

Chapter 11

Mass Appraisal of Farm and Ranch Properties

Mass appraisal of farm and ranch properties follows the same steps as appraisal of other types of property. The appraisal staff develops base unit values and applies these values, along with adjustments, to a large number of individual properties to establish accurate market value estimates.

Rural properties are bought for many reasons. Prices vary as reasons for buying change. Some of the reasons are:

- Income-producing capabilities from a farming operation.
- Income-producing capabilities and speculation.
- Speculation and development (dividing into smaller parcels and/or subdivisions).
- Amenities offered and supplemental income (smaller noneconomic units).

The procedures for mass appraisal of rural properties are:

- Classify the land as to soil capabilities and prepare soil classification maps;
- Establish value zones;
- Collect water rights information;
- Perform preappraisal set-up; and
- Reappraise area.

Land Classification

Land classification is conducted in the field with the use of aerial photos. Compare the photo to the field conditions to discover any changes that may have occurred since the photo was taken, such as clearing, leveling, or irrigation. Determine characteristics such as soil depth and texture. Soil classification lines are drawn directly on the aerial photo. Examine the aerial photos to identify the land capabilities and uses. Obvious physical features such as cultivated land and rock outcroppings can be identified on the photograph. Document any changes on the aerial photo.

Transfer the land classification details from the aerial photos to the soil classification maps. In this way, ownership lines, land classes and acreage by land class for each ownership, as well as roads, ditches, and streams are on each map.

Land classes may vary somewhat from county to county. However, the following classing system is considered basic and will apply in most instances. For complete descriptions of land classes and subsymbols, refer to the Department of Revenue's *Farm Use Assessment Procedures*, 150-303-422.

The major classes are identified by roman numerals I through VIII.

- Classes I through IV cover land that is, or could be, tilled. I is best and IV is least desirable. These categories are referred to as crop land.
- Classes V, VI, and VII cover land generally not tillable because of steep slopes, rocky soils, and other limiting factors.
- Class VIII is generally unusable land and is referred to as wasteland.

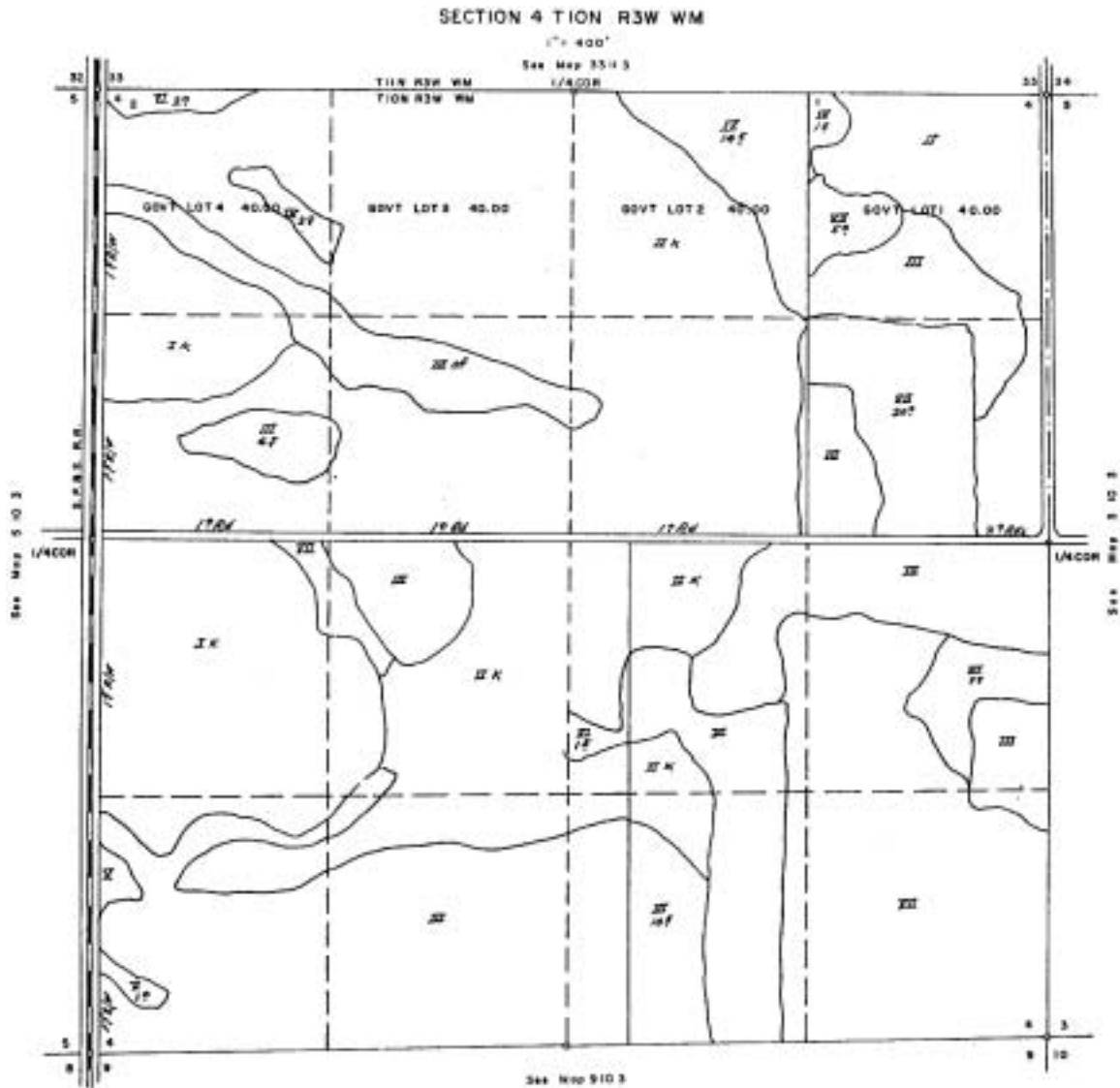
In addition to the eight major classes, nine subsymbols are available to further classify the land.

These are used in conjunction with the major classes:

k	river bottom soils
b	bench land
h	hill land
of	overflow
f	nontillable land—suitable for clearing
cg	clearing
cd	cleared
rv	reverted
m	meadow

To help determine land classes, obtain information and land capability from soil surveys made by the Soil Conservation Service (SCS). Also, in certain areas, the Bureau of Reclamation maps indicate irrigation potential, and Army Corps of Engineers maps indicate drainage and related qualities. Guides to other sources of information about land capabilities and classes are available from the county extension service. See the following soil classification map as an example.

Example of Soil Classification Map



Value Zones

Basic land class values are established on a per-acre basis for each class of land. It is often necessary to divide the county into value areas or zones. Geological or economic conditions might change the value for the same class of soil in different areas. Variables such as rainfall, frost zones, and distance to market centers can result in different values for the same class of land.

Water Rights

Irrigation is an important addition to the land, provided the land can respond to the water. The same amount of water applied to two different types of soil can produce different benefits. This may result in different value levels of contribution from the water.

Water right priorities are based on the date the water right was established. The earlier the water right is established, the greater the right to benefit from available water.

When a water right is secured for a parcel of land through the application and approval process, that right is adjudicated to the land. The value of the water is generally reflected in the land value. The exception is where the water is applied to different parcels of land within the ownership in different years. In these cases, and in areas where water rights can be sold separately, the water may be valued separately from the land.

Water for irrigation can be obtained from several sources. Information regarding these sources or water rights in general is available from:

- Irrigation district offices;
- District Water Master; and
- Water Resources Department.

Valuation of Water Rights

The value of water rights can be determined by comparing sales of similar land where one sale has water rights and another does not. Also, in areas where water rights are sold separately from the land, the value of the water right will be found in sales of the water right only. The local Water Master or Irrigation District should have record of sold rights.

In areas where the water rights are not sold separately, the value can be determined by capitalizing the added production from irrigation into an indication of value for the water.

Preappraisal Set-up

The steps are the same as discussed in Chapter 9. This chapter will focus on those procedures unique to farm and ranch properties.

Collect and Confirm Sales Data

Gather information concerning sales from sources such as deeds, realtors, and owners. Interview buyers and sellers to determine if sales are representative of the market. Verify the following sales information:

- Personal property involved;
- Building details;
- Acres of crop land and production;
- Need for crop deduction;
- Income and expense data;
- Participation in government programs; and
- Any other items relating to value.

Determine Crop Deduction

ORS 215.203, 307.315, 307.320, 307.325, and 321.267 (1)(e) define items grown on agriculture lands that are exempt from taxation. They include:

- Cultured Christmas trees;
- Deciduous trees;
- Shrubs;
- Plants or crops (annual or perennial);
- Hardwood timber;
- Nursery stock; and
- Agricultural products.

To make sure the value of the plants and crops are not included in the appraised value of the land, deduct the value of any deciduous trees, plants, and crops from sales before establishing base unit values.

For land in production (owner operator), deduct the value of any plants or crops included in a sale. Consider:

- The cost of the seed, shrub, nursery tree, or cutting;

- The cost of planting and establishing a crop;
- The risk involved;
 - ◆ Establishing the stand (loss implies replanting),
 - ◆ Continuing the stand (loss of an annual harvest); and
- The quality and quantity of the stand.

If you have enough sales of bare land to establish the base value, the statutory provisions will have been met. However, this probably won't occur except in areas that are primarily devoted to grain farming. In other areas, bare land sales may be only of sufficient quantity to provide a check on the value of the growing crop arrived at by the cost of establishing the stand.

You can get information about the cost of seed and planting costs from extension service offices, farmers, and others involved in agriculture.

For land not in production (bare) or leased land (no expenses to owner), no crop deduction is warranted.

Determine Base Unit Values

To develop an indication of value for each soil type contained in a sold property, rate the soils by their relative productivity. The typical productivity for each land class can be determined using information published by the Soil Conservation Service, Extension Service, or can be obtained directly from farmers. The indicated productivity is converted into percentages by using the predominate soil type as 100 percent.

The value for the one-acre homesite is developed from comparable land sales. Use the average price per acre method explained in Chapter 8. The on-site development (OSD) value is then added to the one-acre value.

Example:

Sales price	\$505,000	
House and garage	-75,000	
Out buildings	-45,000	
Machinery and equipment	-60,000	
Crop deduction	-2,500	(100 acres alfalfa @ \$25.00/acre)
1-acre homesite	-6,000	(developed from comparison to rural land sales + OSD)
Class VII 9 acres	<u>-1000</u>	(allocated @ \$100/acre)
Total	<u><u>-189,500</u></u>	
Residual to farmland	\$315,500	
Class II	100 acres	
Class III	180 acres	
Class IV	80 acres	
Class VII	<u>10 acres</u>	
Total size	370 acres	

Typical production Class II land = 6 ton alfalfa/acre

Typical production Class III land = 4 ton alfalfa/acre

Typical production Class IV land = 3.2 ton alfalfa/acre

Class III (4 ton) = 100%

6 ton ÷ 4 ton = 150% for class II

3.2 ton ÷ 4 ton = 80% for class IV

Class II 100 acres × 1.50 = 150

Class III 180 acres × 1.00 = 180

Class IV 80 acres × . 80 = 64

Total equivalent Class III acres 394

\$315,500 ÷ 394 = \$801 indicated average value per acre

Class II	Class III	Class IV
\$ 801 ×1.50 <hr/>	\$ 801 ×1.00 <hr/>	\$ 801 ×.80 <hr/>
\$1,201 per acre	\$801 per acre	\$640 per acre

Class II 100 acres × \$1,201 = \$120,100

Class III 180 acres × \$ 801 = \$144,180

Class IV 80 acres × \$ 640 = \$ 51,200

\$315,480 *

* Does not equal \$315,500 due to rounding

Income Approach to Establish Base Unit Values

In areas where sales are insufficient to establish base values for different land classes, use the income approach to develop an estimate of value.

Collect information about cash rents, share rents, production, and expenses from farmers, extension service, rural property managers, and lending agencies. Analyze the available sales to determine the expected rate of return by investors in agricultural properties. Convert the average income for each land class to an indication of value.

Developing Rate of Return

Sale #1 (\$17,000 down, balance @ 7%)	\$169,000
Improvements	– 85,000
Personal property	– 17,000
1 acre homesite (+OSD)	<u>– 6,000</u>
	– \$108,000
Net to farmland	\$ 61,000

Acres	Class	Rent/acre	Exp/acre	Typical net Income/acre	Net Income
65.0	III	\$41.75	\$2.75	\$39.00	\$2,535
25.0	V	\$18.75	\$.75	\$18.00	<u>\$ 450</u>
Total net income to farmland					<u><u>\$2,985</u></u>

$\$2,985 \div \$61,000 = 4.9\%$ overall rate (including taxes).

Each sale is analyzed as shown above. The indicated capitalization rates are tabulated into a final estimate of the applicable rate to be used.

Developing Base Unit Values by the Income Approach

After typical income for each class of farmland is established, divide the net income by the rate to develop the value for that class.

Example:

Class II

Net income \$59.00 per acre \div 4.9% = \$1,204

Class II base value \$1,200 (rounded)

Class III

Net income \$39.00 per acre \div 4.9% = \$ 796

Class III base value \$ 800 (rounded)

Class IV

Net income \$31.00 per acre \div 4.9% = \$ 633

Class IV base value \$ 630 (rounded)

Class V

Net income \$18.00 per acre \div 4.9% = \$ 367

Class V base value \$ 370 (rounded)

The indicated rate of return developed from sales of farm properties will usually be much lower than rates found from sales of other properties. This is due, in part, to the amenities involved but is primarily due to anticipated appreciation of the land value.

Developing A Base Value Schedule

Indicated values by land class from the sales and/or income approach are tabulated to develop the final base unit values as follows:

SALE	II	III	IV	V	VI	VII
1	\$1,201		\$633		\$210	
2		\$780			\$170	\$95
3		\$815		\$360		
4	\$1,204			\$385		\$111
5			\$655		\$203	
6	\$1,225	\$796				\$85
7			\$600	\$375		
8	\$1,190					
9			\$664			
10					\$225	
Totals	\$4,820	\$2,391	\$2,552	\$1,120	\$808	\$291
Mean	\$1,205	\$ 797	\$ 638	\$ 373	\$202	\$ 97
Base Value Conclusion	\$1,200	\$ 800	\$ 640	\$ 370	\$200	\$100

Appraisal Benchmarks

Benchmark farms are established to provide a standard for each class of land within each value zone in areas where sales are lacking. The properties selected are those that best represent the typical farm or ranch operation in the area.

A detailed appraisal is made of the benchmark properties on an individual basis using the sales comparison and income approaches.

Example:

Appraisal of Jones farm
 Benchmark number three
 Zone one

Summary of pertinent facts and conclusions:

1. **Market value conclusion** \$160,000
 - a. Indication by sales comparison \$160,100
 - b. Indication by income approach \$159,510

2. **Purpose of the appraisal:** To establish a standard for uniform application of base unit values.
3. **Location:** The subject property lies just north of Lip Creek county road in the Round Hill district. Almost all farming is diversified and demand is high for properties in this area. Markets for all farm products are within 20 miles.
4. **Soils:** The tillable land of the subject is mostly Woodburn and Wapato soils. The classification is as follows:

99.5acres	I
15.5acres	III
29.5acres	IV
11.0acres	V
1.0acres	VI
<u>51.5acres</u>	VII

Total 208.0 acres

5. Sales comparison approach

Class	Acres	Unit value from Base schedule	Total Value
I	99.5	\$1,200	\$119,400
III	15.5	800	12,400
IV	29.5	640	18,880
V	11.0	370	4,070
VI	1.0	200	200
VII	51.5	100	5,150
			<hr/>
			\$160,100

6. Income approach

Approximately 120 acres are used for rotation between row crops and oats. Typical rent for this type land is \$60 per acre. The balance of the property is used for pasture. Estimated carrying capacity – 195 AUMS.

Gross income	
120 acres @ \$60/acre	\$7,200
195 AUMS @ \$5.50 per AUM	<u>+1,072</u>
Total income	\$8,272

Expenses	
Management 3%	\$248
Fence maintenance \$1 per acre	+208
	\$456
Net income (\$8,272 - \$456)	\$7,816
Capitalization	$\$7,816 \div 4.9\% = \$159,510$

Note: The capitalization rate is developed by comparison. Net income to farmland is divided by net sales price of farmland. ($\$7,816 \div \$160,100 = 4.9\%$)

7. Reconciliation and final estimate of value: The value of the subject land indicated by sales comparison is \$160,100. Indication of value by income of \$159,510 supports the conclusion of value arrived at by comparison and the final estimate of value is set at \$160,000.

8. Addenda

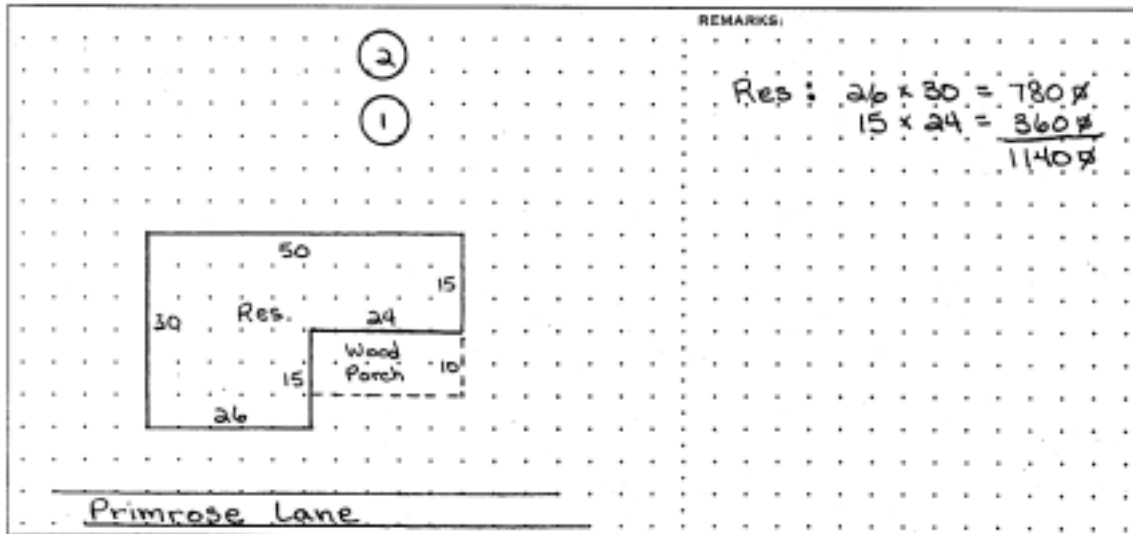
- a. Area map showing location of subject and sales.
- b. Soil classification map of subject.
- c. Comparable sales and analysis chart.
- d. Capitalization rate analysis chart.
- e. Value schedule - Zone 1.

The benchmark appraisals are used for a comparative standard for the appraisal of properties in the area. You should use these for references to tie the schedules to the properties you will be appraising.

Valuation of Rural Buildings

The valuation of rural buildings is divided into two parts: dwellings and farm buildings. In each case, the beginning point is the development of the replacement cost by using the *Cost Factors for Residential Buildings* or the *Cost Factors for Farm Buildings*. An example of a building diagram card showing the location of farm buildings in relation to the residence follows:

BUILDING DIAGRAM AND OUTBUILDINGS



NO.	TYPE USE	DESCRIPTION					DIMENSIONS	AREA S.F. BASE ADJ. BASE	REPL. COST LUMP SUM TOTAL	QUAL. INDEX % IMP.	REPL. COST	DEP. % PHYS % USE % GOOD %	DEPRECIATED REPLACE- MENT COST
		FOUND	FLOOR	ROOF	WALLS	MISC.							
	GARAGE						X						
	CLASS						X						
	ATT DET REHT						X						
	FR BUILT						X						
1	Loft	Conc	Conc	Gamb.	B&B		40x75	3000				75	
				Comp			X	10.40		100		43	
	Barn	cls 5					X		21200		31200	32	9980
2	Utility	Pole	Conc	Gable	B-E		40x50	2000					
	Bldg	cls 5		B-E			X	6.70		100			
3							X						
							X						
4							X						
							X						
5							X						
							X						
6							X						
							X						
7							X						
							X						
8							X						
							X						
							X						
TOTAL DEPRECIATED REPLACEMENT COST—OUTBUILDINGS AND OTHER IMPROVEMENTS (TRANSFER TO VALUE SUMMARY)												21370	

Dwellings

The residential buildings on farm properties are influenced by many of the same factors that determine value for single family dwellings. The best support for market indications and depreciation guides may be developed by using data gathered from sales of tract type properties in an area having similar amenities. Generally, the appraiser follows the same procedures used for improvements on rural tract properties, as discussed in Chapter 9.

Farm Buildings

Review the farming operations in the area to establish building benchmarks that indicate the types and sizes of the buildings that constitute functional improvements.

With the typical types of farm buildings in mind, you can answer the following questions to develop a reasonable value estimate for farm buildings.

- In your judgment, what is the estimated physical condition?
- Does the building now, or could it, provide practical shelter for livestock, grain, feed, machinery, or supplies on the subject property?
- Does the building conform to the present farming systems of the area? If not, could it be economically altered to fit?
- Does all or part of the building contribute to the value of the farm?
- Is the building typical of the area?
- If the building were destroyed, would it be replaced by the same building today?
- Does the building add an aesthetic value that the market recognizes?

In most cases, answering these questions will help determine the amount of accrued depreciation that applies to a particular farm building. Farm buildings not used for their original purpose should be adjusted to reflect the present usefulness or aesthetic value, rather than the use intended by its original design.

Due to changing farming methods and/or crops, it is common to find farm buildings that are limited in use or completely unnecessary to the present farming operation. You must estimate the usefulness of the buildings. Often, buildings with little or no utility are given a value by appraisers merely because the building exists. However, your value estimate should reflect actual market value. If a particular building does not have value to purchasers it should not be included in the appraisal as a value item. It is correct, however, to note the existence of the building on the appraisal card and state a reason for zero value (if the account is an improvement only account, the overall value cannot be zero).

Example of Percent Useful:

The subject building is a 3,000 sq. ft. loft barn in good physical condition. However, due to changing farming practices it is now used as a machine and seed storage building. New construction in the area for the same use is typically a 2,000 sq. ft. utility building. The physical percent good of the subject is estimated at 75 percent. To find the percent useful, the cost new of the replacement building is divided by the cost new for the subject building. The costs new are estimated by using the cost factors contained in the Department of Revenue's *Cost Factors for Farm Buildings*.

1. Calculating Replacement Cost New:

Class 5 utility building

2000 sq. ft. \times \$6.70 = \$13,400 (cost new)

Class 5 loft barn

3000 sq. ft. \times \$10.40 = \$31,200 (cost new)

2. Calculating the Percent Useful:

Utility building \div loft barn = percent useful

\$13,400 \div \$31,200 = 43%

Note: Physically, the loft barn appears to be approximately 75 percent good.

3. Calculating the Percent Good:

75% physical \times 43% useful = 32% good

Depreciated replacement cost = \$31,200 \times .32 = \$9,980 (rounded)

Other forms of functional obsolescence must be considered separately. The above technique does not measure obsolescence resulting from poor layout and design. Examples of these include low ceiling height, support posts set closely together, and other items that restrict use.

Another type of functional obsolescence is over-improvement caused by a super abundance of buildings. Each building may be typical of the building type needed for the present highest and best use of the land. Due to a surplus number of buildings, each building is assigned a portion of the obsolescence reflected in the total. For example, there are three hay storage barns on a property that needs only two. In such a case, each building suffers an equal amount of functional obsolescence. If one of the buildings is unfavorably located and is seldom used, most or all of the obsolescence would likely accrue to that building.

Reappraisal

Applying Land Values

Record the number of acres of each class, basic unit value per class, and site adjustments for each parcel on the land appraisal record. Check the property to determine if other adjustments that may influence value are needed. These adjustments include items such as location, access, size and shape of fields, frost pockets, homesite, access and flooding problems. These adjustments are not included in the basic classification and are applied as a plus or minus adjustment, based on market indications.

However, as the property becomes less of a farm enterprise, the land class may not provide a guide to the value. Recreational property values may be the same for all classes of land, or may even be higher for the less productive land classes.

The following illustrates information necessary for land appraisal.

PROPERTY CLASS _____ **LAND APPRAISAL** ACCT. No. _____
 PHOTO No. _____ CODE No. _____

RECORD OF APPRAISAL		OKS 308.234					
SUB TOTAL "A"	\$						
INCREMENTS TO LAND "B"	\$						
GROSS LAND VALUE "A" + "B"	\$						
SITE ADJUSTMENTS _____ %	\$						
TOTAL APPRAISED VALUE	\$						
APPR. BY _____	DATE _____	19 _____					
MARKET DATA		REMARKS:					
PURCHASE PRICE \$ _____							
DATE _____							
DEED _____ TYPE _____							
CONTRACT _____							
TRADE _____							
RENT _____							
LISTING _____							
ZONING		COMPUTATION					
RESIDENTIAL		DIMENSIONS OR ACRES	LAND CLASS	BASIC UNIT VALUE	ADJUSTMENT FACTORS	ADJUSTED UNIT VALUE	TOTAL VALUE
MULTI-FAMILY							
COMMERCIAL							
NEIGHBORHOOD COM'L							
LT. INDUSTRIAL							
HVY. INDUSTRIAL							
AGRICULTURAL							
AREA IMPROVEMENTS							
SIDEWALKS							
CURBS							
STREET							
WATER							
SEWERS							
ELECTRICITY							
SITE ADJUSTMENTS %							
ROAD TYPE D G P							
MI. TO ALL WTHR. RD. _____							
MI. TO MKT. CENTER _____							
TOPOGRAPHY							
VIEW							
STANDARD DEPTH	FEET		← TOTAL ACRES		SUB TOTAL "A" (TRANSFER TO VALUE SUMMARY) →		
STANDARD DEPTH							
EFFECTIVE DEPTH							
		COMPUTER	DATE	CHECKED	DATE		

COUNTY FORM - 303-902 (7-75)

