company, wrote:

The prevailing inequity in assessments of real estate is due primarily to confusion of thought as to concepts of value; and in the second place the failure of the law to require assessors to use systematic processes of appraisal, which would record for each real estate property the value due to each element or factor of value — under which the value of the whole property would be shown to be the sum of the values of all its value-elements. Of course, some of the assessment shortcomings are the result of placing nontechnical assessors in office, and some to conscious favoritism.¹

Part of the above criticism might not be accurate in 1968. There has been in recent years the establishment of the professional designation of Certified Assessment Evaluator or CAE. In order to obtain this designation, the assessor or appraiser must have certain education and experience qualifications in addition to passing an examination and submitting appraisals showing his appraisal skills and ability. Nevertheless, this professional training is much less extensive than the requirements for obtaining the Senior Residential Appraiser designation or for the designation of the American Institute of Real Estate Appraisers known as the "M.A.I."

**Need for Certification of Appraiser**

In a number of states, there is legislation in process for the certification of tax assessors with substantial help from leading professional assessors. Tennessee and New Jersey passed certification laws in 1967 and California enacted a bill in 1966. At the present time, hearings are underway in Michigan to
accomplish the general upgrading of assessment practices in the state.

One main reason for this interest for certification is due to the model property tax administration law which was recommended to the states last year by the Advisory Commission on Intergovernmental Relations. This bill places the responsibility for assessment supervision and equalizations, assessment of all state assessed property, and valuation research into the hands of one state agency.2

**Purpose of the Appraisal Report**

Clarification is necessary with regard to the purpose of the assessment. The overwhelming majority of authors on this subject indicate that the purpose of the assessor's appraisal is to estimate fair market value. The definition of market value according to the National Association of Assessing Officers' Terminology

Handbook is

The amount of money or monies worth for which goods or services may be exchanged within a reasonable period of time under conditions in which both parties to the exchange are able, willing, and reasonably well informed.  

This definition is similar to the definition of market value defined by The American Institute of Real Estate Appraisers

The highest price estimated in terms of money which a property will bring if exposed for sale in the open market allowing a reasonable time to find a purchaser who buys with knowledge of all uses to which it is adapted and for which it is capable of being used.

To estimate market value, there are three widely known and generally accepted approaches to value. These approaches are known as the cost, income, and market data methods and are used in the assessment of real estate appraisals. Emphasis is given the first approach.

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**The Cost Approach**

Utilization of the cost approach requires the estimate of the current cost of reproducing the improvement less the depreciation from all sources. To this depreciated value of the building is added the land value. The reproduction cost of the structures assumes the use of the same materials which were in the original construction. Since many materials used years ago are no longer available, new products have been introduced. The use of the reproduction cost method has become less prevalent. As an alternative, the real estate assessor has relied upon replacement cost which requires an estimate for the cost of replacing the building under appraisement with a new building of equal utility.

**Advantages of the cost approach.**

1. The cost approach to value is particularly desirable when estimating the value of land having new improvements. Typical buyers will consider purchasing a vacant lot and building the improvement before paying a price which exceeds the replacement cost of the land and building under consideration. New structures have no physical depreciation and frequently little functional or economic
obsolescence thus eliminating the most difficult portion of the appraisal process.

2. It is the only approach to value which requires a separate value for land prior to arriving at the total property value. In the assessment principles report prepared by the National Association of Assessing Officers, it is a requirement that land and improvements be valued separately for property tax purposes.\(^5\)

3. Current building cost and trend information are published by several sources, helping to reduce the appraisal to a mathematical process. The initial step in the appraisal of improvements is the establishment of approximate building costs. Therefore the approach offers a convenient application of empirical data in arriving at the final value estimate.

4. The cost approach is the easiest of the methods to explain to the public. People are familiar with the terminology associated with this approach. In the case of a

new building being appraised, the owner frequently knows precisely his total investment and is familiar with land values.

Disadvantages of the cost approach. --

1. The difficulty in valuing improvements arises from great variety in building design, construction materials and qualities of construction, and also from the different ages of the individual buildings. The appraiser when valuing the improvements is confronted with numerous building designs, an assortment of construction materials of which many may become irreplaceable in time. The relatively long life of such buildings and the depreciation problems which result therefrom produce additional appraisal problems. 6

2. Depreciation represents a loss of value from deterioration or obsolescence and requires great skill to determine precisely. Frequently, older buildings are situated in neighborhoods which have undergone considerable change since the date of the original construction.

To arrive at an exact dollar amount of depreciation from physical, functional and economic obsolescence requires nearly super-human judgment.

3. Land for all practical purposes is not reproducible. Therefore the land appraisal for taxation purposes is made by means of comparison with parcels whose market values have been ascertained by recent sales. In older neighborhoods where the land is 90 to 100 per cent improved, vacant land sales comparable to the subject lot may be few and far between. Using the market approach to estimate the land may be a more difficult assignment than using this approach to estimate the total land and building valuation when numerous similar buildings are in the same general neighborhood.

4. Separating land and building estimates presents another problem encountered when the land is not being improved to its highest and best use. Suppose, for example, a single family dwelling is situated on land zoned for commercial purposes. Assume that the total value of the property is no greater than the value of the land if it were vacant. In such a situation, the dwelling is contributing nothing to the value of the land. The dilemma
is whether to value the land as a residential lot to which is added the value of the improvement, or to appraise the land as a commercial lot without any additional contribution for the dwelling. In the latter situation, there would be uniformity in land values, yet a considerable amount of functional and economic obsolescence may occur to any dwelling as an improper improvement to the subject's site. One of the foremost authorities in the valuation of real estate, Dr. Richard Ratcliff, contends that once the real estate is improved, it is no longer possible to separate the contribution of land and building.\textsuperscript{7} The two are wed into one value based on the utility of the property. The responsibility remains for the county assessor to value separately the land and building.

\textbf{The Income Approach}

The income approach to market value is based on the concept of value being equal to the present worth of all future benefits. The income approach to value requires an estimate of the income which a property is capable of

generating. This income stream is capitalized into a value estimate by using a rate which reflects the property return that buyers, in the market, are requiring on their investment. Any investment type real estate which is capable of producing an income stream can be appraised by the income approach.

A definition assigned to the income approach to value of rental properties is:

The value of the parcel is equal to the present worth of all future net benefits or the present worth of future rights to receive income.®

Mr. Donald H. Graham's article concerning the valuation of income property in the Appraisal Journal® emphasizes the advantage of the income approach for valuing rental property. Mr. Graham points out that the replacement method might be satisfactory for a special purpose type of building such as a museum, school or church. The

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replacement costs, according to Mr. Graham, are not reliable for an appraisal of a shopping center or other income producing properties. Value, he wrote:

is not the price that the developer of the shopping center paid nor is it the total cost of the brick and mortar that go into the center. Rather, the income the center is producing is the primary determinant of the property's market value. The assessed valuation of the center should be equal to the valuation put on the center by a buyer or the fair market value estimate of a mortgage lender.10

Land valuation. -- One of the most difficult tasks of the assessor is the valuation of vacant land. One of the principal characteristics of land is location and this is not subject to duplication. Two parcels may be very similar as to soil, contour, shape, or accessibility to main highways, but seldom are these factors found in the same combination in any two parcels. Thus, even if the value of a unit of land could be established by sales or otherwise, it is a precarious practice to carry this value over to other land areas. Furthermore, sales of real property occur much less frequently than sales of goods

10 Ibid., p. 7
which are freely reproducible so that the opportunity for establishing unit values by this means is somewhat limited. Sale prices are a useful guide to the market value of properties of similar classification, provided they are reasonably representative, but in the instance of some types of real property, sales are not only infrequent but also are not representative. For still other classes of properties which are considered to be of special purpose types, there is virtually no market. Because market values are not static and because objective valuation procedures must be supplemented to some extent by the assessor's judgment, the attainment of absolute equality of assessment throughout an assessment district may be unattainable.

**Market value vs. sales price.** -- Perhaps part of the confusion over an accurate estimate of value for assessment purposes arises from the lack of a definitional framework distinguishing market value from sales price. Sales price is the actual consideration, generally in dollars, for which a parcel is sold. Sales price, the result of negotiations between an individual buyer and seller, will greatly vary depending upon the anxiety of either party to buy or sell, their knowledge of real estate values, and
their reasons for completing the transaction. Market value, on the other hand, is that price which the property should bring after adequate exposure on the open market. It assumes a knowledgeable buyer and seller, and with both parties ready, willing and able but not compelled to transact. The dangers of accepting comparable sales prices without investigation of the compelling factors involved are evident.

**The highest and best use.** -- Much has been written on the importance of estimating the highest and best use to which the property may be put. This has been defined as

The most profitable likely use to which a property can be put. The opinion of such use may be based on the highest and most profitable continuous use to which the property is adapted and needed, or likely to be in demand in the reasonably near future. However, elements affecting value which depend upon events or a combination of occurrences which, while within the realm of possibility, are not fairly shown to be reasonably probable, should be excluded from consideration. Also, if the intended use is dependent on an uncertain act of another person, the intention cannot be considered.

That use of land which may reasonably be expected to produce the greatest net return to land
over a given period of time. That legal use which will yield to land the highest present value. Sometimes called optimum use.\textsuperscript{11}

One of the foremost authorities in real estate valuation, Mr. F. M. Babcock, stated in \textit{The Valuation of Real Estate}

An estimate of value of a property is of no significance whatsoever in the absence of a described specific plan or program for the utilization of property. Even an estimate of the value of vacant land is meaningless unless it is the valuator's estimate subject to a specific use.\textsuperscript{12}

This statement emphasizes the importance of determining the best use for a property prior to estimating its value. The assessor's determination of market value is relatively easy for those types of real property that have a well defined use, particularly special purpose type property. Service stations, churches, bowling alleys, breweries, and greenhouses are examples of properties which are difficult to convert to any use other than the one for which it was originally intended. The major limitation of the cost


approach on older properties is that the use for which the property was originally constructed may no longer be the highest and best use. The appraiser must then consider remodeling costs and other expenditures necessary to maximize the net income potential of the property under appraisement. 13

The Market Approach

The market data approach, also known as the comparable data method, is used when there are many recent sales of properties similar to the subject. Properties which have sold are compared with the subject property and adjustments are made for the dissimilarities. The economic principle is that a well informed buyer will not pay more for a property than it would cost to obtain an equally desirable substitute.

In a market area where there are many similarly improved properties, this approach is easy to apply. The fewer adjustments that are necessary, the greater degree of accuracy from the use of this approach. The major

drawback occurs when there are few sales of properties similar to the one under appraisement and substantial adjustments are then necessary.

**Variances from Assessment at Full Value**

In most of the states the assessment practice bears little resemblance to the legal requirements which contemplate the assessment at full value. Assessments throughout the country were disclosed by the Census Bureau's Assessment Ratio Study for the 1957 Census of Government. This study revealed that the assessed value of real property in the United States approximated only 30 per cent of the market value of property with the level of individual states ranging from as low as 7 per cent of market value.

**Definition of Terms**

Throughout this dissertation, the term assessed value is considered that amount for which a given parcel is on the tax duplicate. This is a percentage of the

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appraised value for taxation purposes, which is considered to be the true value. The assessor's true value corresponds closely to the previously defined definition of market value. The true value concept is being used to be consistent with the terminology applied to the real property appraisals for Franklin County.
CHAPTER V

RATIOS OF TRUE VALUE TO MARKET VALUE
BETWEEN DOWNTOWN AND OUTLYING AREAS

The purpose for this chapter is to present statistically an empirical test of the null hypothesis that there is no difference between the ratios of assessed value to market value in the downtown area and outlying areas. Explained below is the manner in which the geographic areas were selected, a description of the sample with an identification of the 100 properties involved, and a comparison of the market value with the true value for each property.

Two tests, namely the chi square and the Kolmogorov-Smirnov test, were applied to the data and the results are reported in the latter part of this chapter. The results from both statistical analyses indicate, as shown at the end of this chapter, that the null hypothesis is rejected with 99 per cent
confidence. This can be restated in terms of a degree of error of not more than 1 per cent that the two samples, namely properties situated in the downtown area and those outside of this area, came from different populations.

The City of Columbus and Franklin County were divided into nine sections for the purpose of comparing property tax appraisals in geographic areas. The newly constructed Columbus Innerbelt System encircles area number one which is designated as downtown (DT). Routes 71 and 70 are part of the Interstate Highway System, leading in north-south and east-west directions, respectively, through Franklin County and the City of Columbus. These highways have been used to establish boundaries for eight other areas, four of which are located inside the City of Columbus and are designated north (N), south (S), east (E), and west (W). The Franklin County sections are similarly identified as county north (CN), county south (CS), county east (CE), and county west (CW). The last four mentioned areas extend from the City of Columbus corporate line outward to the county limits and are separated by the aforementioned interstate highways. See maps in the Appendix for location of sample parcels.
From these areas, individual parcels were selected from the Franklin County auditor's office. Every property in the City of Columbus is assigned a parcel number, and the auditor's office files all parcels chronologically without separation for zoning. Of the 227,000 parcels listed or recorded approximately 10,000 qualify for the sample, which is concerned with commercial and industrial properties exclusively. From the 10,000 parcels, 2,400 parcels were selected at random. The tax card of each of these properties was examined at the court house to determine its zoning and use. A total of 100 parcels were selected at random and qualified as being:

1. Zoned for commercial or industrial purposes.
2. Improved with a structure being used for commercial or industrial purposes.
3. Developed with a substantial improvement to the land. Commercial land which had only a small garage, shed, or minor structure was not included.
4. Intended originally for commercial or industrial purposes. For example, a dwelling which was converted to a business use was excluded from the sample.
The 100 parcels used in this test and appraised individually appear in Tables 4 through 12. Properties were appraised between August and November, 1967, by 15 appraisers; each appraiser was assigned approximately six or seven properties. An attempt was made to distribute the parcels assigned in such a manner that each appraiser was given at least two and in some cases three or four areas in which to make appraisals.

The 15 independent real estate appraisers were requested to estimate market value as defined on page 32 of this report. All of these real estate appraisers are involved in the appraisal business on a full time basis, and all but one are members or candidates of the American Institute of Real Estate Appraisers. Ten men have the M.A.I. designation. Eleven appraisers are members of the Society of Real Estate Appraisers (including all of those in Columbus holding the designation Senior Real Estate Appraiser), and 13 are founders of the Columbus Chapter
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| DT1   | Owner . . Farm Bureau Mutual Automobile Ins. Co.  
Tenant . Jack's Restaurant, etc.  
Address . 220-222 North High Street |
| DT2   | Owner . . Katherine J. Engle  
Tenant . Vacant  
Address . 266 South High Street |
| DT3   | Owner . . Beacon Mutual Indemnity Company  
Tenant . Beacon Mutual Indemnity Company  
Address . 52 West Gay Street |
| DT4   | Owner . . State Street Medical Clinic, Inc.  
Tenant . Various  
Address . 194-196-196½ East State Street |
| DT5   | Owner . . Mary S. Eagleson, et al  
Tenant . Children's Hospital Thrift Shop  
Address . 260-266 South Fourth Street |
| DT6   | Owner . . The Ohio State Journal Company  
Tenant . Ohio State Bank, WBNS  
Address . 62-64 East Broad Street |
| DT7   | Owner . . Gustave A. Dury  
Tenant . The Fish Bowl Bar and Restaurant  
Address . 313 South Fifth Street |
| DT8   | Owner . . Walter Braun, et al  
Tenant . Braun & Bowman Drug Company  
Address . 80,80½ East Long Street |
| DT9   | Owner . . Hi Rath Realty Company  
Tenant . Troy Laundry and Dry Cleaning  
Address . 213-221 North Third Street |
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| DT10 | Owner . . A. D. Richardson, Jr. and William G. Pace, Jr., Trustees  
Tenant . Federal-Mogul  
Address . 40 South Skidmore |
| DT11 | Owner . . Clara M. Hall  
Tenant . Music Sales and Service  
Address . 108-110 East Main Street |
| DT12 | Owner . . A. M. Corporation  
Tenant . General Electric  
Address . 479 West Broad Street |
| DT13 | Owner . . Thomas G. Neal  
Tenant . Neal Soap and Chemical Company  
Address . 59 West Starling Street |
| DT14 | Owner . . Herbert A. Kanter  
Tenant . Ludlow Beer  
Address . 99 West Rich Street |
| DT15 | Owner . . Myrtle A. Maucer  
Tenant . Lin Chon Hai Company  
Address . 47 West Mound Street |
| DT16 | Owner . . Carl L. and Chloe A. Freshman  
Tenant . Swan Cleaners  
Address . 247-51 South High Street |
| DT17 | Owner . . L.O.R., Inc.  
Tenant . Olson Electronics  
Address . 142 North High Street |
| DT18 | Owner . . Louise K. Shedd, et al  
Tenant . Emerson Radio and Appliances  
Address . 227 North Front Street |
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| DT19 | Owner . . Eve F. Powell and William S. Kimmel, Trustees  
Tenant . Sunbeam Appliances  
Address . 73-77 Spring Street |
| DT20 | Owner . . R & N Realty, Inc.  
Tenant . Miller & Davis Electric Company  
Address . 158 North Fourth Street |
| DT21 | Owner . . William B. Harris  
Tenant . Office building  
Address . 322 State Street |
| DT22 | Owner . . Claude P. and Nellie Hamilton  
Tenant . Hamilton's Market  
Address . 206-208 South Grant Street |
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>Owner . Pietro and Natalina Marsili&lt;br&gt;Tenants . Marsili's Restaurant and Northwest Confectionery&lt;br&gt;Address . 1248 W. Third Avenue</td>
</tr>
<tr>
<td>N3</td>
<td>Owner . Arthur V. and Mary H. Johnson&lt;br&gt;Tenant . Hobart Food Machines&lt;br&gt;Address . 1063 Dublin Road</td>
</tr>
<tr>
<td>N4</td>
<td>Owner . Academy Operating Company&lt;br&gt;Tenants . State Theater, Treasure Chest, and Charlie's&lt;br&gt;Address . 1716-1726 North High Street</td>
</tr>
<tr>
<td>N5</td>
<td>Owner . Cora C. Trantham&lt;br&gt;Tenant . North High Market&lt;br&gt;Address . 1573 North High Street</td>
</tr>
<tr>
<td>N6</td>
<td>Owner . Hedges Properties, Inc.&lt;br&gt;Tenant . Bayer Printing Company&lt;br&gt;Address . 1376-1380 Holly Avenue</td>
</tr>
<tr>
<td>N7</td>
<td>Owner . Don M. Casto, Jr. et al (3)&lt;br&gt;Tenant . McLoughlin's Pharmacy, Perkins Pancake House, Central Savings, and a barber shop&lt;br&gt;Address . 4290 North High Street</td>
</tr>
<tr>
<td>N8</td>
<td>Owner . The Doddington Corporation&lt;br&gt;Tenant . The Doddington Corporation&lt;br&gt;Address . 590 Oakland Park</td>
</tr>
<tr>
<td>Area</td>
<td>Identification</td>
</tr>
<tr>
<td>------</td>
<td>----------------</td>
</tr>
</tbody>
</table>
| N9   | Owner . . K & T Realty Company  
          Tenant . Earl Scheib Auto Painting  
          Address . 686 Grandview Avenue |
| N10  | Owner . . Edward J. Coughlin and  
          Edward J. Coughlin, Jr.  
          Tenant . Jeg's Auto Parts  
          Address . 7511 Eleventh Avenue |
| N11  | Owner . . Jean A. Racer  
          Tenant . Lewalt's Variety Store  
          Address . 364 West First Avenue |
| N12  | Owner . . George L. Crites  
          Tenant . Laurel Corporation  
          Address . 537 Bonham Street |
| N13  | Owner . . Rita Thomas, et al  
          Tenant . Swan Cleaners  
          Address . 1812 West Fifth Avenue |
| N14  | Owner . . Katherine G. Feinknopf  
          Tenant . Alaskan Distributing Company  
          Address . 1187 Cleveland Avenue |
| N15  | Owner . . William D. Duffy  
          Tenant . Midco Products  
          Address . 139 East Third Avenue |
          Tenant . Buckeye Heating  
          Address . 184 East Fifth Avenue |
| N17  | Owner . . Emil C. Heyder  
          Tenant . Heyder Auto Parts  
          Address . 899 Weber Road |
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| N18  | Owner . . Thomas J. and Lena M. Piolata  
      | Tenant . Michelle's Beauty Shop  
      | Address . 1724 Northwest Boulevard |
| N19  | Owner . . W. N. Owens Enterprises, Inc.  
      | Tenant . Fiesta Lanes  
      | Address . 1291 West Lane Avenue |
      | Address . Corner of Third and Olentangy Boulevard |
### TABLE 6

#### SOUTH PARCELS

<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| S1   | Owner . . Catherine A. Miller  
Tenant . Cleary and Deal Tire Company  
Address . 1360-1366 South Parsons Avenue |
| S2   | Owner . . The Burdett Oxygen Company of Cleveland, Inc.  
Tenant . Burdett Oxygen Company  
Address . 450 Greenlawn Avenue |
| S3   | Owner . . Nathan and Esther Goldstein  
Tenant . Nathan's Auto Parts  
Address . 1900 South High Street |
| S4   | Owner . . James W. Graves  
Tenant . Graves Market  
Address . 995 Lockbourne Avenue |
| S5   | Owner . . Donald P. Bean  
Tenant . Southside Furniture Store  
Address . 1224 South High Street |
| S6   | Owner . . The Elar Company  
Tenant . Polster  
Address . 581 South High Street |
| S7   | Owner . . Robert L. and Hilda L. Stalder  
Tenant . Bob's Carry Out  
Address . 809 South Eighteenth Street |
| S8   | Owner . . Alvin E. Schottenstein, Trustee  
Tenant . A & P Store  
Address . Northeast corner of Reeb Avenue and Parsons Avenue |
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| S9   | Owner . Rose L. Meyer  
Tenant . A. L. Meyer Company  
Address . 1271 Alum Creek Drive |
| S10  | Owner . Maria G. and Tony Susi, Jr.  
Tenant . Berwick Party House  
Address . 3262 Refugee Road |
| S11  | Owner . Mary K. Weilbacher  
Tenant . Omar Thrift Store  
Address . 1174 Whittier Street |
**TABLE 7**

**EAST PARCELS**

<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| E1   | Owner . . Ohio National Bank and William J. Miller, Trustees  
      Tenant . Big Bear Store  
      Address . 2572-2578 Cleveland Avenue |
| E2   | Owner . . The Van Hise Realty Company  
      Tenant . White's Furniture Store  
      Address . 3100-3102-3104-3106 East Main Street |
| E3   | Owner . . Neva L. Wardelich  
      Tenant . Electric Appliances  
      Address . 1229-1231 East Mound Street |
| E4   | Owner . . Universal Investment Company  
      Tenant . James Road Plaza Shopping Center  
      Address . 935 James Road |
| E5   | Owner . . Frederick W. Herbst  
      Tenant . Ernie's Market  
      Address . 320-322 Taylor Avenue |
| E6   | Owner . . Effie Hardy  
      Tenant . Robinson's Body Shop  
      Address . 1687 Leonard Avenue |
| E7   | Owner . . Bryon J. and Vera Hartle  
      Tenants . Mirror's Art Glass, Ray's Wine Store and apartments  
      Address . 72-72½-76-78 South Eighteenth Street |
| E8   | Owner . . Essex Properties  
      Tenant . Home Office Building for Texaco  
      Address . 741 East Broad Street |
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| E9   | Owner . . Esther L. Minkin
       Tenant . George Riddle and Son Music Land
       Address . 2924 East Fifth Avenue |
| E10  | Owner . . Roy Brenholts, Trustee
       Tenant . Cook Furniture Company
       Address . 2862 East Main Street |
| E11  | Owner . . James Road Realty Company
       Tenant . Columbia Cement Company
       Address . 3059 East Mound Street |
| E12  | Owner . . Clifford and Alice C. Church
       Tenant . The Den of Antiquity
       Address . 1664 Hudson Street |
| E13  | Owner . . B. R. Shoemaker
       Tenant . Shoemaker's Rental and Sales
       Address . 2591 East Granville Road |
| E14  | Owner . . The Texas Company
       Tenant . Texaco Service Station
       Address . 3152 Oakland Park |
| E15  | Owner . . Barbara E. Denune
       Tenants . Cooperider's Market, East Linden Barber Shop, Jewell's Market
       Address . 2462 Parkwood Avenue |
| E16  | Owner . . Willard H. and Wilma L. Wendt
       Tenant . The Service Bureau Corporation
       Address . 2111 East Main Street |
# TABLE 8

## WEST PARCELS

<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| W1   | Owner . . Harry J. Haney, Jr.  
Tenant . Professional Building  
Address . 3099 Sullivant Avenue |
| W2   | Owner . . Huntington National Bank, et al,  
Trustees  
Tenant . Capitol Donut and Goodwins Pharmacy  
Address . 2776 Sullivant Avenue |
| W3   | Owner . . John A. Miller  
Tenant . Weaver Trailer and Body Company  
Address . 1355 West Mound Street |
| W4   | Owner . . Charles W. Althen  
Tenant . West Side Motors  
Address . 1350 West Broad Street |
| W5   | Owner . . Jessie Noon  
Tenant . Town Grocery  
Address . 1272 West Town Street |
| W6   | Owner . . Ralph H. and Gracia M. McMasters  
Tenant . Mac's Tom Thumb Auto Racing  
Address . 460 Wilson Road |
| W7   | Owner . . Herman R. Kisamore  
Tenant . Gabe's Auto Garage  
Address . 1271 Sullivant Avenue |
| W8   | Owner . . Richard L. McFarland  
Tenant . Weber's No. 2 Snack Bar  
Address . 780 West Town Street |
| W9   | Owner . . Olin L. Parrett  
Tenant . 3 C Lanes  
Address . 801 Harrisburg Pike |
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| CN1  | Owner . . Jack Headlee  
        Tenant . Jack's Appliances - Laundromat  
        Address . 26 East Columbia Street, Hilliard |
| CN2  | Owner . . Ralph D. and Eva M. McCarty  
        Tenant . Hilliard Dry Cleaners  
        Address . 49 Main Street, Hilliard |
| CN3  | Owner . . Eugene E. McConnell  
        Tenant . Hilliard Drug Store  
        Address . 254 West Main Street, Hilliard |
| CN4  | Owner . . Raymond L. Stauch  
        Tenant . Hilliard Body Shop  
        Address . 4996 Scioto Darby Creek Road |
| CN5  | Owner . . Gordon F. Dixon  
        Tenant . Dublin R.C.A. Television  
        Address . 36 North High Street, Dublin |
| CN6  | Owner . . John A. Guy and Anna M. Herm  
        Tenant . Truck Lettering Signs and John Southard TV  
        Address . 6160 Linworth Road, Linworth |
| CN7  | Owner . . Gravely West Ohio, Inc.  
        Tenant . Gravely Tractors and Attachments  
        Address . 2309 Granville Road |
<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| CS1  | Owner . . Kenneth McCloughlin and Conley G. Belcher  
       Tenant . Super Duper  
       Address . 152 West Waterloo Street, Canal Winchester |
| CS2  | Owner . . The Cellar Lumber Company  
       Tenant . Cellar Lumber Company  
       Address . 45 East Waterloo Street, Canal Winchester |
| CS3  | Owner . . Charles J. and Marie O. Rawlins  
       Tenant . Turfside  
       Address . 6239 South High Street |
## TABLE 11

### COUNTY EAST PARCELS

<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE1</td>
<td>Owner . . G. E. Bass &amp; Company, Inc.  &lt;br&gt;Tenant . Shady Lane Drugs  &lt;br&gt;Address . 4444 East Livingston Avenue</td>
</tr>
<tr>
<td>CE2</td>
<td>Owner . . George L. Gonder  &lt;br&gt;Tenant . Conrad's Carry Out  &lt;br&gt;Address . 1193 Hamilton Road</td>
</tr>
<tr>
<td>CE3</td>
<td>Owner . . Federal Concrete Pipe Company  &lt;br&gt;Tenant . Federal Concrete Pipe Company  &lt;br&gt;Address . 5665 Claycraft Road</td>
</tr>
<tr>
<td>CE4</td>
<td>Owner . . Otho Schott  &lt;br&gt;Tenant . S &amp; A Auto Parts  &lt;br&gt;Address . 32 East Home Street, Westerville</td>
</tr>
<tr>
<td>CE6</td>
<td>Owner . . Robert E. and Ellen E. Vaugh  &lt;br&gt;Tenant . Westerville Cleaners  &lt;br&gt;Address . 40 West Main Street, Westerville</td>
</tr>
</tbody>
</table>
# TABLE 12

COUNTY WEST PARCELS

<table>
<thead>
<tr>
<th>Area</th>
<th>Identification</th>
</tr>
</thead>
</table>
| CW1  | Owner . . Estel O. Gifford, Trustee  
      | Tenant . El Rancho Motel  
      | Address . 5800 West Broad Street |
| CW2  | Owner . . Walter F. and Esther Stauch  
      | Tenant . Dairy Chef  
      | Address . 5384 West Broad Street |
| CW3  | Owner . . The Grove City Savings and Loan Company  
      | Tenant . The Grove City Savings and Loan Company  
      | Address . 3215 Harrisburg Pike |
| CW4  | Owner . . Kenneth M. and Mary C. Norris  
      | Tenant . Norris Funeral Home  
      | Address . 3574 North Broadway |
| CW5  | Owner . . Commercial Development Company  
      | Tenant . Lawsons, Johnnie's Pizza  
      | Address . 3400-3402 Hoover Road, Grove City |
| CW6  | Owner . . Mabel L. Bailey  
      | Tenant . Cal's Garage  
      | Address . 3769 Franklin Avenue, Grove City |
of the American Society of Appraisers. The appraisers who participated in the valuation of the sample properties are considered, by the author, to be the most experienced and capable real estate appraisers in Columbus.

Prior to inspecting a property, each appraiser was furnished a photograph of the subject property to be valued and was provided a building sketch showing exterior dimensions and the lot size. The photographs of each of the sample parcels and the building sketch and other information provided each appraiser are shown in the Appendix. The appraisals were all completed independently. Each appraiser was advised that his purpose was to estimate market value, as previously defined, and each appraiser knew this undertaking was part of an experiment in real estate appraising techniques; however, none was informed of the hypothesis for this research paper.

Just over 20 per cent of the appraised properties were located in the downtown district which contained 22 parcels. Nearly 60 per cent (58 parcels) were located in either the downtown, north, or east areas of the City of Columbus. There were 20 parcels located in the north
area. All other areas had at least three parcels although a total of only 22 parcels out of the 100 appraised were situated in one of the four Franklin County areas.

The maps of Franklin County and Columbus showing the location of each property appraised are shown in the Appendix.

**Results of the Test**

This empirical study revealed some very interesting and unexpected results. The ratio of the true value, which is the assessor's estimate from which the assessed value is determined, and the independent appraiser's value (market value) for each sample parcel is shown in Table 13.

Of the 22 parcels located within the downtown district, 11 had an appraised market value in excess of the true value. The median of the downtown group represented the 100 per cent true value to market value category. In all of the other districts, the median true value to market value was below the 100 percentile. The north area, which had a similar distribution to that of the east district, had exactly one half of its 20 parcels
<table>
<thead>
<tr>
<th>Area</th>
<th>True Value*</th>
<th>Market Value**</th>
<th>True Value/Market Value Ratio (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT1</td>
<td>$ 53,250.</td>
<td>$ 60,000.</td>
<td>88.8</td>
</tr>
<tr>
<td>DT2</td>
<td>45,680.</td>
<td>20,000.</td>
<td>228.4</td>
</tr>
<tr>
<td>DT3</td>
<td>1,779.730.</td>
<td>1,500,000.</td>
<td>118.6</td>
</tr>
<tr>
<td>DT4</td>
<td>138,900.</td>
<td>110,000.</td>
<td>126.3</td>
</tr>
<tr>
<td>DT5</td>
<td>80,060.</td>
<td>42,400.</td>
<td>188.8</td>
</tr>
<tr>
<td>DT6</td>
<td>498,540.</td>
<td>400,000.</td>
<td>124.6</td>
</tr>
<tr>
<td>DT7</td>
<td>5,370.</td>
<td>13,750.</td>
<td>39.1</td>
</tr>
<tr>
<td>DT8</td>
<td>101,490.</td>
<td>100,000.</td>
<td>101.5</td>
</tr>
<tr>
<td>DT9</td>
<td>113,810.</td>
<td>70,000.</td>
<td>162.6</td>
</tr>
<tr>
<td>DT10</td>
<td>18,730.</td>
<td>18,000.</td>
<td>104.1</td>
</tr>
<tr>
<td>DT11</td>
<td>29,550.</td>
<td>32,500.</td>
<td>90.9</td>
</tr>
<tr>
<td>DT12</td>
<td>66,930.</td>
<td>68,400.</td>
<td>97.9</td>
</tr>
<tr>
<td>DT13</td>
<td>17,100.</td>
<td>32,900.</td>
<td>52.0</td>
</tr>
<tr>
<td>DT14</td>
<td>16,430.</td>
<td>17,700.</td>
<td>92.8</td>
</tr>
<tr>
<td>DT15</td>
<td>9,500.</td>
<td>12,000.</td>
<td>79.2</td>
</tr>
<tr>
<td>DT16</td>
<td>94,060.</td>
<td>65,000.</td>
<td>144.7</td>
</tr>
<tr>
<td>DT17</td>
<td>141,070.</td>
<td>180,000.</td>
<td>78.4</td>
</tr>
<tr>
<td>DT18</td>
<td>101,390.</td>
<td>70,000.</td>
<td>144.8</td>
</tr>
<tr>
<td>DT19</td>
<td>65,860.</td>
<td>65,000.</td>
<td>101.3</td>
</tr>
<tr>
<td>DT20</td>
<td>23,800.</td>
<td>34,700.</td>
<td>68.6</td>
</tr>
<tr>
<td>DT21</td>
<td>51,590.</td>
<td>55,000.</td>
<td>93.8</td>
</tr>
<tr>
<td>DT22</td>
<td>6,450.</td>
<td>12,000.</td>
<td>53.8</td>
</tr>
<tr>
<td>N1</td>
<td>25,880.</td>
<td>30,000.</td>
<td>86.3</td>
</tr>
<tr>
<td>N2</td>
<td>15,640.</td>
<td>18,500.</td>
<td>84.5</td>
</tr>
<tr>
<td>N3</td>
<td>41,790.</td>
<td>65,000.</td>
<td>64.3</td>
</tr>
<tr>
<td>N4</td>
<td>164,040.</td>
<td>125,000.</td>
<td>131.2</td>
</tr>
<tr>
<td>N5</td>
<td>18,920.</td>
<td>17,500.</td>
<td>108.1</td>
</tr>
<tr>
<td>N6</td>
<td>70,340.</td>
<td>74,000.</td>
<td>95.1</td>
</tr>
<tr>
<td>N7</td>
<td>175,630.</td>
<td>325,000.</td>
<td>54.0</td>
</tr>
<tr>
<td>N8</td>
<td>53,280.</td>
<td>76,550.</td>
<td>69.6</td>
</tr>
<tr>
<td>N9</td>
<td>43,650.</td>
<td>70,000.</td>
<td>62.4</td>
</tr>
<tr>
<td>N10</td>
<td>35,710.</td>
<td>62,400.</td>
<td>57.2</td>
</tr>
</tbody>
</table>
TABLE 13 -- Continued

<table>
<thead>
<tr>
<th>Area</th>
<th>True Value*</th>
<th>Market Value**</th>
<th>True Value/Market Value Ratio (in %)</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<tr>
<td>N13</td>
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<td>43,000.</td>
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<tr>
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<td>82.6</td>
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</table>
TABLE 13 -- Continued

<table>
<thead>
<tr>
<th>Area</th>
<th>True Value*</th>
<th>Market Value**</th>
<th>True Value/Market Value Ratio (in %)</th>
</tr>
</thead>
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<td>90,000.</td>
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<tr>
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<td>80,000.</td>
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<td>45,000.</td>
<td>61.0</td>
</tr>
<tr>
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<td>35,000.</td>
<td>33.0</td>
</tr>
<tr>
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<tr>
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</tr>
<tr>
<td>W8</td>
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<td>11,000.</td>
<td>77.8</td>
</tr>
<tr>
<td>W9</td>
<td>228,650.</td>
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<tr>
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<td>114.9</td>
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<td>12,470.</td>
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<td>49.9</td>
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</table>
## TABLE 13 -- Continued

<table>
<thead>
<tr>
<th>Area</th>
<th>True Value*</th>
<th>Market Value**</th>
<th>True Value/Market Value Ratio (in %)</th>
</tr>
</thead>
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<tr>
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<td>$ 205,000.</td>
<td>63.8</td>
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<tr>
<td>CW2</td>
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<td>20,700.</td>
<td>49.0</td>
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<tr>
<td>CW3</td>
<td>58,270.</td>
<td>65,000.</td>
<td>89.6</td>
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<td>86.3</td>
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<td>155,000.</td>
<td>61.9</td>
</tr>
<tr>
<td>CW6</td>
<td>18,330.</td>
<td>42,000.</td>
<td>43.6</td>
</tr>
</tbody>
</table>

*Assessor's valuation

**Independent appraiser's valuation
located above the 70-79 true value to market value percentile. Lowest percentages of true value to market value occurred in the four county areas where a total of only three parcels were above the 80-89 percentile. Table 14 on the following page illustrates the distribution of the 100 parcels within the nine geographic areas. A class interval midpoint is based on an assumed variance of plus or minus 5 per cent in the true value/market value ratio.

A thorough examination of the individual properties was made by this writer. Many of the parcels, although located outside of the interbelt system, are on main arteries which would have characteristics similar to those properties located in the core of Columbus. Three properties that were located on the edge of the downtown area close to the interbelt on side streets have been removed from this classification since they have characteristics unlike the remaining downtown properties. Two of the three parcels which were removed from the downtown district were relocated into the city east section, and the third was inserted in the city west area.
<table>
<thead>
<tr>
<th>Class Interval Midpoint</th>
<th>DT</th>
<th>N</th>
<th>S</th>
<th>E</th>
<th>W</th>
<th>CN</th>
<th>CS</th>
<th>CE</th>
<th>CW</th>
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<td>20</td>
<td>11</td>
<td>16</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>6</td>
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<tr>
<td><strong>Mean (\bar{x})</strong></td>
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<tr>
<td>(in %)</td>
<td>108</td>
<td>79</td>
<td>71</td>
<td>75</td>
<td>79</td>
<td>66</td>
<td>52</td>
<td>72</td>
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<tr>
<td>(in %)</td>
<td>100</td>
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<td>70</td>
<td>65</td>
<td>65</td>
<td>45</td>
<td>55</td>
<td>60</td>
<td>65</td>
</tr>
</tbody>
</table>
Eleven properties situated in the north, east, west, and south districts were reclassified into the downtown area for the following reasons:

1. All except one of these properties were located on one of three main Columbus arteries: High Street, Mound Street, or Broad Street.

2. A special situation occurred with Parcel N20 which is situated on the prominent corner of West Third Avenue and Olentangy Boulevard; it is the Dollar Federal Savings and Loan building. This parcel was reassigned to the DT classification since it was close to the downtown properties.

3. Another unique parcel which deserves mention is Parcel S9. This parcel is a bowling alley of substantial size. It is a special purpose type property and, therefore, the cost approach might be the only applicable valuation method.

All eleven properties would have been placed in the downtown area if it were not for the geographic constraint imposed by the interbelt.

Table 15 showing the adjusted distribution appears on page 74. This table indicates that the true
### TABLE 15

ADJUSTED FREQUENCY DISTRIBUTION OF PERCENTAGES TRUE VALUE/MARKET VALUE

<table>
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<th>Districts</th>
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</tr>
<tr>
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</tr>
<tr>
<td>215</td>
<td></td>
</tr>
<tr>
<td>205</td>
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<tr>
<td>195</td>
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<td>185</td>
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<td>45</td>
<td>2</td>
</tr>
<tr>
<td>35</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Parcels</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

| Mean (\(\bar{x}\)) (in %) | 111 | 71 | 71 | 66 | 69 | 66 | 71 | 72 | 65 |
| Median (in %)               | 105 | 65 | 70 | 60 | 50 | 45 | 55 | 60 | 65 |
value to market value ratio in the downtown area is con-
siderably higher in relation to all other areas than in
the unadjusted distribution.

The adjusted distribution of true value percen-
tages to market value is shown in Figure 1. Each one
half square represents one parcel which is within the
class interval shown on the horizontal heading. In this
graph, 30 of the 100 parcels are in the downtown area.
It can be readily seen that the 90 to 109 per cent class
intervals are those of heaviest concentration for the
downtown area which, in turn, are several intervals
higher than the concentrated distribution levels for
the remaining eight areas.

The adjusted distribution is presented in Figure
2 which relates in cumulative percentages individual dis-
tributions for the nine districts. This graph and Figure
1 reveal that the county north (CN), west (W), and down-
town (DT) are the only areas in which parcels were ap-
praised in excess of the 120-129 per cent interval true
value to market value. In the county north (CN) and
<table>
<thead>
<tr>
<th>Class Interval</th>
<th>DT</th>
<th>N</th>
<th>CN</th>
<th>E</th>
<th>CE</th>
<th>W</th>
<th>CW</th>
<th>S</th>
<th>CS</th>
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<tr>
<td>210-219</td>
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</tr>
<tr>
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<td>180-189</td>
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<td>40-49</td>
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<td>30-39</td>
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<td>20-29</td>
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<td>10-19</td>
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</tr>
</tbody>
</table>

Fig. 1.—Distribution of adjusted percentages true value/market value within nine districts.
Fig. 2.—Cumulative percentages of adjusted distribution for class intervals in nine geographic areas.
west (W) areas were seven and eight total parcels so that a single appraisal would have more effect on this curve than in the downtown area where there were 30 properties appraised. Fifty per cent of all parcels outside of the downtown area (DT) were in the 60-69 per cent true value to market value interval or lower. For the downtown area, the corresponding midpoint is between the 100-109 and 110-119 intervals. Table 16 indicates the age distribution of the sample parcels with a significant number of parcels over 50 years of age being located in the downtown area.

**Statistical Significance of Results**

Sample distributions usually differ. The problem is to determine whether the differences among the samples taken from the geographic areas are merely the chance variations that are to be expected among random samples from the same population. In other words, are the percentage differences in true value to market value sufficiently large to conclude that taxation practices vary among the areas? Since data obtained from the relationship between true value and market value are regarded as distribution-free or nonparametric, a nonparametric
**TABLE 16**

**AGE DISTRIBUTION OF SAMPLE PARCELS**

<table>
<thead>
<tr>
<th>Area</th>
<th>0 - 10</th>
<th>11 - 25</th>
<th>26 - 50</th>
<th>Over 50</th>
<th>Total Parcels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>North</td>
<td>4</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>South</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>East</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>West</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>County North</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>County South</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>County East</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>County West</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24</td>
<td>33</td>
<td>20</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>
A statistical test is applicable for this study. Using a type of nonparametric technique, the generality of the findings is increased: "... nonparametric tests have the further advantage of enabling data which are inherently only classificatory (in a nominal scale) or in ranks (in an ordinary scale) to be examined for significance". ¹

To apply a nonparametric technique, tables must be constructed as shown on pages 82 and 83. The hypothesis which is to be tested, and known as the null hypothesis, is that no difference exists between the distributions of true value/market value ratios among the geographic areas. In other words, the hypothesis states that the individual samples do not differ among themselves and could come from the same population or from identical populations.

The null hypothesis may be tested by

\[ x^2 = \sum_{i=1}^{r} \sum_{j=1}^{k} \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \]

where \( O_{ij} \) = observed number of cases categorized in \( i \)th row of \( j \)th column

\( E_{ij} \) = number of cases expected under \( H_0 \) to be categorized in \( i \)th row of \( j \)th column

\[ \sum_{i=1}^{r} \sum_{j=1}^{k} \] directs one to sum over all \((r)\) rows and all \((k)\) columns, i.e., to sum over all cells

The values of \( x^2 \) yielded by formula are distributed approximately as chi square with \( df = (r - 1)(k - 1) \), where \( r \) = the number of rows and \( k \) = the number of columns in the contingency table.

To find the expected frequency for each cell \( (E_{ij}) \), multiply the two marginal totals common to a particular cell, and then divide this product by the total number of cases, \( N \).

Computations are shown for both the adjusted and unadjusted percentage of true value/market value under the tables on the following pages. The areas under consideration have been grouped into downtown, city, and county classifications. The primary comparison is the downtown area with the outlying areas. A further

---

2Ibid., pp. 104, 105.
TABLE 17

FREQUENCY OF ADJUSTED PERCENTAGES TRUE VALUE/MARKET VALUE GROUPED IN FOUR INTERVALS FOR THREE AREAS OF FRANKLIN COUNTY

<table>
<thead>
<tr>
<th>Areas</th>
<th>Intervals*</th>
<th></th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
<td>III</td>
<td>IV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downtown</td>
<td>15.0</td>
<td>9.6</td>
<td>3.6</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eij value</td>
<td>4</td>
<td>13</td>
<td>9</td>
<td>4</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Number of</td>
<td>16</td>
<td>7.0</td>
<td>2.6</td>
<td>1.3</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>parcels</td>
<td>30</td>
<td>16</td>
<td>1</td>
<td>1</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>City</td>
<td>25.0</td>
<td>16.0</td>
<td>6.0</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eij value</td>
<td>30</td>
<td>16</td>
<td>1</td>
<td>1</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Number of</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>parcels</td>
<td>50</td>
<td>32</td>
<td>12</td>
<td>6</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>County</td>
<td>11.0</td>
<td>7.0</td>
<td>2.6</td>
<td>1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eij value</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Number of</td>
<td>50</td>
<td>32</td>
<td>12</td>
<td>6</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>parcels</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Interval I = 35 to 74.9%
Interval II = 75 to 114.9%
Interval III = 115 to 154.9%
Interval IV = 155% and over

\[ x^2 = \sum_{i=1}^{r} \sum_{j=1}^{k} \frac{(O_{ij} - E_{ij})^2}{E_{ij}} = 32.7 \]
TABLE 18

FREQUENCY OF UNADJUSTED PERCENTAGES TRUE VALUE/MARKET VALUE GROUPED IN FOUR INTERVALS FOR THREE AREAS OF FRANKLIN COUNTY

<table>
<thead>
<tr>
<th>Areas</th>
<th>Intervals*</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown</td>
<td>Eij value</td>
<td>11.0</td>
<td>7.0</td>
<td>2.6</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of parcels</td>
<td>4</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>City</td>
<td>Eij value</td>
<td>28.0</td>
<td>17.9</td>
<td>6.7</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of parcels</td>
<td>30</td>
<td>19</td>
<td>5</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td>County</td>
<td>Eij value</td>
<td>11.0</td>
<td>7.0</td>
<td>2.6</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of parcels</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>32</td>
<td>12</td>
<td>6</td>
<td>100</td>
</tr>
</tbody>
</table>

*Interval I = 35 to 74.9%  
Interval II = 75 to 114.9%  
Interval III = 115 to 154.9%  
Interval IV = 155% and over

\[ x^2 = \sum_{i=1}^{x} \sum_{j=1}^{k} \frac{(O_{ij} - E_{ij})^2}{E_{ij}} = 16.2 \]
breakdown of city and county areas would not comply with the \( x^2 \) test requirement since there would be too few parcels in several of the geographic sections.

In the unadjusted percentages of true value to market value, the significance of \( x^2 \) is 16.2. The corresponding \( x^2 \) figure for the adjusted percentages is 32.7. These numbers are related to the chart on page 85 (Table 19). The probability that the samples are not drawn from the same population is significant at the .01 level of error, i.e., there is a difference in distributions of the downtown, city and county percentages. For the unadjusted distribution, there is approximately 99.0 per cent probability that a difference exists between the distributions of downtown, city, and county areas, and that the difference in the distribution is not a result of chance. Although no predetermined level of significance is regarded as a standard for rejection of the null hypothesis, the results do serve to emphasize the high level of rejection that is applicable for this test.
TABLE 19

<table>
<thead>
<tr>
<th>df</th>
<th>.0016</th>
<th>.0050</th>
<th>.0100</th>
<th>.0160</th>
<th>.0250</th>
<th>.0350</th>
<th>.0450</th>
<th>.0550</th>
<th>.0650</th>
<th>.0750</th>
<th>.0850</th>
<th>.0950</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1.50</td>
<td>1.50</td>
<td>1.63</td>
<td>1.78</td>
<td>1.96</td>
<td>2.14</td>
<td>2.33</td>
<td>2.52</td>
<td>2.73</td>
<td>2.97</td>
<td>3.24</td>
<td>3.53</td>
</tr>
<tr>
<td>2</td>
<td>2.90</td>
<td>3.14</td>
<td>3.44</td>
<td>3.73</td>
<td>4.06</td>
<td>4.42</td>
<td>4.83</td>
<td>5.26</td>
<td>5.72</td>
<td>6.22</td>
<td>6.75</td>
<td>7.32</td>
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<tr>
<td>3</td>
<td>4.10</td>
<td>4.50</td>
<td>5.02</td>
<td>5.60</td>
<td>6.25</td>
<td>6.95</td>
<td>7.70</td>
<td>8.49</td>
<td>9.33</td>
<td>10.21</td>
<td>11.15</td>
<td>12.14</td>
</tr>
<tr>
<td>4</td>
<td>5.30</td>
<td>5.84</td>
<td>6.51</td>
<td>7.24</td>
<td>8.07</td>
<td>8.95</td>
<td>9.87</td>
<td>10.83</td>
<td>11.84</td>
<td>12.90</td>
<td>14.02</td>
<td>15.18</td>
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<td>6.50</td>
<td>7.18</td>
<td>8.00</td>
<td>8.87</td>
<td>9.82</td>
<td>10.83</td>
<td>11.91</td>
<td>13.03</td>
<td>14.19</td>
<td>15.39</td>
<td>16.65</td>
<td>17.96</td>
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<tr>
<td>8</td>
<td>10.10</td>
<td>10.99</td>
<td>12.06</td>
<td>13.21</td>
<td>14.44</td>
<td>15.75</td>
<td>17.14</td>
<td>18.59</td>
<td>20.09</td>
<td>21.65</td>
<td>23.29</td>
<td>24.93</td>
</tr>
</tbody>
</table>

*Table 19 is abridged from Table IV of Fisher and Yates: Statistical Tables for Biological, Agricultural, and Medical Research (Oliver and Boyd Ltd.: Edinburgh)

The df that applies to this test is 6, and the values of chi square 16.2 and 32.7. In Table 16.81 is 1 per cent and 22.46 corresponds to the 0.1 per cent column, being the percentages of acceptance of the null hypothesis.
Second Test of Distribution

Another two sample test which may be applicable to the distributions of this empirical study is known as the Kolmogorov-Smirnov two sample test. The one-tailed test may be used to decide whether or not the ratios of downtown properties true value to market value is larger than the comparable ratios obtained from the samples in the city and county areas.

To apply the Kolmogorov-Smirnov test, a cumulative frequency distribution is made for each sample, using the same intervals for both distributions. The test is concerned with the largest of the observed deviations.

Tables 20 and 21 are the unadjusted and adjusted cumulative percentages for the three areas. The "D" value represents the largest observed deviations from the downtown area.

It has been shown that:

\[ X^2 = 4D^2 \frac{n_1n_2}{n_1+n_2} \]

has a sampling distribution which is approximated by the chi square distribution with df = 2.\(^3\)

\[^3\text{Ibid, p. 131.}\]
TABLE 20
UNADJUSTED CUMULATIVE PERCENTAGE OF TOTAL PARCELS OF TRUE VALUE/MARKET VALUE RATIOS

<table>
<thead>
<tr>
<th>Intervals</th>
<th>Downtown ($N_1$)</th>
<th>City ($N_2$)</th>
<th>County ($N_3$)</th>
<th>($N_2-N_1$)</th>
<th>($N_3-N_1$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Parcels</td>
<td>22</td>
<td>56</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39.9</td>
<td>5</td>
<td>7</td>
<td>18</td>
<td>2</td>
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<tr>
<td>40-49.9</td>
<td>5</td>
<td>14</td>
<td>45</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>50-59.9</td>
<td>14</td>
<td>36</td>
<td>55</td>
<td>22</td>
<td>41</td>
</tr>
<tr>
<td>60-69.9</td>
<td>18</td>
<td>54</td>
<td>73</td>
<td>36</td>
<td>55*</td>
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<tr>
<td>70-79.9</td>
<td>27</td>
<td>63</td>
<td>73</td>
<td>36</td>
<td>46</td>
</tr>
<tr>
<td>80-89.9</td>
<td>32</td>
<td>77</td>
<td>82</td>
<td>45*</td>
<td>50</td>
</tr>
<tr>
<td>90-99.9</td>
<td>50</td>
<td>85</td>
<td>86</td>
<td>35</td>
<td>36</td>
</tr>
<tr>
<td>100-109.9</td>
<td>64</td>
<td>88</td>
<td>86</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>110-119.9</td>
<td>68</td>
<td>90</td>
<td>95</td>
<td>22</td>
<td>27</td>
</tr>
<tr>
<td>120-129.9</td>
<td>77</td>
<td>94</td>
<td>95</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>130-139.9</td>
<td>77</td>
<td>95</td>
<td>95</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>140-149.9</td>
<td>86</td>
<td>97</td>
<td>95</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>150-159.9</td>
<td>86</td>
<td>99</td>
<td>95</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>160-169.9</td>
<td>91</td>
<td>99</td>
<td>100</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>170-179.9</td>
<td>91</td>
<td>99</td>
<td>100</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>180-189.9</td>
<td>95</td>
<td>99</td>
<td>100</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>190-199.9</td>
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<td>100</td>
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<td>5</td>
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<tr>
<td>200-209.9</td>
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</tr>
<tr>
<td>220-229.9</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*D value

For downtown - city comparison

\[ x^2 = 4D^2 \frac{n_1 n_2}{n_1 + n_2} \]
\[ = 4(.45)^2 \frac{22 \times 56}{22 + 56} \]
\[ = 4 \times 2025 \times 15.8 \]
\[ = 12.80 \]

For downtown - county comparison

\[ x^2 = 4D^2 \frac{n_1 n_2}{n_1 + n_2} \]
\[ = 4(.55)^2 \frac{22 \times 22}{22 + 22} \]
\[ = 4 \times 3025 \times 11.0 \]
\[ = 13.31 \]
TABLE 21

ADJUSTED CUMULATIVE PERCENTAGE OF TOTAL PARCELS
OF TRUE VALUE/MARKET VALUE RATIOS

<table>
<thead>
<tr>
<th>Intervals</th>
<th>Downtown ((N_1))</th>
<th>City ((N_2))</th>
<th>County ((N_3))</th>
<th>((N_2-N_1))</th>
<th>((N_3-N_1))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Parcels</td>
<td>30</td>
<td>48</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39.9</td>
<td>0</td>
<td>11</td>
<td>18</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>40-49.9</td>
<td>0</td>
<td>19</td>
<td>45</td>
<td>19</td>
<td>45</td>
</tr>
<tr>
<td>50-59.9</td>
<td>7</td>
<td>44</td>
<td>54</td>
<td>37</td>
<td>47</td>
</tr>
<tr>
<td>60-69.9</td>
<td>13</td>
<td>63</td>
<td>72</td>
<td>50</td>
<td>59*</td>
</tr>
<tr>
<td>70-79.9</td>
<td>26</td>
<td>69</td>
<td>72</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td>80-89.9</td>
<td>30</td>
<td>86</td>
<td>81</td>
<td>56*</td>
<td>51</td>
</tr>
<tr>
<td>90-99.9</td>
<td>43</td>
<td>95</td>
<td>86</td>
<td>52</td>
<td>43</td>
</tr>
<tr>
<td>100-109.9</td>
<td>56</td>
<td>97</td>
<td>86</td>
<td>41</td>
<td>30</td>
</tr>
<tr>
<td>110-119.9</td>
<td>63</td>
<td>97</td>
<td>95</td>
<td>34</td>
<td>32</td>
</tr>
<tr>
<td>120-129.9</td>
<td>73</td>
<td>99</td>
<td>95</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>130-139.9</td>
<td>76</td>
<td>99</td>
<td>95</td>
<td>23</td>
<td>19</td>
</tr>
<tr>
<td>140-149.9</td>
<td>86</td>
<td>99</td>
<td>95</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>150-159.9</td>
<td>89</td>
<td>99</td>
<td>95</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>160-169.9</td>
<td>92</td>
<td>99</td>
<td>100</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>170-179.9</td>
<td>92</td>
<td>99</td>
<td>100</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>180-189.9</td>
<td>96</td>
<td>99</td>
<td>100</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>190-199.9</td>
<td>96</td>
<td>100</td>
<td>100</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>200-209.9</td>
<td>96</td>
<td>100</td>
<td>100</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>210-219.9</td>
<td>96</td>
<td>100</td>
<td>100</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>220-229.9</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*\(D\) value

For downtown - city comparison

\[
x^2 = 4D^2 \frac{n_1 n_2}{n_1 + n_2}
\]

\[
= 4(.56)^2 \frac{30 \times 48}{30 + 48}
\]

\[
= 4 \times 3.136 \times 18.46
\]

\[
x^2 = 23.16
\]

For downtown - county comparison

\[
x^2 = 4D^2 \frac{n_1 n_2}{n_1 + n_2}
\]

\[
= 4(.59)^2 \frac{30 \times 22}{30 + 22}
\]

\[
= 4 \times 3.481 \times 12.69
\]

\[
x^2 = 17.67
\]
The significance of the observed value of D has been computed at the bottom of the respective tables with the solution for $X^2$. Reference is made to Table 19 for the corresponding values of df = 2.

In the unadjusted solution for the value of chi square, the critical value for the downtown - city comparison is 12.80 which, in Table 19, is close to the .001 probability under $H_0$ that $X^2$ is greater than or less than chi square. The corresponding values in the table for df = 2 are .01 = 9.21; .001 = 13.82. The solution for chi square unadjusted downtown and county comparisons is 13.31 which also is close to the .001 probability.

The adjusted comparisons of the same respective areas produce values of 23.16 and 17.67, respectively. These two figures, in excess of 13.82, indicate that the probability is less than .1 per cent that there is no difference between the downtown ratios and those of the city and county samples.
Independent Real Estate Appraisers' Valuations for the Individual Properties Appraised

The true value to market value ratio of the individual properties for each of the 15 appraisers is shown on Figure 3. Seven of the 15 appraisers had at least one property located in the downtown area to appraise. Since no appraiser had more than seven parcels to appraise and many had three or four, it is impossible to assign a confidence level to the correctness of the independent appraisers' value estimates. However, the author believes an assumption that the real estate appraisers were accurate in their estimates within a range of 10 per cent from the true value/market value midpoints is realistic.

Conclusions of Statistical Tests

The 100 properties appraised have been distributed by age in Table 16 on page 79. This distribution indicates that nearly two thirds of the downtown properties are 50 years of age or over. In seven of the eight remaining districts, not more than two parcels are in this age category.

The limitations of the cost approach to value, which is heavily relied upon by the real estate assessor,
Fig. 3 -- Distribution of independent real estate appraisers' valuations for downtown and outside downtown, Columbus, Ohio.
were discussed in Chapter IV. As noted there, widely accepted appraisal thought contends that the cost approach is less appropriate than the income and market approaches for appraising older buildings. This study shows the high probability that the downtown properties are appraised for tax purposes at a higher ratio of true value to market value. Since Table 16 indicates that a much higher proportion of older properties in the sample are located in the downtown area, the contention concerning the ineffectiveness of the cost approach for older properties is empirically supported by the results of this study.
CHAPTER VI

ALTERNATIVE APPROACHES FOR ESTIMATING

THE VALUE OF REAL PROPERTY

In recent years there has been a tendency for real estate tax assessors to give greater consideration to the income and market approaches to value. The cost approach, once the dominant method employed in valuing improved real estate for assessment purposes, has assumed a less significant role. Notwithstanding this trend which many real estate experts feel has been long overdue, the question remains whether or not the cost approach should be used to any extent in estimating the value of old buildings when market data and rental information are plentiful on comparable parcels.

The study made in the downtown area produced valuation estimates significantly different from those obtained by the real estate assessors for Franklin County. The independent fee appraisers who contributed to this study...
were interviewed by this writer after the appraisals were completed. These interviews revealed that all appraisers relied almost exclusively upon the income and market approaches to reach their final value estimates.

Mr. Charles Bartlett gives further evidence of the need to examine the various approaches to value. Mr. Bartlett, in addition to being a member of the American Institute of Real Estate Appraisers and the Society of Real Estate Appraisers, holds two professional assessor's designations including the CAE. In his article in The Appraisal Journal, he asks and answers the question regarding the proper approach to use.

Is market value the same when appraising for property tax purposes as when appraising for any other purpose? The answer is, of course, yes, because actually the purpose of the appraisal is to estimate market value, while the function of the appraisal is its use as a basis for assessment. Does this function or use require special considerations on the part of the assessor and/or appraiser? Yes, there are some special considerations such as: all property is valued as of the same date, conservative thinking in respect to value influences, but the most important consideration is uniformity.¹

Mr. Bartlett explains the uniformity clause as meaning the subject property must be appraised in relation to all other properties that are on the real estate tax duplicate. The same relevant factors used by the assessor for valuing other properties in a given area must be used in estimating the value of the subject property.

**Example of Relevant Factors Influencing the Approaches to Value**

Mr. Bartlett presents several premises often heard on behalf of owners of commercial properties. A few of the typical arguments are considered next in this dissertation.

1. The cost is immaterial. I'm only making 3% on my investment. The income approach is the only method to use and the estimated income should be the amount I made last year.

2. I have provided 20 acres of off-street parking and thereby have helped the city by taking traffic off the public streets. This relieves traffic congestion and reduces the city's cost of traffic control. Therefore, the parking area should not be considered in arriving at the assessed value or at least it should be assessed at only a nominal amount.

3. My parking area is dead weight. It produces no income and therefore has no value. It should not even be assessed.
4. My mall area is superfluous. It produces no income. The fountains, lighting, planter boxes, and other items of aesthetic nature are designed simply to provide a relaxing, enjoyable interlude away from home for those visiting my center. It is actually a semi-park and recreation area available to the public and certainly should not bear the same assessment basis as the rentable area.

5. The private streets in my center are all used freely by the public. Why should I pay taxes on them when they are the same as public streets? Anyway, the expense I'm out for street cleaning should at least be offset by a reduced assessment on the street area.2

To the first argument, Mr. Bartlett wrote that the cost is not immaterial since all three approaches must be considered in valuing property. It is assumed in this discussion that the real estate is a nearly new shopping center. The author implies that the 3 per cent return does not reflect the potential of the center. Using this low percentage as the indication of anticipated annual income would not be a fair reflection of the market value of the center.

In arguments two, three, four, and five, there is the implication by the shopping center owner that he

2Ibid., p. 379.
deserves to have exemption on a portion of the center because of his extreme generosity, cooperative nature or civic minded attitude. By providing facilities and aesthetics for the public, the owner feels he is entitled to special treatment. Mr. Bartlett emphasizes the point that the assessor has no right to exempt any type of property.

Mr. Bartlett also writes that the proper approach to the valuation of any shopping center or any other major development deserves more time and analysis than the appraisal of a single family residence. He restates the need for gathering comparable land sales and analyzing them together with income and expense data in an effort to obtain an appraisal that can be substantiated. Not only should present income be considered but the projection of earning capacity over the long term must be analyzed.
Influences Responsible for Change in Downtown Property Values

There have been few innovations in the past two decades which have resulted in such an enormous effect on the value of downtown property as the outlying shopping center. The downtown retail stores enjoyed an influential position in cities throughout the United States until the 1940's. The expanding neighborhood shopping centers and more recently the large regional center have eliminated much of the need for traveling into the downtown area. This decentralization has included the construction of professional and medical office buildings in the outlying areas where there are the advantages of less congestion, free parking, and good access to the residential area of the city.

Many of the more progressive cities, including Columbus, have experienced drastic reductions in rental potential of their downtown properties. New leases have been negotiated at rentals well below the amounts paid in the 1920's and 1930's. Upper floors of multi-story buildings in the downtown areas once in demand have become very difficult and, frequently, impossible to rent.
Based upon the results of this empirical study, many of the downtown properties may remain on the tax duplicate at an amount far in excess of their market values. This over assessment of downtown area properties may be caused by the lingering effect of the cost approach to value. Cole-Layer-Trumble claim to have found the greatest decline in real estate values and reduction of assessed values in the downtown area. The results of the analysis in this dissertation indicate that the reductions may not have been great enough. Downtown properties have experienced a decline in net rental potential while costs of operation have continually increased. Since the true value figures which reflect this decline are based, for the most part on 1962 valuations, the further reduction of downtown true values is anticipated. This reduction would to some degree reduce the differences among area true value/market value ratios found in this study. The above remarks are predicated on the assumption that the independent real estate appraisers' estimates were accurate within a range of 10 per cent in the true value/market value ratios.
The Case for the Income Approach to Value

The income approach to estimating value of income producing properties would seem to offer potentially more reliable value estimates. As stated earlier, the definition of market value is the amount of money a well informed buyer should pay for property. If two storerooms regardless of location have the same potential of generating $5,000 per annum in net income with the same amount of risk associated with the likelihood of obtaining this amount of money over a long period of time, the market values should be in the same range. By gathering numerous sales of leased properties and comparing the rate of return buyers are requiring on their investment, an accurate capitalization rate for similar type properties can be obtained. Thus, the income approach for these kinds of properties might produce more reliable value estimates. The need under present assessment practices to classify and compare all properties within a confined geographic location would be eliminated.
Favorable Legislation for Implementation of the Market Approach

One of the most important aspects of the market approach is verification of the prices for which comparable sales have transferred. As of January 1, 1968, all properties that are sold in Franklin County require a certification by the buyer of the purchase price at which the property transferred. This legislation will be of significant benefit to the real estate appraiser. A reproduction of this form is in Table 21. In many situations involving, for example, family transfers, market value and sale price may be far apart; however, most of the sales represent arms length transactions. These purchase price statements should provide valuable information for estimating the market value through the use of the market approach. The real estate assessor will have a more reliable guide to the market value of real estate than was offered by the previous Federal Revenue stamps indicator.

The Best Approach - The Right Approach

Theoretically every property should be appraised for real estate taxation purposes at an amount equal to
### TABLE 21

**SAMPLE OF FORM FOR CERTIFICATION OF PURCHASE PRICE FOR PROPERTY TRANSFERRED**

<table>
<thead>
<tr>
<th>Co. No.</th>
<th>Date</th>
<th>Number</th>
<th>Type or Print All Information</th>
<th>SEE INSTRUCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FOR COUNTY AUDITOR’S USE ONLY**

1. Grantor’s name: ________________________________
2. Grantee’s name and address: _______________________
3. Tax billing address if other than above: _____________
5. If instrument does not convey entire fee simple interest, explain: ________________________________

**STATED OF GRANTEE**

1. Grantor’s name: ________________________________
2. Grantee’s name and address: _______________________
3. Tax billing address if other than above: _____________
5. If instrument does not convey entire fee simple interest, explain: ________________________________

**RECEIPT TO PERSON PAYING CONVEYANCE FEE**

Receipt No. ____________________________

(Same as statement of value) Number: ____________________________

FRANKLIN County

The full consideration or estimated market value on the statement of value, bearing the same number as this receipt was $ ____________________________.

The conveyance fee on the property described of 10 cents per $100 of total consideration or value, or $1.00, whichever is greater, in the amount of $ ____________________________ has been paid by the

FRANKLIN County Auditor’s Office.

□ If conveyance is exempt from fee pursuant to Sec. 319.54 (F) (3) R.C., check here.

ARCH J. WARREN

(County Auditor or Deputy)
that price which the property would bring if placed on the open market. The uniform rate would then be applied to this appraised value to arrive at the assessed valuation. The approach to value that is best in a given situation is the one which takes into consideration the actions of buyers and sellers in the market place.

The cost approach may be of importance in the appraisal of new or nearly new commercial properties. A well informed purchaser will consider his cost of duplicating the building on a comparable lot. However, there are many sales of newer properties that take place for a consideration well in excess of actual cost. This difference must be attributed to entrepreneurial profit, an amount determined by the direct use of the income or market approaches.

A purchaser of commercial property is concerned with the future income producing capacity if the purchase is regarded as an investment by a non-user. In these cases, the income approach is the best approach and therefore the right approach. Equally as interested in the future outlook is the owner occupant who must make a determination of not only rental potential of
the property in question but also its physical, functional, and economic desirability in the years to come. The past may serve as a guide to what may be anticipated for the future. The real estate assessor must be alert to ever changing values of real estate and be prepared to revise income projections when merited.
CHAPTER VII

AREAS FOR FUTURE RESEARCH OF REAL PROPERTY VALUATION

PROCEDURES FOR TAXATION PURPOSES

Need for Research

This writer found very few studies that have examined the area of valuation techniques employed in the appraisal of real estate for property taxation purposes. Also, it is interesting to note that the method of real estate valuation used by real estate assessors has drawn little attention from the expert independent real estate appraiser.

When complaints concerning an appraised value are heard, they frequently are initiated by the taxpayer whose sole concern is reducing the amount of his property taxes. His interest does not extend to the appraisals for assessed valuation of his neighbor's or another individual's property. The property owner may evaluate his total real estate tax payment in relation to the real
estate taxes of others who have property and which he regards as comparable to his own. Such a comparison is more difficult for commercial property owners who find their property dissimilar to others nearby.

The public has displayed total apathy toward the inequities in assessing valuation procedures which exist between various types of property or between properties situated in various parts of a city. The individual taxpayer does not have the time nor the ability to make a study of the fairness of the appraisal methods employed for real estate assessment purposes. The taxpayer must hope that either a segment of the government or the universities would be involved in research projects in this subject area.

Frequently, after many complaints are heard, the state legislature will set up a temporary tax study committee, either on its own initiative or at the behest of the governor. Often including prominent lay citizens as well as legislative members, the committee or commission employs consultants and in due course presents its findings in a report. This procedure has the virtues of producing an independent audit by specialists of the state's property tax system and focusing
attention backed by the prestige of the com-
mittee's members and staff on the deficiencies
and needs of the system. If the effort does
not produce remedial legislation immediately
there is still a chance of deferred action,
and in any event the legislature always can
create another temporary committee in some
subsequent year.¹

The state is ignoring an obvious responsibility
when it places in the hands of its legislature the re-
sponsibility for equalizing the inequities, if any,
that exist in the property tax system including the
methods employed by the appraiser. If the government
is to make a substantial contribution in this area, then
research must be undertaken by individuals or committees
who are equipped with research staffs and facilities to
carry on continuous studies.

This writer found one study that was concerned
with the uniformity of assessed values as compared with
selling prices of properties. The study was undertaken
by the Division of Business and Economic Research at the
University of Wyoming. The assessment-sales ratio used

¹Advisory Commission on Intergovernmental Rela-
tions, The Role of the States in Strengthening the Pro-
in this study was simply the relationship between the assessed valuation and the sale price of real property. The introduction of this study suggested that many transactions which were not bona fide were included in the analysis. The major limitation in this study, however, is imposed by the lack of population in Wyoming. The study was limited to those sales which took place in a two year period. All types of property were used in this study making a total number of 2,946 sales which had taken place throughout the state. The study was primarily one of comparing the relationship between assessment and sales ratios between counties. The conclusion of this study was that the distribution indicated that "... a better than average job is being done at present by the assessment agencies in Wyoming".  

Need for Additional Similar Sampling

There is hope that a study similar to the one undertaken in Columbus will be completed in other cities

\[2\] August Shopin, A Study of Relationship Between Assessment and Selling Price of Real Estate in Wyoming, Years 1957-1958 (Division of Business and Economic Research, College of Commerce & Industry, University of Wyoming, 1959)
throughout the country. Admittedly, this report is confined to 100 properties situated in one geographic area which have been appraised for taxation purposes by one company. Many cities which have been appraised by different assessors must be analyzed before general conclusions can be stated with confidence.

**Upgrading Professional Appraisal Standards for Real Estate Assessors**

Separate appraisal organizations have been mentioned throughout this dissertation. There have been unsuccessful attempts in the past to merge the American Institute of Real Estate Appraisers with the Society of Real Estate Appraisers. Each appraisal organization has its own educational standards, code of ethics, and requirements for membership.

Evaluation procedures of real property for assessment purposes, particularly for the complex commercial and industrial parcels, should be formulated by those who have demonstrated an appraisal ability in keeping with the requirements imposed upon the membership of some of the various appraisal organizations. Should the CAE
designation be required or are the standards of this organization unsatisfactory? What are the possibilities of establishing one set of criteria for membership or a designation which would be mandatory for those who aspire to appraise real estate for taxation purposes? Should the educational course work be part of graduate study at the college or university level? Research into this broad area of appraisal professionalism is long overdue.

The possibility of licensing real estate appraisers has caused considerable discussion recently. The Society of Real Estate Appraisers has taken the stand that

Licensing or certification of real estate appraisers would not at this time be in the best interest of the public or the appraisal profession. 3

The central idea of this article is that good judgment evolves from and is strengthened by experience. Some of the most experienced appraisers might have difficulty passing the requirements for certification. If experience is incorporated as a requirement for

3 Jerry C. Davis, "The Case Against the Licensing or Certification of Real Estate Appraisers", The Real Estate Appraiser (September, 1967), Vol.33, No. 9 (The Society of Real Estate Appraisers: Chicago), p. 15.
certification, the beginning appraiser would be unemployed or at a severe disadvantage without the certification. This one sided report deserves additional attention.

Analysis of Taxation on Vacant Land Only

In this dissertation, the total market value is compared with the total true value without a comparison of the value of the land as improved to its highest and best use. The breakdown of land and building is of considerable importance as explained earlier in connection with the misimprovement factor. A sample which would be limited to vacant parcels might yield different results from those found in this report. This needed research would add a valuable dimension to the accuracy of the land value estimate which becomes an integral part of the cost approach to value.

Additional Research on True Value/Market Value Relationships

Research was undertaken by Dr. Robert M. Williams, who is Vice Chairman, Business Economics, Graduate School of Business Administration, University of California at Los Angeles, on the subject of trends in the ratios of
assessed values to market values. The impetus for this study was to measure trends in the relationship between assessed and market values for single family dwellings for the years 1940, 1950, and 1961 based on a small sample of residential properties. The sample included 38 single family dwellings selected in Los Angeles County. The two main findings from this study were:

1. There is a declining trend in the ratio of assessed value to estimates of market value for single family residences since 1940.

2. There is a sharply rising trend in the proportion of total assessed value accounted for by land over the same period.

Although the author measures the validity of his results in statistical terms, the sample is a selected one rather than a random sample so that the standard errors can not be determined. Dr. Williams states that his main purpose for completing this study was to describe how an inexpensive but reasonably accurate manner of changes in the ratio of assessed to market values may be measured. An important conclusion of this study is that declining assessment ratios are usually accompanied
by a low dependence on property taxes. "Declining ratios tend to be associated with a shift in the burden of local taxation from property to other sources of revenue".⁴

A limitation of the research project of Dr. Williams involves appraisers' estimates of market value. The qualifications of these appraisers was not discussed in the article. Although containing this major weakness, this research project suggests many related areas for important contributions regarding changes in assessed value/market ratios. The study should be broadened to include all types of property with an expanded random sample.

Effect of a Change in the Assessing Practice

Since the present assessment practices have been blamed for the claimed over taxation of downtown properties, a study should be made of the possible advantages of a single tax on land only. This ad valorem tax would be in contrast to the present practice of taxing both land and improvements. An article by Leonard C. Moffitt

appearing in *Land Economics*, August, 1966 edition, and more recently in *The Real Estate Appraiser* discusses the subject. Limiting the tax to land only would be for the purpose of encouraging good development and discouraging detrimental speculation, slum-producing exploitation, and inflationary monopolization. This tax would be based on the assumption that the land was being put to its highest and best use. If the property was not utilized to its best use, the real estate taxes would be high in relation to its present income potential. The property owner would be induced to change the existing use of the land.

A type of weighted tax has been used in Pennsylvania and it has also been used in Australia and New Zealand. Results of this modified single tax system have not been thoroughly researched. The only article available on this topic was one by R. O. Harvey and W. A. V. Clark. They concluded that the single tax had not produced the benefits for which it was intended.

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The subjects recommended above point out that there is a need for studies in three major areas:

1. Similar research projects should be completed by competent independent fee appraisers with the hope of obtaining more than one market value estimate for each property. Additional valuation estimates would help substantiate the statistical analysis.

2. Discussion has taken place on the need to upgrade the professional standards of the real estate assessor. Additional investigation on this topic should prove worthwhile.

3. Study should be devoted to the advantages and disadvantages of the various types of real estate taxation policies. A property tax limited to land only or a weighted tax deserves attention.

These topics merely scratch the surface of research problems that are of major concern in terms of the distribution of the real estate tax burden.
CHAPTER VIII

CONCLUSIONS AND SUMMARY

Conclusions

One hundred parcels of commercial and light industrial real estate in Franklin County, selected at random, were compared by geographical area. Each of the parcels was appraised for market value and then compared with the assessor's market value, known as the true value, for each parcel. The locations of the individual parcels appraised appear on the maps in the Appendix. In this sample, the 100 parcels were distributed as follows: 22 downtown (DT), 20 north (N), 7 county north (CN), 16 east (E), 6 county east (CE), 9 west (W), 6 county west (CW), 11 south (S), and 3 county south (CS).

The data indicated that properties located in the downtown area may be appraised for real estate tax purposes at a higher value in relation to market value than the properties located in the other eight areas.
The suggestion of over assessment became even more pronounced when the few properties originally located in the downtown area near the outskirts on side streets were reclassified into other city locations, and when commercial properties on the three main arteries in Columbus were re­located from city areas into the downtown section. Several implications are noted from the analysis of this empirical test.

When the real estate assessor employs the cost approach for the valuation of downtown properties, errors may arise in any one or more of three areas: the land valuation, the reproduction cost new, and the depreciation.

The true value of the land could be below or above the market value. If the land value is appraised for real estate assessment purposes at an amount below the market value, then the depreciated value of the improvements is far in excess of its actual contribution. It follows that if the true valuation of the land is in excess of the market value, then the depreciated value of the buildings could be equal to or below their market value. The possibility exists that the land and building were valued
for taxation purposes in excess of market value, resulting in an over assessment of downtown properties. Although not tested, a possible explanation is that the downtown buildings are on the tax duplicate for more than their contribution to the land. This belief stems from the fact that many older downtown buildings are being razed because of their inability to produce income in excess of the land value. Many new buildings have been constructed while other older buildings have been razed for parking purposes.

Should this study or other studies similar in nature be undertaken and the same results be found, it can be expected that real estate assessors will take a new look at their appraisals of downtown property. If these conclusions are valid, many appeals may be anticipated from downtown property owners. Appraisals used for requesting a reduction in the true value of investment properties must use, as an expense item for real estate taxes, that amount which the taxes would be if the reduction were effected. If the existing real estate taxes are used in error, then the net income projection would be understated. Capitalizing this net income would
give a market value below the fair market value as estimated after the tax reduction. This case is well presented in an article by Samuel C. Warwick. 

Summary

This dissertation is an attempt to compare statistically the fairness of appraisal methods employed for taxation purposes. The first three chapters discussed the importance of the property tax, and the methods used in its determination. In Chapters IV, V, and VI, the methods of valuing real estate were explained with emphasis on the techniques used in Franklin County, Ohio. The advantages of the market and income approaches, when adequate data are available, were presented in depth. The limitations of the cost approach were another important facet of this study.

Many related areas in which worthwhile research may be undertaken appear in Chapter VII.

The test of the standardization of appraisal techniques used is part of Chapter V. The conclusions from these results are in the beginning of this chapter. The null hypothesis of this study, that there is no difference between the ratios of assessed value to market value in the downtown area and outlying areas, has been rejected. Therefore, the conclusion based upon this research project is that there may be significant over assessment of older downtown properties in Columbus, Ohio. The measurement for this over assessment is the relationship of the property's assessed value to market value; the market value was estimated by competent independent real estate appraisers.
APPENDIX

EMPIRICAL TEST DATA
Photograph of Parcel DT1:

220-222 North High Street
**AREA:** DT1

**TYPE OF PROPERTY:** Restaurant

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
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<tbody>
<tr>
<td><strong>LAND VALUE</strong></td>
<td>$45,310.</td>
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<tr>
<td><strong>BUILDING VALUE</strong></td>
<td><strong>$7,940.</strong></td>
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<td><strong>TOTAL</strong></td>
<td><strong>$53,250.</strong></td>
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</tbody>
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**TOTAL TRUE VALUE/MARKET VALUE RATIO 88.8%**

Building sketch and true value/market value breakdown for Parcel DT1: 220-222 North High Street
Photograph of Parcel DT2:

266 South High Street
TYPE OF PROPERTY: Building is now vacant

22' --- 1 story concrete block
37'
814 sq. ft.

43' --- 3 story brick with basement
946 sq. ft.

23' 506 sq. ft. --- 1 story brick with basement

22' --- 3 story brick with basement
50'
1,100 sq. ft.

TRUE VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
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<tr>
<td>BUILDING VALUE</td>
<td>$17,540.</td>
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<tr>
<td>TOTAL</td>
<td>$45,680.</td>
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MARKET VALUE

<table>
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<th>Value</th>
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<tbody>
<tr>
<td></td>
<td>$20,000.</td>
</tr>
</tbody>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 228.4%

Building sketch and true value/market value breakdown for Parcel DT2: 266 South High Street
Photograph of Parcel DT3:

52 West Gay Street
AREA: DT3

TYPE OF PROPERTY: Insurance Building

105.6'  
11.662 square feet

78.6'  111.6'  
6 story reinforced concrete stone exterior

1.6'  31'  26'  2'  78'

Insurance Company Building

<table>
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<th>MARKET VALUE</th>
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<tr>
<td>LAND VALUE</td>
<td>$ 241,910</td>
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<tr>
<td>BUILDING VALUE</td>
<td>$1,537,720</td>
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<tr>
<td>TOTAL</td>
<td>$1,779,630</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 118.6%

Building sketch and true value/market value breakdown for Parcel DT3: 52 West Gay Street
Photograph of Parcel DT4: 194-196-196½

East State Street
AREA: DT4

TYPE OF PROPERTY: Medical Building

<table>
<thead>
<tr>
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<th>MARKET VALUE</th>
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<tbody>
<tr>
<td>LAND VALUE $24,180.</td>
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<tr>
<td>BUILDING VALUE $114,720.</td>
<td>$90,000.</td>
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<td>TOTAL $138,900.</td>
<td>$110,000.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 126.3%

Building sketch and true value/market value breakdown for Parcel DT4: 194-196-196½ East State Street
Photograph of Parcel DT5: 260-266
South Fourth Street
AREAS: DT5

TYPE OF PROPERTY: Thrift Shop

LAND VALUE $27,000.
BUILDING VALUE $53,060.
TOTAL $80,060.

MARKET VALUE $32,400.
$10,000.
$42,400.

TOTAL TRUE VALUE/MARKET VALUE RATIO 188.8%

Building sketch and true value/market value breakdown for Parcel DT5: 260-266 South Fourth Street
Photograph of Parcel DT6:

62-64 East Broad Street
TYPE OF PROPERTY: The tenants consist of a bank and television station.

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TOTAL TRUE VALUE/MARKET VALUE RATIO 124.6%

Building sketch and true value/market value breakdown for Parcel DT6: 62-64 East Broad Street.
Photograph of Parcel DT7:

313 South Fifth Street
AREA: DT7

TYPE OF PROPERTY: Bar and Restaurant

15.6' - 271 sq. ft.
1 story brick

17.6' - 1 story brick

2 story brick with ½ basement

44' - 1,100 sq. ft.

25'

TRUE VALUE MARKET VALUE

LAND VALUE $1,780. $7,750.
BUILDING VALUE $3,590. $6,000.
TOTAL $5,370. $13,750.

TOTAL TRUE VALUE/MARKET VALUE RATIO 39.1%

Building sketch and true value/market value breakdown for Parcel DT7: 313 South Fifth Street
Photograph of Parcel DT8: 80-80½

East Long Street
AREA: DT8

TYPE OF PROPERTY: Drug Company

<table>
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<th>MARKET VALUE</th>
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<tbody>
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<td>LAND VALUE</td>
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<tr>
<td>BUILDING VALUE</td>
<td>$ 60,580.</td>
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<td>TOTAL</td>
<td>$101,490.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 101.5%

Building sketch and true value/market value breakdown for Parcel DT8: 80-80½ East Long Street
Photograph of Parcel DT9: 213-221

North Third Street
AREA: DT9

TYPE OF PROPERTY: Tenant is the Troy Laundry and Dry Cleaning, also offices

--- 4 story and basement brick building

11,668 square feet

TRUE VALUE

LAND VALUE $30,640.
BUILDING VALUE $83,170.
TOTAL $113,810.

MARKET VALUE

$35,000.
$35,000.
$70,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 162.6%

Building sketch and true value/market value breakdown for Parcel DT9: 213-221 North Third Street
Photograph of Parcel DT10:

40 South Skidmore
**AREA:** DT-10

**TYPE OF PROPERTY:** Commercial Building

![Building sketch](image)

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<tr>
<td>LAND VALUE</td>
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<td>BUILDING VALUE</td>
<td>$14,140.</td>
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<td>TOTAL</td>
<td>$18,730.</td>
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<tr>
<td>$ 6,500.</td>
<td>$11,500.</td>
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<tr>
<td>$18,000.</td>
<td>$18,000.</td>
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</table>

**TOTAL TRUE VALUE/MARKET VALUE RATIO 104.1%**

Building sketch and true value/market value breakdown for Parcel DT10: 40 South Skidmore
Photograph of Parcel DT11: 108-110

East Main Street
AREA: DT-11

TYPE OF PROPERTY: Music Sales and Service

<table>
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<tr>
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<tr>
<td>LAND VALUE</td>
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<td>BUILDING VALUE</td>
<td>$14,080.</td>
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<td>TOTAL</td>
<td>$29,550.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 90.9%

Building sketch and true value/market value breakdown for Parcel DT11: 108-110 East Main Street
Photograph of Parcel DT12:

479 West Broad Street
AREA: DT-12

TYPE OF PROPERTY: Electric Service Building

5,376 sq. ft.

1 story brick with basement

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<th>MARKET VALUE</th>
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</thead>
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<tr>
<td>LAND VALUE</td>
<td>$9,300.</td>
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<td>BUILDING VALUE</td>
<td>$57,630.</td>
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<td>TOTAL</td>
<td>$66,930.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 97.9%

Building sketch and true value/market value breakdown for Parcel DT12: 479 West Broad Street
Photograph of Parcel DT13:

59 West Starling Street
AREA: DT-13

TYPE OF PROPERTY: Soap and Chemical Company

TRUE VALUE

LAND VALUE $4,500.
BUILDING VALUE $12,600.
TOTAL $17,100.

MARKET VALUE

$14,400.
$18,500.
$32,900.

TOTAL TRUE VALUE/MARKET VALUE RATIO 52.0%

Building sketch and true value/market value breakdown for Parcel DT13: 59 West Starling Street
Photograph of Parcel DT14:

99 West Rich Street
AREA: DT-14

TYPE OF PROPERTY: Grill with apartments above

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
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<tbody>
<tr>
<td>LAND VALUE</td>
<td>$12,500.</td>
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<tr>
<td>BUILDING VALUE</td>
<td>$3,930.</td>
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<td>$16,430.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 92.8%

Building sketch and true value/market value breakdown for Parcel DT14: 99 West Rich Street
Photograph of Parcel DT15:

47 West Mound Street
AREA: DT-15

TYPE OF PROPERTY: Restaurant and Laundry Supplies

TRUE VALUE         MARKET VALUE

LAND VALUE     $7,680.        $ 9,000.
BUILDING VALUE $1,820.        $ 3,000.
TOTAL             $9,500.       $12,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 79.2%

Building sketch and true value/market value breakdown for Parcel DT15: 47 West Mound Street
Photograph of Parcel DT16: 247-251

South High Street
TYPE OF PROPERTY: The tenants are a cleaners, and also an appliance store

2,582 square feet
3 story brick building with basement

TRUE VALUE MARKET VALUE

<table>
<thead>
<tr>
<th></th>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
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</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
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<td>$55,000.</td>
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<tr>
<td>BUILDING VALUE</td>
<td>$30,350.</td>
<td>$10,000.</td>
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<td>TOTAL</td>
<td>$94,060.</td>
<td>$65,000.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 144.7%

Building sketch and true value/market value breakdown for Parcel DT16: 247-251 South High Street
Photograph of Parcel DT17:

142 North High Street
AREA: DT-17

TYPE OF PROPERTY: Electronics Store

$119,000
$22,070
$141,070

$150,000
$30,000
$180,000

TOTAL TRUE VALUE/MARKET VALUE RATIO 78.4%

Building sketch and true value/market value breakdown for Parcel DT17: 142 North High Street
Photograph of Parcel DT18:

227 North Front Street
AREA: DT-18

TYPE OF PROPERTY: Distributor for radio - television and air conditioners

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<tr>
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<td>TOTAL</td>
<td>$101,390.</td>
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<tr>
<td></td>
<td>$20,000.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 144.8%

Building sketch and true value/market value breakdown for Parcel DT18: 227 North Front Street
Photograph of Parcel DT19:

73-77 Spring Street


**True Value**

<table>
<thead>
<tr>
<th>Description</th>
<th>True Value</th>
<th>Market Value</th>
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</thead>
<tbody>
<tr>
<td>Land Value</td>
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<td>Building Value</td>
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<tr>
<td>Total</td>
<td>$65,860.</td>
<td>$65,000.</td>
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**Total True Value/Market Value Ratio** 101.3%

Building sketch and true value/market value breakdown for Parcel DT19: 73-77 Spring Street
Photograph of Parcel DT20:

158 North Fourth Street
AREA: DT-20

TYPE OF PROPERTY: Electrical Appliance

25'
1,550 sq. ft.
62'
1 story concrete block

25'
1,500 sq. ft.
60'
1 story brick

TRUE VALUE                      MARKET VALUE

LAND VALUE                $11,120.  $26,000.
BUILDING VALUE            $12,680.  $ 8,700.
TOTAL                    $23,800.  $34,700.

TOTAL TRUE VALUE/MARKET VALUE RATIO 68.6%

Building sketch and true value/market value breakdown for Parcel DT20: 158 North Fourth Street
Photograph of Parcel DT21:
322 State Street
AREA: DT-21

TYPE OF PROPERTY: Professional Building

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
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<tbody>
<tr>
<td>LAND VALUE</td>
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<tr>
<td>BUILDING VALUE</td>
<td>$27,590.</td>
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<td>TOTAL</td>
<td>$51,590.</td>
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<td></td>
<td>$30,000.</td>
</tr>
<tr>
<td></td>
<td>$55,000.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 93.8%

Building sketch and true value/market value breakdown for Parcel DT21: 322 State Street
Photograph of Parcel DT22: 206-208

South Grant Street
AREA: DT-22

TYPE OF PROPERTY: Market

11' 4'
38' 35'
418 sq. ft.
10' 6'

Open front porch
170 sq. ft.

22.6'
35.6'
3 story brick
799 square feet

Wood Canopy
28 sq. ft.

TRUE VALUE

LAND VALUE $1,060.
BUILDING VALUE $5,390.
TOTAL $6,450.

MARKET VALUE

$ 5,000.
$ 7,000.
$12,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 53.8%

Building sketch and true value/market value breakdown for Parcel DT22: 206-208 South Grant Street
Photograph of Parcel N1:

1248 West Third Avenue
AREA: N-1

TYPE OF PROPERTY: Restaurant

TRUE VALUE

LAND VALUE $11,060.
BUILDING VALUE $14,820.
TOTAL $25,880.

MARKET VALUE

LAND VALUE $11,060.
BUILDING VALUE $14,820.
TOTAL $25,880.

TOTAL TRUE VALUE/MARKET VALUE RATIO 86.3%

Building sketch and true value/market value breakdown for Parcel N1: 1248 West Third Street
Photograph of Parcel N2:

2793 Indianola Avenue
TYPE OF PROPERTY: Heating, Air Conditioning and Plumbing

AREA: N2

TRUE VALUE MARKET VALUE

LAND VALUE $ 4,000. $12,000.
BUILDING VALUE $11,640. $ 6,500.
TOTAL $15,640. $18,500.

TOTAL TRUE VALUE/MARKET VALUE RATIO 84.5 %

Building sketch and true value/market value breakdown for Parcel N2: 2793 Indianola Avenue
Photograph of Parcel N3:

1063 Dublin Road
AREA: N-3

TYPE OF PROPERTY: Food Machine Building

97'
6,305 sq. ft.
1 story
concrete
block

65'

TRUE VALUE
LAND VALUE $12,480.
BUILDING VALUE $29,310.
TOTAL $41,790.

MARKET VALUE
$12,480. $30,000.
$29,310. $35,000.
$41,790. $65,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 64.3%

Building sketch and true value/market value breakdown for Parcel N3: 1063 Dublin Road
Photograph of Parcel N4: 1716-1726 North High Street
AREA: N4

TYPE OF PROPERTY: Tenants are a theater, bar

TRUE VALUE                MARKET VALUE

LAND VALUE       $ 48,000.            $100,000.
BUILDING VALUE   $116,040.           $ 25,000.
TOTAL            $164,040.           $125,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 131.2%

Building sketch and true value/market value breakdown for Parcel N4: 1716-1726 North High Street
Photograph of Parcel N5:

1573 North High Street
AREA:  N-5

TYPE OF PROPERTY:  Market

TRUE VALUE

LAND VALUE  $ 7,430.
BUILDING VALUE $11,490.
TOTAL  $18,920.

MARKET VALUE

$ 7,500.
$10,000.
$17,500.

TOTAL TRUE VALUE/MARKET VALUE RATIO 108.1%

Building sketch and true value/market value breakdown for Parcel N5:  1573 North High Street
Photograph of Parcel N6: 1376-1380

Holly Avenue
AREA: N-6

TYPE OF PROPERTY: Printing Company

1 story brick and concrete block printing company

128' x 128' = 12,523 sq. ft.

LAND VALUE $11,230.00 $14,000.00
BUILDING VALUE $59,110.00 $60,000.00
TOTAL $70,340.00 $74,000.00

TOTAL TRUE VALUE/MARKET VALUE RATIO 95.1%

Building sketch and true value/market value breakdown for Parcel N6: 1376-1380 Holly Avenue
Photograph of Parcel N7:

4290 North High Street
TYPE OF PROPERTY: Small Shopping Center
Tenants are Loughlin's Drugs, Perkins Pancake, Central Savings, Barber Shop

TRUE VALUE

<table>
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<tr>
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<td>$175,630.</td>
<td>$325,000.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 54.0%

Building sketch and true value/market value breakdown for Parcel N7: 4290 North High Street
Photograph of Parcel N8:

590 Oakland Park
AREA: N8

TYPE OF PROPERTY: Lumber Company

48' 6,144 square feet
1 story stone and concrete
block

128'

TRUE VALUE

MARKET VALUE

BUILDING VALUE $28,120. $43,000.
TOTAL $53,280. $76,550.

TOTAL TRUE VALUE/MARKET VALUE RATIO 69.6%

Building sketch and true value/market value breakdown for Parcel N8: 590 Oakland Park
Photograph of Parcel N9:

- 686 Grandview Avenue
AREA: N-9

TYPE OF PROPERTY: Automobile Painting

TRUE VALUE

LAND VALUE $12,630.
BUILDING VALUE $31,020.
TOTAL $43,650.

MARKET VALUE

$40,000.
$30,000.
$70,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 62.4%

Building sketch and true value/market value breakdown for Parcel N9: 686 Grandview Avenue
Photograph of Parcel N10:

7511 Eleventh Avenue
AREA: N10

TYPE OF PROPERTY: Auto Parts Building

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<td>$35,710.</td>
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TOTAL TRUE VALUE/MARKET VALUE RATIO 57.2%

Building sketch and true value/market value breakdown for Parcel N10: 7511 Eleventh Avenue
Photograph of Parcel N11:

364 West First Avenue
AREA: N-11

TYPE OF PROPERTY: Variety Store

2 story brick
Variety Store

52'

1,456 sq. ft.

28'

TRUE VALUE

| LAND VALUE | $1,380. |
| BUILDING VALUE | $13,100. |
| TOTAL | $14,480. |

MARKET VALUE

| | $3,000. |
| | $12,000. |
| | $15,000. |

TOTAL TRUE VALUE/MARKET VALUE RATIO 96.5%

Building sketch and true value/market value breakdown for Parcel N11: 364 West First Avenue
Photograph of Parcel N12:

537 Bonham Street
AREA: N12

TYPE OF PROPERTY: Commercial Building

TRUE VALUE

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MARKET VALUE

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<tbody>
<tr>
<td>Land Value</td>
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</tr>
<tr>
<td>Building Value</td>
<td>$25,000.</td>
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<tr>
<td>Total</td>
<td>$35,000.</td>
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</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 83.7%

Building sketch and true value/market value breakdown for Parcel N12: 537 Bonham Street
Photograph of Parcel N13:

1812 West Fifth Avenue
AREA: N-13

TYPE OF PROPERTY: Cleaners

30'

3,510
sq. ft.

117'

1 story
brick

TRUE VALUE | MARKET VALUE
---|---
LAND VALUE | $ 5,670. | $10,000.
BUILDING VALUE | $14,250. | $30,000.
TOTAL | $19,920. | $40,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 49.8%

Building sketch and true value/market value breakdown for Parcel N13: 1812 West Fifth Avenue
Photograph of Parcel N14:

1187 Cleveland Avenue
AREA: N14

TYPE OF PROPERTY: Distributing Company

193

40'
5,360 sq. ft.
134'
1 story brick

TRUE VALUE
LAND VALUE $ 4,680.
BUILDING VALUE $18,010.
TOTAL $22,690.

MARKET VALUE
$13,000.
$30,000.
$43,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 52.8%

Building sketch and true value/market value breakdown for Parcel N14: 1187 Cleveland Avenue
Photograph of Parcel N15:

139 East Third Avenue
AREA: N15

TYPE OF PROPERTY: Commercial Building

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$ 1,870.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$15,930.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$17,800.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 59.3%

Building sketch and true value/market value breakdown for Parcel N15: 139 East Third Avenue
Photograph of Parcel N16:

184 East Fifth Avenue
AREA: N16

TYPE OF PROPERTY: Heating Company

1 story concrete block
35'
70'
2,450 sq. ft.

1 story concrete block
80'
2,400 sq. ft.
30'

TRUE VALUE | MARKET VALUE
---|---
LAND VALUE | $3,500. | $10,500.
BUILDING VALUE | $23,430. | $39,500.
TOTAL | $26,930. | $50,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 53.9%

Building sketch and true value/market value breakdown for Parcel N16: 184 East Fifth Avenue
Photograph of Parcel N17:

899 Weber Road
AREA: N-17

TYPE OF PROPERTY: Auto Parts Building

1 story concrete block
Auto Parts building

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$4,500.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$6,940.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$11,440.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 81.7%

Building sketch and true value/market value breakdown for Parcel N17: 899 Weber Road
Photograph of Parcel N18:

1724 Northwest Boulevard
AREA: N-18

TYPE OF PROPERTY: Beauty Salon and Furniture Store

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$5,030.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$15,890.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$20,920.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 46.5%

Building sketch and true value/market value breakdown for Parcel N18: 1724 Northwest Boulevard
Photograph of Parcel N19:

1291 West Lane Avenue
AREA: N-19

TYPE OF PROPERTY: Bowling Alley

TRUE VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Value</td>
<td>$116,850.</td>
</tr>
<tr>
<td>Building Value</td>
<td>$208,360.</td>
</tr>
<tr>
<td>Total</td>
<td>$325,210.</td>
</tr>
</tbody>
</table>

MARKET VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Value</td>
<td>$60,000.</td>
</tr>
<tr>
<td>Building Value</td>
<td>$240,000.</td>
</tr>
<tr>
<td>Total</td>
<td>$300,000.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 108.4%

Building sketch and true value/market value breakdown for Parcel N19: 1291 West Lane Avenue
Photograph of Parcel N20: Corner of Third and Olentangy Boulevard
AREA: N-20

TYPE OF PROPERTY: Bank

Stone Canopy

3,575 sq. ft.  44'
26' 31' 50'

3,800 sq. ft.  30'
15' 30' 44'

930 sq. ft.
15' 62'

TRUE VALUE

LAND VALUE  $ 47,630.
BUILDING VALUE  $216,600.
TOTAL  $264,230.

MARKET VALUE

$ 50,000.
$130,000.
$180,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 146.7%

Building sketch and true value/market value breakdown for Parcel N20: Corner of Third and Olentangy Boulevard
Photograph of Parcel S1: 1360-1366

South Parsons Avenue
AREA: S-1

TYPE OF PROPERTY: Tire Company

TRUE VALUE

LAND VALUE $9,940.
BUILDING VALUE $7,360.
TOTAL $18,330.

MARKET VALUE

$20,000.
$12,800.
$32,800.

TOTAL TRUE VALUE/MARKET VALUE RATIO 55.9%

Building sketch and true value/market value breakdown for Parcel S1: 1360-1366 South Parsons Avenue
Photograph of Parcel S2:

450 Greenlawn Avenue
AREA: S-2

TYPE OF PROPERTY: Oxygen Company

101'

7,979 sq. ft.
1 story brick

TRUE VALUE

LAND VALUE $5,110.  BUILDING VALUE $31,120.  TOTAL $36,230.

MARKET VALUE

$24,000.  $32,000.  $56,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 64.7%

Building sketch and true value/market value breakdown for Parcel S2: 450 Greenlawn Avenue
Photograph of Parcel S3:

1900 South High Street
AREA: S-3

TYPE OF PROPERTY: Auto Parts Building

1 story concrete block
55.6'
39.6'
2,192 sq. ft.

1 story concrete block
19.6' 36'
2,160 sq. ft.

1 story stucco & frame
60'
1,080 sq. ft.
30' 36'

TRUE VALUE

LAND VALUE $5,080.
BUILDING VALUE $17,190.
TOTAL $22,270.

MARKET VALUE

$11,400.
$27,000.
$38,400.

TOTAL TRUE VALUE/MARKET VALUE RATIO 58.0%

Building sketch and true value/market value breakdown for Parcel S3: 1900 South High Street
Photograph of Parcel S4:

995 Lockbourne Avenue
AREA: S4

TYPE OF PROPERTY: Small Market

1 story frame building

16' 2'
10' 9.6'
236 sq. ft.

2 story brick building

42'
1,092 square feet

20' 10'

1,500.
14,670.
16,170.
4,500.
12,500.
17,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 95.1%

Building sketch and true value/market value breakdown for Parcel S4: 995 Lockbourne Avenue
Photograph of Parcel S5:

1224 South High Street
AREA: S5

TYPE OF PROPERTY: Furniture Store

2,760 sq. ft.
60'
1 story brick

2 story tile
80'
3,360 sq. ft.
42'

TRUE VALUE

LAND VALUE $ 5,010.
BUILDING VALUE $43,440.
TOTAL $48,450.

MARKET VALUE

$18,500.
$46,500.
$65,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 74.5 %

Building sketch and true value/market value breakdown for Parcel S5: 1224 South High Street
Photograph of Parcel S6:

581 South High Street
AREA: S6

TYPE OF PROPERTY:

1 story concrete block and partial basement

True Value

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Value</td>
<td>$27,630.</td>
</tr>
<tr>
<td>Building Value</td>
<td>$146,140.</td>
</tr>
<tr>
<td>Total</td>
<td>$173,770.</td>
</tr>
</tbody>
</table>

Market Value

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$228,000.</td>
</tr>
</tbody>
</table>

Total True Value/Market Value Ratio 76.2%

Building sketch and true value/market value breakdown for Parcel S6: 581 South High Street
Photograph of Parcel S7: 809

South Eighteenth Street
AREA: S-7

TYPE OF PROPERTY: Grocery Store

1 story frame building with basement

672 square feet

TRUE VALUE

LAND VALUE $1,960.  
BUILDING VALUE $3,020.  
TOTAL $4,980.

MARKET VALUE

$5,500.  
$2,000.  
$7,500.

TOTAL TRUE VALUE/MARKET VALUE RATIO 66.4%

Building sketch and true value/market value breakdown for Parcel S7: 809 South Eighteenth Street
Photograph of Parcel S8: Northeast corner of Reeb Avenue and Parsons Avenue
AREA: S-8

TYPE OF PROPERTY: Grocery Store

1 story brick & concrete block

18,600 sq. ft.

20' x 8' = 160 sq. ft.

155'

LAND VALUE $ 2,930.
BUILDING VALUE $146,080.
TOTAL $149,010.

MARKET VALUE $ 21,000.
$149,000.
$170,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 87.7%

Building sketch and true value/market value breakdown for Parcel S8: Northeast corner of Reeb Avenue and Parsons Avenue
Photograph of Parcel S9:

1271 Alum Creek Drive
AREA: S-9

TYPE OF PROPERTY: Construction Company

1 story concrete block

87'

3,480 sq. ft.

40'

TRUE VALUE

LAND VALUE $ 9,370.
BUILDING VALUE $17,870.
TOTAL $27,240.

MARKET VALUE

$17,500.
$20,000.
$37,500.

TOTAL TRUE VALUE/MARKET VALUE RATIO 72.6%

Building sketch and true value/market value breakdown for Parcel S9: 1271 Alum Creek Drive
Photograph of Parcel S10:

3262 Refugee Road
**AREA:** S10

**TYPE OF PROPERTY:** Party House

---

**TRUE VALUE** | **MARKET VALUE**
--- | ---
LAND VALUE $ 9,000. | $ 60,000.
BUILDING VALUE $ 95,220. | $ 140,000.
TOTAL $ 104,220. | $ 200,000.

**TOTAL TRUE VALUE/MARKET VALUE RATIO 52.1 %**

Building sketch and true value/market value breakdown for Parcel S10: 3262 Refugee Road
Photograph of Parcel S11:

1174 Whittier Street
AREA: S-11

TYPE OF PROPERTY: Bakery Store

12.6' 8.6' 115 sq. ft.
28' 2 story brick
72'
2,016 sq. ft.
45 sq. ft.
9' 16' 80 sq. ft.

TRUE VALUE                      MARKET VALUE

LAND VALUE   $ 1,970.              $ 6,000.
BUILDING VALUE $22,120.           $25,000.
TOTAL        $24,090.              $31,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 77.7%

Building sketch and true value/market value breakdown for Parcel S11: 1174 Whittier Street
Photograph of Parcel E1:

2572-78 Cleveland Avenue
AREAI E-1 229

TYPE OF PROPERTY: Grocery Store

9,100 sq. ft. 1 story tile and partial basement

TRUE VALUE MARKET VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>True Value</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$16,850</td>
<td>$17,550</td>
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<tr>
<td>BUILDING VALUE</td>
<td>$50,260</td>
<td>$54,600</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$67,110</td>
<td>$72,150</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 93.0%

Building sketch and true value/market value breakdown for Parcel El: 2572-78 Cleveland Avenue
Photograph of Parcel E2: 3100-3102-3104-
3106 East Main Street
AREA: E-2

TYPE OF PROPERTY: Furniture Store

BUILDING SKETCH AND TRUE VALUE/MARKET VALUE BREAKDOWN FOR PARCEL E2: 3100-3102-3104-3106 EAST MAIN STREET
Photograph of Parcel E3:

1229-31 East Mound Street
1 story frame appliance building

39' x 31.6'
1,229 sq. ft.

TRUE VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$1,100.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$3,040.</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$4,140.</strong></td>
</tr>
</tbody>
</table>

MARKET VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$1,000.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$2,500.</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$3,500.</strong></td>
</tr>
</tbody>
</table>

**TOTAL TRUE VALUE/MARKET VALUE RATIO 118.3%**

Building sketch and true value/market value breakdown for Parcel E3: 1229-31 East Mound Street
Photograph of Parcel E4:

935 James Road
AREA: E-4

TYPE OF PROPERTY: Small Shopping Center

TRUE VALUE

LAND VALUE $61,430.
BUILDING VALUE $306,510.
TOTAL $367,940.

MARKET VALUE

$125,000.
$325,000.
$450,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 81.8%

Building sketch and true value/market value breakdown for Parcel E4: 935 James Road
Photograph of Parcel E5:

320-322 Taylor Avenue
AREA: E-5

TYPE OF PROPERTY: Small Grocery Store and a Lounge which is attached

2,128 sq. ft.

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$ 2,970.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$ 7,820.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$10,790.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 59.9%

Building sketch and true value/market value breakdown for Parcel E5: 320-322 Taylor Avenue
Photograph of Parcel E6:

1687 Leonard Avenue
TYPE OF PROPERTY: Body Shop

TRUE VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$1,730.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$13,770.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$15,500.</td>
</tr>
</tbody>
</table>

MARKET VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$5,000.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$21,000.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$26,000.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 59.6%

Building sketch and true value/market value breakdown for Parcel E6: 1687 Leonard Avenue
Photograph of Parcel E7: 72–72½–76–78

South Eighteenth Street
AREA: E7

TYPE OF PROPERTY: Building occupied by Glass Company and Wine Store

1 story brick

47' 46' 20' 21' 420 sq. ft.
79.6' 1' 18' 21' 378 sq. ft.
3,010 sq. ft. 1,536 sq. ft.
32' 2 story brick
30' 48'

TRUE VALUE

LAND VALUE $4,750.
BUILDING VALUE $16,870.
TOTAL $21,620.

MARKET VALUE

$7,000.
$28,000.
$35,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 61.8%

Building sketch and true value/market value breakdown for Parcel E7: 72-72½-76-78 South Eighteenth Street
Photograph of Parcel E8:

741 East Broad Street
AREA: E8

TYPE OF PROPERTY: Office Building

2 story brick and stone with partial basement

48'

100'

4,800 sq. ft.

TRUE VALUE MARKET VALUE

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$38,850.</td>
<td>$60,000.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$147,420.</td>
<td>$95,000.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$186,270.</td>
<td>$155,000.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 120.2%

Building sketch and true value/market value breakdown for Parcel E8: 741 East Broad Street
Photograph of Parcel E9:

2924 East Fifth Avenue
**AREA:** E-9

**TYPE OF PROPERTY:** Music Store

---

**1 story concrete block**

60'  

1,980 sq. ft.

---

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$1,980.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$12,290.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$14,270.</td>
</tr>
</tbody>
</table>

**TOTAL TRUE VALUE/MARKET VALUE RATIO 54.9%**

Building sketch and true value/market value breakdown for Parcel E9: 2924 East Fifth Avenue
Photograph of Parcel E10:

2862 East Main Street
AREA: E-10

TYPE OF PROPERTY:  Furniture Store

2 story
cement
block 19'
Mezz.
floor

9,520 sq. ft.
1 story
cement
block

TRUE VALUE  MARKET VALUE

<table>
<thead>
<tr>
<th>LAND VALUE</th>
<th>$34,990.</th>
<th>$50,000.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILDING VALUE</td>
<td>$53,520.</td>
<td>$60,000.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$88,510.</td>
<td>$110,000.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 80.5%

Building sketch and true value/market value breakdown for Parcel E10: 2862 East Main Street
Photograph of Parcel Ell:

3059 East Mound Street
AREA: E-11

TYPE OF PROPERTY: Cement Company

<table>
<thead>
<tr>
<th>1 story brick</th>
<th>1 story brick &amp; concrete block</th>
</tr>
</thead>
<tbody>
<tr>
<td>60'</td>
<td>60'</td>
</tr>
<tr>
<td>870 sq. ft.</td>
<td>2,400 sq. ft.</td>
</tr>
<tr>
<td>14.6'</td>
<td>40'</td>
</tr>
</tbody>
</table>

TRUE VALUE                  MARKET VALUE
LAND VALUE    $ 4,440.       $10,000.  
BUILDING VALUE $49,700.  $32,500.  
TOTAL         $54,140.       $42,500.  

TOTAL TRUE VALUE/MARKET VALUE RATIO 127.4%

Building sketch and true value/market value breakdown for Parcel Ell: 3059 East Mound Street
Photograph of Parcel E12:

1664 Hudson Street
TYPE OF PROPERTY:

1 story concrete block

TRUE VALUE

LAND VALUE $ 3,600.
BUILDING VALUE $13,660.
TOTAL $17,260.

MARKET VALUE

$ 9,000.
$11,900.
$20,900.

TOTAL TRUE VALUE/MARKET VALUE RATIO 82.6%

Building sketch and true value/market value breakdown for Parcel E12: 1664 Hudson Street
Photograph of Parcel E13:

2591 East Granville Road
AREA: E-13

TYPE OF PROPERTY: Tool Rental and Sales Building

1 story concrete block

25' x 50'

1,250 sq. ft.

TRUE VALUE

LAND VALUE $2,560.
BUILDING VALUE $5,820.
TOTAL $8,380.

MARKET VALUE

$15,000.
$6,500.
$21,500.

TOTAL TRUE VALUE/MARKET VALUE RATIO 39.0%

Building sketch and true value/market value breakdown for Parcel E13: 2591 East Granville Road
Photograph of Parcel El4:

3152 Oakland Park
**AREA:** E-14

**TYPE OF PROPERTY:** Filling Station

1,296 square feet
27'
1 story enamel steel
48'

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$9,060.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$18,500.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$27,560.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO  65.6%

Building sketch and true value/market value breakdown for Parcel E14: 3152 Oakland Park
Photograph of Parcel El5:

2462 Parkwood Avenue
TYPE OF PROPERTY: Tenants consist of a Market, Confectionery, and Barber Shop.

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$2,840.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$6,680.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$9,520.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 64.1%

Building sketch and true value/market value breakdown for Parcel E15: 2462 Parkwood Avenue
Photograph of Parcel E16:

2111 East Main Street
AREA: E-16

TYPE OF PROPERTY: Commercial Building

120 sq. ft.
8' 1 story tile with partial basement 8' 96 sq. ft.

8,000 sq. ft.

TRUE VALUE           MARKET VALUE

LAND VALUE  $40,950.  $ 55,000.
BUILDING VALUE $46,510.  $ 95,000.
TOTAL       $87,460.  $150,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 58.3%

Building sketch and true value/market value breakdown for Parcel E16: 2111 East Main Street
Photograph of Parcel W1:

3099 Sullivant Avenue
AREA: W-1

TYPE OF PROPERTY: Professional Building

1,631 sq. ft.

495 sq. ft. 345 sq. ft. 43.6'
2 story brick & basement

18.6' 13' 37.6'

6' 48 sq. ft. Open front porch

TRUE VALUE

LAND VALUE $7,110. BUILDING VALUE $37,210. TOTAL $44,320.

MARKET VALUE

$18,500. $106,500. $125,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 35.5%

Building sketch and true value/market value breakdown for Parcel W1: 3099 Sullivant Avenue
Photograph of Parcel W2:

2776 Sullivant Avenue
AREA: W-2

TYPE OF PROPERTY: Tenants: Capitol Donut and Goodwin's Pharmacy

1 story brick with partial basement
6,502 sq. ft.
90'

TRUE VALUE
LAND VALUE $12,170.
BUILDING VALUE $31,560.
TOTAL $43,730.

MARKET VALUE
$27,000.
$63,000.
$90,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 48.6%

Building sketch and true value/market value breakdown for Parcel W2: 2776 Sullivant Avenue
Photograph of Parcel W3:

1355 West Mound Street
AREA:  W-3

TYPE OF PROPERTY:  Trailer Body Company

120'
8,640 sq. ft.
72'
1 story concrete block

40'
800 sq. ft.
1 story concrete block

TRUE VALUE                                      MARKET VALUE

LAND VALUE   $ 72,220.                   $40,000.
BUILDING VALUE $ 52,220.                $40,000.
TOTAL        $124,440.                 $80,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 155.0%

Building sketch, and true value/market value breakdown for Parcel W3:  1355 West Mound Street
Photograph of Parcel W4:

1350 West Broad Street
AREA: W-4

TYPE OF PROPERTY: Automobile Sales and Service

<table>
<thead>
<tr>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$ 5,930.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$21,520.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$27,450.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 61.0%

Building sketch and true value/market value breakdown for Parcel W4: 1350 West Broad Street
Photograph of Parcel W5:

1272 West Town Street
AREA: W-5

TYPE OF PROPERTY: Small Market

1 story brick & stucco
1,800 sq. ft.

TRUE VALUE
LAND VALUE $ 2,930.  
BUILDING VALUE $ 8,610.  
TOTAL $11,540.  

MARKET VALUE
$35,000.  
$0.  
$35,000.  

TOTAL TRUE VALUE/MARKET VALUE RATIO 33.0%

Building sketch and true value/market value breakdown for Parcel W5: 1272 West Town Street
Photograph of Parcel W6:

460 Wilson Road
AREA: W-6

TYPE OF PROPERTY: Hobby Shop

40'

100'

4,000 sq. ft.

1 story
concrete
block

TRUE VALUE  MARKET VALUE

LAND VALUE $ 7,440.  $30,000.
BUILDING VALUE $19,010.  $35,000.
TOTAL $26,450.  $65,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 40.7%

Building sketch and true value/market value breakdown for Parcel W6: 460 Wilson Road
Photograph of Parcel W7:

1271 Sullivant Avenue
AREA: W-7

TYPE OF PROPERTY: Automobile Garage

41'
1,517 sq. ft.
1 story concrete block garage

TRUE VALUE    MARKET VALUE

LAND VALUE    $3,320.    $ 6,000.
BUILDING VALUE $4,900.    $ 6,500.
TOTAL        $8,220.    $12,500.

TOTAL TRUE VALUE/MARKET VALUE RATIO 65.8 %

Building sketch and true value/market value breakdown for Parcel W7: 1271 Sullivant Avenue
Photograph of Parcel W8:

780 West Town Street
AREA: W-8

TYPE OF PROPERTY: Snack Bar

4.6' x 3.6' = 16 sq. ft.

920 square feet

1 story

Concrete block Snack bar

Frame Canopy

36' x 40' = 1440 sq. ft.

240 sq. ft.

TRUE VALUE MARKET VALUE

LAND VALUE $3,300. $ 6,500.
BUILDING VALUE $5,260. $ 4,500.
TOTAL $8,560. $11,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 77.8%

Building sketch and true value/market value breakdown for Parcel W8: 780 West Town Street
Photograph of Parcel W9:

801 Harrisburg Pike
AREA: W-9

TYPE OF PROPERTY: Bowling Alley

150'
25.6'
140'
19,800 sq. ft.
145'
1 story concrete block
15,772 sq. ft.
1 story concrete block
173'
147.6'
67'
62'
11'
11'
67'
2.6'
11'
81'

TRUE VALUE

LAND VALUE $ 47,750.
BUILDING VALUE $180,900.
TOTAL $228,650.

MARKET VALUE

$ 80,000.
$ 40,000.
$120,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 190.5%

Building sketch and true value/market value breakdown for Parcel W9: 801 Harrisburg Pike
Photograph of Parcel CN1: 26 East Columbia Street, Hilliard
TYPE OF PROPERTY: Appliance store with laundromat to the rear

1 story concrete block

<table>
<thead>
<tr>
<th>1,300 sq. ft.</th>
<th>1,170 sq. ft.</th>
<th>1,135 sq. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>26'</td>
<td>26'</td>
<td>20'</td>
</tr>
<tr>
<td>50'</td>
<td>45'</td>
<td></td>
</tr>
</tbody>
</table>

TRUE VALUE

| Land Value | $4,680. |
| Building Value | $18,630. |
| Total | $23,310. |

MARKET VALUE

| Land Value | $15,000. |
| Building Value | $55,000. |
| Total | $70,000. |

TOTAL TRUE VALUE/MARKET VALUE RATIO 33.3%

Building sketch and true value/market value breakdown for Parcel CN1: 26 East Columbia Street, Hilliard
Photograph of Parcel CN2: 49 Main Street, Hilliard
AREA: CN2

TYPE OF PROPERTY: Dry Cleaners

TRUE VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$2,200.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$21,110.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$23,310.</td>
</tr>
</tbody>
</table>

MARKET VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$5,000.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$20,000.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$25,000.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 93.2%

Building sketch and true value/market value breakdown for Parcel CN2: 49 Main Street, Hilliard
Photograph of Parcel CN3: 254 West Main Street, Hilliard
AREA: CN3

TYPE OF PROPERTY: Drug Store

Concrete Block

60'

Brick

100'

6,000 sq. ft.

1 story brick and concrete block drugstore

Canopy

10'

TRUE VALUE

LAND VALUE $ 7,800.
BUILDING VALUE $47,120.
TOTAL $54,920.

MARKET VALUE

LAND VALUE $ 7,800.
BUILDING VALUE $24,700.
TOTAL $32,500.

TOTAL TRUE VALUE/MARKET VALUE RATIO 169.0%

Building sketch and true value/market value breakdown for Parcel CN3: 254 West Main Street, Hilliard
Photograph of Parcel CN4: 4996

Scioto Darby Creek Road
TYPE OF PROPERTY: Automobile Body Shop

1 story concrete block body shop

30'
1 story concrete block

40'
24'
960 sq. ft.

20'
10'
40'

1,600 sq. ft.

TRUE VALUE

LAND VALUE $2,060.
BUILDING VALUE $5,610.
TOTAL $7,670.

MARKET VALUE

$10,000.
$14,500.
$24,500.

TOTAL TRUE VALUE/MARKET VALUE RATIO 31.3%

Building sketch and true value/market value breakdown for Parcel CN4: 4996 Scioto Darby Creek Road
Photograph of Parcel CN5:  36

North High Street, Dublin
AREA: CN-5

TYPE OF PROPERTY: Television Shop

32'

1,792 sq. ft.

56'

1 story concrete block

TRUE VALUE                     MARKET VALUE

LAND VALUE  $1,200.             $6,000.
BUILDING VALUE  $6,780.         $9,000.
TOTAL  $7,980.                $16,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 49.9%

Building sketch and true value/market value breakdown for Parcel CN5: 36 North High Street, Dublin
Photograph of Parcel CN6: 6160 Linworth Road, Linworth
AREA: CN-6

TYPE OF PROPERTY: Television Shop and Truck Lettering

<table>
<thead>
<tr>
<th>1 story concrete block</th>
<th>1,500 sq. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>50'</td>
<td>50'</td>
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<tr>
<td>24'</td>
<td>30'</td>
</tr>
<tr>
<td>120 sq. ft.</td>
<td>4'</td>
</tr>
<tr>
<td>Canopy 30'</td>
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TRUE VALUE

<table>
<thead>
<tr>
<th>LAND VALUE</th>
<th>$ 3,650.</th>
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</thead>
<tbody>
<tr>
<td>BUILDING VALUE</td>
<td>$13,680.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$17,330.</td>
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</table>

MARKET VALUE

<table>
<thead>
<tr>
<th>LAND VALUE</th>
<th>$10,000.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILDING VALUE</td>
<td>$25,200.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$35,200.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 49.2%

Building sketch and true value/market value breakdown for Parcel CN6: 6160 Linworth Road, Linworth
Photograph of Parcel CN7: 2309

Granville Road
AREA: CN-7

TYPE OF PROPERTY: Tractor Sales and Service

TRUE VALUE | MARKET VALUE
---|---
LAND VALUE | $2,460. | $11,000.
BUILDING VALUE | $24,710. | $44,000.
TOTAL | $27,170. | $55,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 49.4 %

Building sketch and true value/market value breakdown for Parcel CN7: 2309 Granville Road
Photograph of Parcel CS1: 152 West Waterloo Street, Canal Winchester
AREA: CS-1

TYPE OF PROPERTY: Grocery Store

1 story concrete block Market

24'

768 sq. ft.

32' 50'

5,000 sq. ft.

TRUE VALUE

LAND VALUE $11,770.
BUILDING VALUE $39,350.
TOTAL $51,120.

MARKET VALUE

$21,000.
$57,000.
$78,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 65.5%

Building sketch and true value/market value breakdown for Parcel CS1: 152 West Waterloo Street, Canal Winchester
Photograph of Parcel CS2: 45 East Waterloo Street, Canal Winchester
AREA: CS-2

TYPE OF PROPERTY: Lumber Company

TRUE VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>True Value</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$2,000.</td>
<td>$20,000.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$29,210.</td>
<td>$80,000.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$31,210.</td>
<td>$100,000.</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 31.2%

Building sketch and true value/market value breakdown for Parcel CS2: 45 East Waterloo Street, Canal Winchester
Photograph of Parcel CS3:

6239 South High Street
AREA: CS-3

TYPE OF PROPERTY: Restaurant

1 story concrete block

52'

27.6'

30'

1,557 sq. ft.

49.6'

TRUE VALUE

LAND VALUE $ 4,000.
BUILDING VALUE $16,910.
TOTAL $20,910.

MARKET VALUE

$15,000.
$24,000.
$39,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 53.6%

Building sketch and true value/market value breakdown for Parcel CS3: 6239 South High Street
Photograph of Parcel CEL:

4444 East Livingston Avenue
AREA: CE-1

TYPE OF PROPERTY: Pharmacy

TRUE VALUE                        MARKET VALUE

LAND VALUE $ 26,170.       $28,000.
BUILDING VALUE $ 80,310.  $62,000.
TOTAL $106,480.         $90,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 118.3%

Building sketch and true value/market value breakdown for Parcel CE1: 4444 East Livingston Avenue
Photograph of Parcel CE2:

1193 Hamilton Road
AREA: CE-2

TYPE OF PROPERTY: Carryout

TRUE VALUE

LAND VALUE $3,060.
BUILDING VALUE $14,770.
TOTAL $17,830.

MARKET VALUE

$20,000.
$15,000.
$35,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 50.9%

Building sketch and true value/market value breakdown for Parcel CE2: 1193 Hamilton Road
Photograph of Parcel CE3:

5665 Claycraft Road
AREA: CE-3

TYPE OF PROPERTY: Industrial Plant

1 story concrete block building

| Measurement | TRUE VALUE | | MARKET VALUE |
|-------------|------------|----------------|
| LAND VALUE  | $16,400.   | $17,000.       |
| BUILDING VALUE | $60,570. | $50,000.       |
| TOTAL       | $76,970.   | $67,000.       |

TOTAL TRUE VALUE/MARKET VALUE RATIO 114.9%

Building sketch and true value/market value breakdown for Parcel CE3: 5665 Claycraft Road
Photograph of Parcel CE4: 32 East

Home Street, Westerville
AREA: CE-4

TYPE OF PROPERTY: Automobile Parts Building

<table>
<thead>
<tr>
<th></th>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND VALUE</td>
<td>$1,110.</td>
<td>$6,400.</td>
</tr>
<tr>
<td>BUILDING VALUE</td>
<td>$26,580.</td>
<td>$36,000.</td>
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<tr>
<td>TOTAL</td>
<td>$27,690.</td>
<td>$42,400.</td>
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</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 65.3%

Building sketch and true value/market value breakdown for Parcel CE4: 32 East Home Street, Westerville
Photograph of Parcel CE5: Southeast corner of State and College, Westerville
AREA: CE-5

TYPE OF PROPERTY: Drug Store

2 story brick

40'
13.6' 540 sq. ft.

40'

60'

2,280 sq. ft.

36'

TRUE VALUE

LAND VALUE $4,320.
BUILDING VALUE $18,400.
TOTAL $22,720.

MARKET VALUE

$15,000.
$58,000.
$73,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 31.1%

Building sketch and true value/market value breakdown for Parcel CE5: Southeast corner of State and College, Westerville
Photograph of Parcel CE6: 40 West Main Street, Westerville
**AREA:** CE-6

**TYPE OF PROPERTY:** Cleaners and Laundry Building

<table>
<thead>
<tr>
<th>Description</th>
<th>TRUE VALUE</th>
<th>MARKET VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAND VALUE</strong></td>
<td>$ 1,700.</td>
<td>$10,000.</td>
</tr>
<tr>
<td><strong>BUILDING VALUE</strong></td>
<td>$10,770.</td>
<td>$15,000.</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$12,470.</td>
<td>$25,000.</td>
</tr>
</tbody>
</table>

**TOTAL TRUE VALUE/MARKET VALUE RATIO** 49.9%

Building sketch and true value/market value breakdown for Parcel CE6: 40 West Main Street, Westerville
Photograph of Parcel CW1:

5800 West Broad Street
AREA: CW-1

TYPE OF PROPERTY: Motel

<table>
<thead>
<tr>
<th>13'</th>
<th>11'</th>
<th>49'</th>
</tr>
</thead>
<tbody>
<tr>
<td>338 sq. ft.</td>
<td>286 sq. ft.</td>
<td>1 story frame</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>49'</th>
</tr>
</thead>
<tbody>
<tr>
<td>26'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14'</th>
</tr>
</thead>
<tbody>
<tr>
<td>20'</td>
</tr>
<tr>
<td>280 sq. ft.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>27'</th>
<th>97'</th>
</tr>
</thead>
<tbody>
<tr>
<td>9'</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>320'</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,881 sq. ft.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>395'</th>
</tr>
</thead>
<tbody>
<tr>
<td>340' Canopy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>340'</th>
</tr>
</thead>
<tbody>
<tr>
<td>83'</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>20'</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,720 sq. ft.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>24'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>20'</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 sq. ft.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>40'</th>
</tr>
</thead>
<tbody>
<tr>
<td>8'</td>
</tr>
<tr>
<td>22'</td>
</tr>
</tbody>
</table>

TRUE VALUE  MARKET VALUE

| LAND VALUE | $18,560. | $ 75,000. |
| BUILDING VALUE | $112,270. | $130,000. |
| TOTAL | $130,830. | $205,000. |

TOTAL TRUE VALUE/MARKET VALUE RATIO 63.8%

Building sketch and true value/market value breakdown for Parcel CW1: 5800 West Broad Street
Photograph of Parcel CW2:

5384 West Broad Street
AREA: CW-2

TYPE OF PROPERTY: Dairy Chef

1 story concrete block Dairy Chef building

TRUE VALUE

| LAND VALUE  | $ 4,970. |
| BUILDING VALUE | $ 5,180. |
| TOTAL        | $10,150. |

MARKET VALUE

| LAND VALUE  | $ 9,200. |
| BUILDING VALUE | $11,500. |
| TOTAL        | $20,700. |

TOTAL TRUE VALUE/MARKET VALUE RATIO 49.0%

Building sketch and true value/market value breakdown for Parcel CW2: 5384 West Broad Street
Photograph of Parcel CW3:

3215 Harrisburg Pike
**AREA:** CW-3

**TYPE OF PROPERTY:** Savings & Loan Company with drive-in window

---

<table>
<thead>
<tr>
<th>32'</th>
<th>12'</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,024 sq. ft.</td>
<td>216 sq. ft.</td>
</tr>
<tr>
<td>32'</td>
<td>18'</td>
</tr>
<tr>
<td>1 story brick</td>
<td>Drive-in Window</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12'</th>
<th>12'</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,224 sq. ft.</td>
<td>Canopy</td>
</tr>
<tr>
<td>1 story brick</td>
<td>18'</td>
</tr>
<tr>
<td>with basement</td>
<td></td>
</tr>
<tr>
<td>8'</td>
<td>11'</td>
</tr>
</tbody>
</table>

**TRUE VALUE**

- **LAND VALUE** $7,500.
- **BUILDING VALUE** $50,770.
- **TOTAL** $58,270.

**MARKET VALUE**

- **LAND VALUE** $20,000.
- **BUILDING VALUE** $45,000.
- **TOTAL** $65,000.

**TOTAL TRUE VALUE/MARKET VALUE 89.6%**

Building sketch and true value/market value breakdown for Parcel CW3: 3215 Harrisburg Pike
Photograph of Parcel CW4:

3574 North Broadway
TYPE OF PROPERTY: Funeral Home

TRUE VALUE

<table>
<thead>
<tr>
<th>Description</th>
<th>True Value</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Value</td>
<td>$14,780</td>
<td>$55,000</td>
</tr>
<tr>
<td>Buildings Value</td>
<td>$71,500</td>
<td>$45,000</td>
</tr>
<tr>
<td>Total</td>
<td>$86,280</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

TOTAL TRUE VALUE/MARKET VALUE RATIO 86.3%

Building sketch and true value/market value breakdown for Parcel CW4: 3574 North Broadway
Photograph of Parcel CW5: 3400-3402

Hoover Road, Grove City
AREA: CW-5


9,840 sq. ft.
1 story concrete block

230 sq. ft.

5' 46'
82'

8' 960 sq. ft.

120'

TRUE VALUE

MARKET VALUE

LAND VALUE $14,090. $75,000.
BUILDING VALUE $81,870. $80,000.
TOTAL $95,960. $155,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO 61.9%

Building sketch and true value/market value breakdown for Parcel CW5: 3400-3402 Hoover Road, Grove City
Photograph of Parcel CW6: 3769 Franklin Avenue, Grove City
AREA: CW-6

TYPE OF PROPERTY: Auto Garage

105'

4,200 sq. ft.

1 story concrete block

40'

TRUE VALUE  MARKET VALUE

LAND VALUE   $ 4,220.  $17,000.
BUILDING VALUE $14,110.  $25,000.
TOTAL        $18,330.  $42,000.

TOTAL TRUE VALUE/MARKET VALUE RATIO  43.6%

Building sketch and true value/market value breakdown for Parcel CW6: 3769 Franklin Avenue, Grove City
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