

## Valuing Residential Acreage and Agricultural Homesites

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There is a subtle distinction between residential acreage tracts and land valued using the agricultural soil productivity method. The basis for this distinction is the different valuation methods used to determine land value for the two types of land. **Agricultural land** is valued using a statewide base rate and a soil productivity index system, as describe in the section **Valuing Agricultural Land** in this chapter. All land utilized for agricultural purpose is valued in this manner. **Residential-land** is land that is utilized or zoned for residential purposes.

The parcel's size does not determine the property classification or pricing method for the parcel. The property classification and pricing method are determined by the property's use or zoning. Land purchased and utilized for residential purposes is based on market worth as of January 1, 1999.

A land area of one acre per residential dwelling unit is assigned to agricultural parcels and residential parcels priced on an acreage basis. The value of this one acre land area is based on the January 1, 1999 cost of a vacant unimproved acre of land plus the 1999 costs of improving the land. Land improvement costs include the cost of landscaping, ingress and egress from the property, and the depreciated 1999 cost of improving the land with either a water well and septic system, or in the case of lands already developed with utility services, the material and labor costs associated with hook-up fees. The 1999 water and sewage additive reflects the overall depreciation assigned to existing facilities within the neighborhood, but may not be less than 50% of the 1999 cost of installing these improvements.

**Example:** In a neighborhood of the township, a vacant unimproved one acre parcel sold for \$6,000. The actual water well and septic system expense is \$5,000. In this neighborhood, it has been determined that the land improvement costs equal an additional \$4,000. That amount was derived by attributing a 60% ratio for the well and septic and an additional \$1,000 for other miscellaneous land improvements (60% of \$5,000 = \$3,000 + \$1,000 = \$4,000). The base rate applicable to the improved homesite is calculated by adding the vacant land cost to the land improvement costs (\$6,000 + \$4,000 = \$10,000).

A parcel's value is influenced by its location. The value of unimproved land may vary substantially between two separate neighborhoods. A one acre unimproved parcel located in a remote neighborhood is less valuable than a one acre unimproved parcel located in a neighborhood on a lake at the edge of town. The difference in their value is attributable to the location difference. The demand for the lake parcel increases the value.

Not all neighborhoods are as diverse as the two in this example. The boundaries of the neighborhoods and their characteristics determine the amount of variation in value. It is impossible to create a precise formula that measures every variable of location and converts those variables into a precise value. The assessor must analyze all variables in the market in order to measure the effects location has on land values.

## Valuing Residential Acreage Parcels Larger Than One Acre

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Residential acreage parcels of more than one acre and not used for agricultural purposes are valued using the residential homesite base rate and the excess acreage base rate established by the township assessor. The excess acreage base rate represents the 1999 acreage value of land when purchased for residential purposes. The land value of the subject parcel should represent the January 1, 1999 market value in use in the neighborhood.

*If the parcel has a dwelling*, one acre is valued using the residential homesite value. The remaining acreage is valued using the excess acreage rate. There must be a residential dwelling unit on the parcel before the homesite acreage rate can be used.

*If there is no dwelling unit on the parcel*, the amount of acreage in the entire parcel is multiplied by the appropriate excess acre rate. The excess acre base rate represents the 1999 acreage value of the land purchased for residential purposes in this neighborhood. The value of the subject parcel should represent the January 1, 1999 market value in use of the property.

The following examples illustrate how residential acreage is valued for parcels larger than one acre. These examples assume a homesite base rate of \$10,000 (per acre) and an excess acreage base rate of \$1,000 (per acre).

**Example 1:** A residential parcel has 1.36 acres and a dwelling. The value of the one acre homesite is \$10,000. The value of the excess acreage (1.36 acres – 1 acre = .36 acre) is calculated by multiplying the acreage by the excess acreage base rate (.36 acre x \$1,000 = \$360). The total value of the parcel is the sum of the value of the homesite and the excess acreage (\$10,000 + \$360 = \$10,360 = \$10,400 rounded to the nearest \$100).

**Example 2:** A residential parcel is vacant and has three acres. Its value is calculated by multiplying the acreage by the excess acreage base rate (3 acres x \$1,000 = \$3,000).

**Example 3:** A residential parcel has 8 acres and a dwelling. The value of the one acre homesite is \$10,000. The value of the excess acreage (8 acres – 1 acre = 7 acres) is: 7 acres x \$1,000 = \$7,000. The total value of the parcel is: \$10,000 + \$7,000 = \$17,000.

## Valuing Residential Acreage Parcels One Acre or Smaller

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Residential acreage parcels containing one acre or less are valued using the base rate (per acre) determined by the township assessor and the appropriate factor obtained from the Acreage Size Adjustment Table shown in Table 2-11. Instructions for determining the size adjustment factor for a parcel are provided in the section **Determining Size Adjustment Factors for Acreage** in this chapter. The size adjustment table compares smaller improved parcels to the

established one acre standard. The value of the parcel is calculated by multiplying the lot size adjustment factor for the subject parcel by the base rate, and by multiplying the result by the acreage size.

**Example:** A .50 acre parcel is located in a neighborhood where the base rate is \$8,000 (per acre). The Acreage Size Adjustment Table indicates that the adjustment factor for .50 acres is 1.50. The value of the parcel is:  
 $\$8,000 \times 1.50 \text{ adjustment factor} = \$12,000 \times .50 \text{ acres} = \$6,000.$

### **Valuing Residential Acreage Tracts Using the Front Foot Method**

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It is often necessary to value acreage tracts of land using the front foot method of pricing instead of the acreage method of pricing. In particular, the front foot method often is used for tracts less than one acre in size and surrounded by platted lots. The land value in the same neighborhood is not different merely because the legal descriptions of the parcels are inconsistent.

The best way to determine the dimensions of a subject property is to read the deed or inspect a survey of the property. This method is time consuming, but is the most accurate. In those counties where the plat maps are verified to scale, a simple measurement of the property will approximate the measurements to an acceptable level. In either case, if you determine either the frontage or depth for a rectangular parcel in feet, you can determine the other dimension by multiplying the acreage of the parcel by 43,560 (the number of square feet per acre) and dividing the result by the known dimension (in feet). Land priced using the front foot method is priced like platted lots described in the section ***Completing the Land Data and Computations Section of the Property Record Card for Platted Lots*** in this chapter.

### **Establishing Base Rates for Residential Acreage Tracts**

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To calculate the indicated acreage base rate of small acreage tracts located among platted lots, the assessor must determine the value of the comparable adjoining lots and work backwards. The following examples illustrate this process.

**Example 1:** Neighborhood #4 was platted with lots measuring 60 feet by 120 feet. The established value of these improved lots is \$6,000. Scattered among the platted lots are small acreage tracts of .165 acre. The assessor must determine the lot size of each tract and price each tract using the front foot method. However, for purposes of illustration, the acreage base rate can be calculated.

Calculate the size of the platted lots in acres by first determining the number of square feet in the lot (60 feet x 120 feet = 7,200 square feet). Then, divide the square footage of the lot by the number of square feet in an acre ( $7,200' \div 43,560' = .165 \text{ acre}$ ). The acreage tracts are the same size as the platted lots. It is important to make this comparison because the base lot for the

neighborhood was established at 60' x 120' or .165 acre. Any acreage tracts above or below this size may need an influence factor adjustment applied to the estimated value.

To establish the acreage base rate, divide the established value of the platted lots by the acreage size adjustment factor for .165 acre, and divide the result by the size of the tract ( $\$6,000 \div 2.32 = \$2,586 \div .165 \text{ acre} = \$15,674$ ). The acreage base rate needed to calculate the \$6,000 estimated value of a .165 acre tract in this neighborhood is \$15,700.

**Example 2:** Neighborhood #5 is at the edge of town. The sizes of the acreage tracts range from .41 acre to .5 acre. The township assessor estimates the range of values for these tracts to be \$10,000 to \$12,000. The assessor establishes the base acreage tract in Neighborhood #5 to be .45 acres. The average value of the tracts is \$11,000. Calculate the acreage base rate by dividing the average value of the tracts by the size adjustment factor for the average size of the tracts, and by dividing the result by the average tract size ( $\$11,000 \div 1.57 = \$7,006 \div .45 \text{ acre} = \$15,570$ ). The acreage base rate for Neighborhood #5 is \$15,600.

### Determining Size Adjustment Factors for Acreage

To determine the size adjustment factor for acreage, refer to Table 2-11 and perform the following steps:

- Step 1 Determine the size of the tract.
- Step 2 In the "Acre" column of the size adjustment table, locate the row corresponding to the actual size of the tract.
- Step 3 Find the intersection of the selected row and the "Factor" column. Note the number that you find—the size adjustment factor for the tract.

To use the size adjustment factor to calculate the value of a parcel that has a size different from the standard in the area, multiply the acreage base rate by the size adjustment factor to find the acreage adjusted rate. Then multiply the acreage adjusted rate by the acreage size of the tract to find the estimated value of the parcel.

$$\text{Acreage Adjusted Rate} = \text{Acreage Base Rate} \times \text{Acreage Size Adjustment Factor}$$

$$\text{Estimated Value} = \text{Acreage Adjusted Rate} \times \text{Acreage size}$$

**Example:** The estimated value of a .50 acre parcel located in Neighborhood #5 with a base rate of \$15,600 is

$$\$23,400 = \$15,600 \times 1.50$$

$$\$11,700 = \$23,400 \times .50 \text{ acre}$$

**Table 2-11. Acreage Size Adjustment Table**

**Note:** When applying this table to square footage, convert the square footage into acreage by dividing by 43,560.

Acre	Factor	Acre	Factor	Acre	Factor	Acre	Factor
.05	3.00	.30	1.85	.55	1.44	.80	1.19
.06	2.94	.31	1.83	.56	1.44	.81	1.18
.07	2.88	.32	1.81	.57	1.43	.82	1.17
.08	2.82	.33	1.79	.58	1.43	.83	1.15
.09	2.76	.34	1.77	.59	1.42	.84	1.14
.10	2.70	.35	1.75	.60	1.42	.85	1.13
.11	2.64	.36	1.73	.61	1.42	.86	1.12
.12	2.58	.37	1.71	.62	1.41	.87	1.11
.13	2.52	.38	1.69	.63	1.41	.88	1.10
.14	2.46	.39	1.67	.64	1.40	.89	1.09
.15	2.40	.40	1.65	.65	1.40	.90	1.08
.16	2.36	.41	1.63	.66	1.38	.91	1.07
.17	2.32	.42	1.62	.67	1.37	.92	1.06
.18	2.28	.43	1.60	.68	1.35	.93	1.06
.19	2.24	.44	1.59	.69	1.34	.94	1.06
.20	2.20	.45	1.57	.70	1.32	.95	1.04
.21	2.16	.46	1.55	.71	1.30	.96	1.03
.22	2.12	.47	1.54	.72	1.29	.97	1.02
.23	2.08	.48	1.53	.73	1.28	.98	1.02
.24	2.04	.49	1.51	.74	1.26	.99	1.01
.25	2.00	.50	1.50	.75	1.25	1.00	1.00
.26	1.97	.51	1.49	.76	1.24		
.27	1.94	.52	1.48	.77	1.23		
.28	1.91	.53	1.46	.78	1.21		
.29	1.88	.54	1.45	.79	1.20		

**Example:** A .33 acre tract is located in a neighborhood where 1 acre tracts are valued at \$20,000 per acre. The estimated value of the .33 acre tract is calculated as:  $\$20,000 \times 1.79 = \$35,800 \times .33 \text{ acres} = \$11,814$  or \$11,810.

## Determining Influence Factors for Residential Acreage

Influence factors are applied to residential acreage in the same way that they are applied to platted lots. When the township assessor establishes base rates for a neighborhood, the assessor establishes rates for the base acreage tract. The calculated value of this base entity becomes the standard against which all remaining acreage tracts within the neighborhood are compared. Often, there are conditions peculiar to specific tracts within the neighborhood that must be analyzed on an individual basis. These conditions require the assessor to make an adjustment to the value of the tract. This adjustment is an influence factor.

An influence factor refers to an aspect of a lot's condition that is different from the base lot on which the base unit land value for the subject neighborhood is based. An influence factor requires an adjustment to the estimated value of the lot to account for variations and is expressed as a percentage. The percentage is obtained by comparing the estimated dollar amount of the adjustment to the estimated value of the lot. This ratio is converted to a percentage. If the ratio represents a negative amount, a negative influence factor percentage is applied to the subject land. If the ratio represents a positive amount to the subject, a positive influence factor is applied to the subject's land.

The examples below illustrate how to identify and calculate influence factors for residential acreage.

**Example 1:** Parcel A is a 4 acre parcel with a residential dwelling and a mobile home situated on it. Because there are two dwelling units, the assessor has designated two 1 acre residential homesites for the property. Upon investigation, it is determined that the mobile home has its own septic system, but obtains its water supply from the residential dwelling. Both 1 acre residential sites are priced using a base rate of \$10,000 per acre. An adjustment is necessary to the 1 acre site where the mobile home is located because there is no separate water supply to the mobile home. The amount of the influence factor adjustment equals the dollar amount attributed to water facilities (\$1,000), as established by the township assessor. Therefore, an adjustment of 10% is applied to the 1 acre homesite for the mobile home.

**Example 2:** Area #10 surrounds a lake and contains parcels sized at .30 acre to .50 acre. The base parcel size of the neighborhood is .40 acre. The base rate for Area #10 has been established at \$121,200 per acre. The value of the base lakefront parcel is \$80,000.

$$\$121,200 \times 1.65 \times .40 = \$79,990$$

During the analysis of the sales data, it was realized that the individual parcel size made no significant difference in the market value in use of the land. Therefore, all individual parcels should have a land value of approximately \$80,000. A .30 acre parcel receives a positive influence factor of +19%.

$$\$121,200 \times 1.85 \times .30 \text{ acre} = \$67,270$$

$$\$80,000 \div \$67,270 = 1.189 \text{ or } 1.19$$

$$1.19 - 1.00 = .19 \text{ or } 19\%$$

A .50 of an acre parcel receives a negative influence factor of -12%.

$$\$121,200 \times 1.50 \times .50 \text{ acre} = \$90,900$$

$$\$80,000 \div \$90,000 = .880 \text{ or } .88$$

$$.88 - 1.00 = -.12 \text{ or } -12\%$$

### **Completing the Land Data and Computations Section of the Property Record Card for Residential Acreage**

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This section describes how to complete the “Land Data and Computations” section of a residential Property Record Card, shown in Figure 2-20, for residential acreage tracts. The steps describe how to use the acreage method to calculate the value of the acreage. The steps for completing the Property Record Card are grouped into two tasks, described in the sections below:

Task 1—Record the necessary data for the residential acreage.

Task 2—Calculate the land value for the residential acreage.



**Task 1—Recording the Necessary Data**

Space is provided on the residential Property Record Card to compute the land value of each residential acreage tract. Enter the data into a series of columns using one row per entry. Enter the one acre residential homesite, if there is one, and the excess acreage as separate entries.

To enter the data for residential acreage, perform these steps:

- Step 1 In the “Land Type” column, enter the code corresponding to the land type classification of the entry. Table 2-12 describes the land type options for residential acreage tracts.

**Table 2-12. Land Type Options for Residential Acreage Tracts**

This option	Indicates
9	The amount of land entered in the “Acreage” column is used as a residential homesite.
91	The amount of land entered in the “Acreage” column is classified as residential excess acres.

- Step 2 In the “Acreage” column, enter the acreage (in acres) for this entry. For parcels of one acre or less and containing a residential dwelling, the entire parcel is designated as a homesite.
- Step 3 In the “Depth Factor” column, enter the factor used to adjust the base rate or unit value. Instructions for determining the size adjustment factor of a residential acreage tract are provided in the section **Determining Size Adjustment Factor for Acreage** in this chapter. The size adjustment factor is applied to the portion of acreage that is or could be used as a homesite. Acreage identified as excess acreage (over 1.00 acre) does not require a size adjustment factor.
- Step 4 *If the entry is a residential homesite*, enter the homesite rate as determined by the township assessor in the “Base Rate” column.  
*If the entry is residential excess acreage*, enter the excess acre rate as determined by the township in the “Base Rate” column.
- Step 5 In the “Influence Factor” column, indicate any condition peculiar to the acreage tract that requires an adjustment to the estimated value to account for variations from the norm:
  - a. Enter the influence code to the left of the brackets.
  - b. Enter the percentage adjustment to the right of the brackets.
  - c. Within the brackets, enter a plus (+) to indicate an increase. Enter a minus (–) to indicate a decrease. Table 2-13 describes the influence factor codes. Information about determining influence factors is provided in the section **Determining Influence Factors for Residential Acreage** in this chapter.

**Table 2-13. Influence Factor Codes for Residential Acreage and Agricultural Homesites**

<b>This code</b>	<b>Indicates</b>
1 Topography	A decrease based on adverse topographical features.
2 Under Improved	A decrease based on the under improvement of landscaping, residential driveways and private walkways, and utility hookups.
3 Excess Frontage	A decrease based on the lower utility value of frontage that is significantly in excess of the base lot frontage.
4 Shape or Size	<p>A decrease based on an irregularity in shape that limits the use of the parcel <b>or</b> a decrease for an oversized lot whose variations are not accounted for elsewhere.</p> <p>An increase based on an irregularity in shape that enhances the use of the parcel <b>or</b> an increase for an undersized lot whose variations are not accounted for elsewhere.</p>
5 Misimprovement	A decrease indicating a lot that has been valued higher than its current use. The value must be lowered to the level of comparable properties in the subject neighborhood.
6 Restrictions	A decrease based on encumbrances, restrictive covenants, or obstructions that limit the use of the land.
7 Traffic Flow	A decrease to account for the nuisance of significantly heavier traffic flow that affects the base lot and is not considered in the base lot value.
8 View	<p>A decrease to account for variations in view from the subject lot and not from the base lot that detracts from the subject lot.</p> <p>An increase to account for variations in view from the subject lot and not from the base lot that enhances the subject lot.</p>

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9 Corner Influence	<p>A decrease to account for building restrictions, such as double set backs and increased traffic flow, that detract from the subject lot and are not considered in the base lot value.</p> <p>An increase to account for building restrictions, such as double set backs and increased traffic flow, that offer commercial benefits and are not considered in the base lot value.</p>
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O Other	<p>An influence, not described above, such as the following. Describe the factor in the memorandum section.</p> <ul style="list-style-type: none"> <li>■ <b>Golf course</b>—An increase to account for a particular location enhancement, not characteristic of the base lot.</li> <li>■ <b>Water frontage</b>—An increase to account for proximity to a water front, not characteristic of the base lot.</li> <li>■ <b>Cul-de-sac</b>—An increase to account for shape or size enhancements due to a cul-de-sac location, not characteristic of the base lot.</li> <li>■ <b>Location</b>—An increase or decrease to account for the influence of a particular location and not considered in the base lot.</li> <li>■ <b>Soil conditions</b>—A decrease to account for adverse soil conditions that prohibit the subject lot being used the same as the base lot.</li> <li>■ <b>Drainage</b>—A decrease to account for drainage limitations, indicated by standing water, not characteristic of the base lot.</li> <li>■ <b>Flooding susceptibility</b>—A decrease to account for a lot or a portion of a lot being in a flood plain, not characteristic of the base lot.</li> <li>■ <b>Noise nuisance</b>—A decrease to account for extraneous noise or other such nuisances not characteristic of the base lot.</li> <li>■ <b>Excess depth</b>—A decrease to account for a disproportionate frontage depth not accounted for in the size adjustment factor.</li> <li>■ <b>Limited access</b>—A decrease to account for ingress or egress limitations not characteristic of the base lot.</li> </ul>
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Step 6 Repeat Step 1 through Step 5 for each residential tract entry.

## Task 2—Calculating the Land Value

Next, use the data that you entered on the property record card to calculate the land value for the residential acreage. Perform these steps:

- Step 1 Calculate the adjusted rate for the residential acreage tract entry by multiplying the base rate by the size adjustment factor:

$$\text{Adjusted rate} = \text{Base rate} \times \text{Size Adjustment factor}$$

Round the adjusted rate to the nearest \$1 and enter it in the “Adjusted Rate” column.

- Step 2 Calculate the estimated value of the entry by multiplying the amount of acreage by the adjusted rate:

$$\text{Estimated value} = \text{Adjusted Rate} \times \text{Amount of Acreage}$$

Round the estimated value to the nearest \$10 and enter it in the “Estimated Value” column.

- Step 3 Calculate the land value of the entry by adjusting the estimated value by the influence factor:

$$\text{Land value} = \text{Estimated value} \times (1.00 - \text{Influence Factor Percentage})$$

Round the land value to the nearest \$10 and enter it in the “Land Value” column.

**Note:** A positive influence factor would be an addition of the influence factor percentage to 1.00. If there is no influence factor, the land value is the same as the Estimated value.

- Step 4 Perform Step 1 through Step 3 for each residential acreage tract entry.

- Step 5 Calculate the total residential land value by summing the entries in the “Land Value” column that represent residential land.

Round the total residential land value to the nearest \$100 and enter it in the “Total Residential Land Value” cell.

- Step 6 Calculate the total non-residential land value by summing the entries in the “Land Value” column that represent non-residential land.

Round the total non-residential land value to the nearest \$100 and enter it in the “Total Non-Residential Land Value” cell.

**Example:** The subject residential parcel has a size of 2.50 acres and contains a dwelling. The parcel has a one acre homesite. The remaining 1.50 acres are considered residential excess acres. This parcel is located in a neighborhood where the homesite base rate is \$10,000 and the residential excess acre base rate is \$2,000 per acre. Figure 2-21 shows the “Land Data and Computations” section of the Property Record Card for the 2.50 acre parcel. Note the following while viewing Figure 2-21:

- The “Land Type” column designates each portion of the acreage.

- The “Acreage” column indicates the acreage size for each land type.
- The “Factor” column indicates the size adjustment factor for the homesite portion of the lot.
- The township assessor determines the base rate for the neighborhood.
- The adjusted base rate for the homesite acreage is  

$$\text{Adjusted Base Rate} = \text{Base Rate} \times \text{Size Adjustment Factor}$$

$$\$10,000 = \$10,000 \times 1.00$$
- The adjusted Base Rate for the residential excess acreage is  

$$\text{Adjusted Base Rate} = \text{Base Rate} \times 1.00$$

$$\$2,000 = \$2,000 \times 1.00$$
- The estimated value of the homesite acreage is  

$$\text{Estimated Value} = \text{Adjusted Base Rate} \times \text{Homesite Acreage}$$

$$\$10,000 = \$10,000 \times 1.00 \text{ acres}$$
- The estimated value of the residential excess acreage is  

$$\text{Estimated Value} = \text{Adjusted Base Rate} \times \text{Excess Acreage Size}$$

$$\$3,000 = \$2,000 \times 1.50 \text{ acres}$$
- Since there are no influence factors on the parcels, the land value of each entry is the same as the estimated value.
- The total residential land value for this parcel is the same as the first entry (\$10,000). *In this case the total is considered residential land value because it is less than or equal to one acre.*
- The total non-residential land value for this parcel is the same as the second entry (\$3,000). *In this case the total is considered non-residential land value because it is the amount over 1 acre.*



## **Valuing Commercial and Industrial Acreage**

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The procedure for valuing commercial and industrial acreage tracts is similar to the procedure for other types of land. However, sales information for existing business properties is less reliable and less available. The township assessor must draw on the expertise within the community to establish the basis of valuing these types of tracts. The township assessor must delineate general neighborhood areas on the basis of characteristics that distinguish them from other areas. This delineation is normally based on such characteristics as:

- zoning
- major roads or streets
- natural geographic features like waterways or lakes
- availability of certain modes of transportation.

These neighborhoods are the basis for establishing land values, as well as for reporting the values to the County Property Tax Assessment Board of Appeals.

## **Understanding Commercial and Industrial Land Categories**

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There are four categories of commercial and industrial land, described in Table 2-14.

**Table 2-14. Categories of Commercial and Industrial Land**

<b>This category</b>	<b>Indicates</b>
Primary	The primary building or plant site. The following are examples of primary land <ul style="list-style-type: none"> <li>■ land located under buildings</li> <li>■ regularly used parking areas</li> <li>■ roadways</li> <li>■ regularly used yard storage</li> <li>■ necessary support land</li> </ul>
Secondary	Land used for purposes that are secondary to the primary use of the land. The following are examples of secondary land: <ul style="list-style-type: none"> <li>▪ parking areas that are not used regularly</li> <li>▪ yard storage that is not used regularly</li> </ul>
Usable Undeveloped	The amount of acreage that is vacant and held for future development
Unusable Undeveloped	The amount of vacant acreage that is unusable for commercial or industrial purposes, and not used for agricultural purposes

Normally, large acreage tracts are partitioned to indicate the various uses of the individual tract. Small acreage tracts of one acre or less are often used as a primary building site and require the primary land classification.

The base rate for each use category includes the following items:

- For primary land, the base rate represents the estimated January 1, 1999 value of the vacant land and various costs associated with the development of the land. The following developmental costs may be included in the base rate for primary acreage:
  - sanitary sewers
  - storm sewers
  - potable water lines
  - fire prevention lines
  - gas lines
  - septic systems
  - water wells
  - grading for general improvement of the site
  - landscaping.
- For secondary land, the base rate represents the January 1, 1999 value of the vacant land and the various costs associated with the development of the land. Normally, this acreage does not include developmental costs for water and sewage. The following developmental costs may be included in the base rate for secondary acreage:
  - storm sewers

- grading for general improvement of the site.
- For usable undeveloped land, the base rate represents the January 1, 1999 value of vacant or raw land that is zoned for commercial and industrial purposes. This type of land has incurred no on-site development cost. This category does **not** include land utilized for agricultural purposes, as stated in IC 6-1.1-4-13.
- For unusable undeveloped land, the base rate represents the January 1, 1999 value of undeveloped land that is zoned for commercial or industrial purposes. This type of land has incurred no on-site development costs and normally represents an area of vacant land with restrictions. There may be restrictions against building because there are environmental hazards on the property or because the area has been designated as a wetland area by the federal government. This category does **not** include land that is utilized for agricultural purposes, as stated in IC 6-1.1-4-13.

### **Establishing Use Classes for Commercial and Industrial Properties**

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Within each neighborhood, the township assessor may establish broad use classes based on either the current use or probable use of commercial or industrial properties. The identification of broad use classes helps ensure that similar types of properties are analyzed and valued consistently by the assessor. Broad use classes may be identified for apartments, retail stores, offices, or various zoning categories. By determining broad use classes for each neighborhood, the assessor can compare unit values and establish base rates to treat all properties equitably.

Table 2-15 shows the recommended unit value for selected use classes.

**Table 2-15. Recommended Unit Values for Selected Use Classes**

<b>For this use class</b>	<b>Use this unit value</b>
Central business district	Front foot or square foot
Urban fringe businesses	Front foot or square foot
Retail or service strip centers	Front foot or square foot
Shopping centers	Square foot or acreage
Interchange areas	Square foot or acreage
Town centers	Front foot or square foot
Suburban office parks	Square foot or acreage
Urban renewal projects	Front foot, square foot, or acreage
Industrial corridors	Front foot or acreage
Industrial parks	Acreage
Rural industrials	Acreage
Apartment complexes	Square foot, acreage, or unit density
Parking accommodations	Front foot, square foot, unit density, or acreage

### **Determining the Building Density Ratio**

For commercial and industrial parcels, the assessor analyzes each individual parcel to determine what portion of the parcel is considered improved and what portion of the parcel is considered undeveloped. Site size refers to the improved portion of the land which may encompass the entire parcel, multiple parcels, or a portion of a parcel.

Commercial and industrial properties contain certain site requirements for each specific property. These site requirements differ from use to use, or within the same use, because of variations in the size of the buildings. For example, a 40,000 square feet store requires more building space and parking area than a comparable store of 20,000 square feet. There is, within each use category, a definite relationship between the building size and the required site size, referred to as building density ratio. This ratio is calculated by dividing the area of the site by the gross floor area of the building. The result is rounded to one decimal point (the nearest tenth).

By analyzing the building density ratios throughout a defined neighborhood, the assessor develops a norm for that area. Each neighborhood could have a different norm based on the properties located within it. By thinking about the development of a community, the assessor can appreciate the need for identifying the different building density ratios associated with a community.

As commercial and industrial areas develop over a period of time, land requirements necessary to support the various businesses change. For years, downtown businesses have relied on limited on-street parking so the commercial structures normally were built to cover the entire area of a lot. As more automobiles clogged the downtown streets, many businesses began moving into

recently constructed larger structures at the edge of town. To support these facilities, the owners provided adequate amounts of parking with pleasantly landscaped surroundings on larger tracts of land. These facilities served their purpose well, but as time passed and business patterns change, newer, larger, and more accessible complexes have been constructed to attract the contemporary uses. These complexes occupy large acreage tracts and provide efficient parking facilities, landscaped areas, and/or greenspaces. By analyzing the building density ratios of these various locations, the assessor can establish standards relative to the size requirements required to support the various uses by property use for each neighborhood. Each type of facility located within the area is compared against its established standard to determine the amount of the developed site which should be classified as primary land.

**Example.** An 80,000 square foot strip center occupying a five acre tract would have a building density ratio calculated by dividing 217,800 square feet ( $43,560 \times 5 = 217,800$ ) by the 80,000 square foot building ( $217,800 / 80,000 = 2.72$ , rounded to 2.7). By comparing this ratio to other strip centers ratios in the neighborhood, a standard is established by use category for each neighborhood. Once a standard is established, the assessor can apply it to other strip centers to determine how much of the improved site is to be classified as primary. No portion of the improved site shall be classified as secondary until the requirements of the building density ratio has been met.

Some taxing jurisdictions have an active zoning authority that issues certain building requirements based on the type of property being constructed. Care should be taken when consulting local zoning information during the analysis of a neighborhood's building density ratios. Zoning regulations normally mandate minimum land size and parking requirements which may, but do not necessarily correspond to the developed portions of all land. What is more, these regulations change periodically so an analysis using current regulations might misrepresent the actual situation in a specific neighborhood. It is more applicable to analyze the building sites within each defined neighborhood and develop the building density ratio standards based upon specific information obtained from the analysis.

### **Establishing Base Rates for Commercial and Industrial Land**

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To calculate the indicated base rate of small acreage tracts located among platted lots, the township assessor must determine the value of the comparable adjoining lots and work backwards. The following examples illustrate the process of calculating acreage values and square foot values.

**Example 1:** For acreage values, Neighborhood #7 was platted with lots measuring 60 feet by 120 feet. The established value of the improved lots is \$24,000. Scattered among these lots are small acreage tracts of .20 acre. They are slightly larger than the platted lots and reflect a slightly higher estimated value. The acreage rate for the platted lots is calculated by dividing \$24,000 by the factor from Table 2-11, the size adjustment table, for the equivalent size of the platted lots. The result is then divided by the acreage equivalent of the

platted lots. ( $\$24,000 \div 2.36 = \$10,169 \div .165 \text{ acres} = \$61,630$ ). To calculate the value of the .20 acre parcels, multiply the rate of \$61,630 by the factor from the size adjustment table for .20 acres. Multiply the result by the parcel size ( $\$61,630 \times 2.20 = \$135,586 \times .20 \text{ acres} = \$27,117$ ).

**Example 2:** For acreage values, Neighborhood #7 is analyzed slightly differently to determine the square foot base rate. The platted lots contain 7,200 square feet and the value of the lots is \$24,000. The square foot base rate is determined by first dividing the value of the lot by the size adjustment factor from Table 2-11 for the equivalent acreage size. The factor is 2.36 for a parcel size of .165 acres ( $60' \times 120' = 7,200$  square feet). The rate of \$10,169 ( $\$24,000 \div 2.36$ ) is divided by the number of square feet to equal \$1.41 per square foot ( $\$10,169 \div 7200$  square feet = \$1.41). To calculate the value of the .20 acre parcels, multiply the square foot rate of \$1.41 by the factor from the size adjustment table for .20 acres, and multiply the result by the parcel square footage ( $\$1.41 \times 2.20 = \$3.10 \times 8,712$  square feet = \$27,007).

To calculate the indicated value of larger acreage tracts, the assessor may analyze the land using one of the following methods:

- The **land development method** is normally more appropriate for newer commercial or industrial area because on-site development costs are attributed directly to the land using the latest construction costs available. The land development method entails adding the purchase price of vacant land to the on-site development costs. On large acreage tracts, the value of the development costs are attributed to the acres affected by the cost.
- The **comparison method** is more reliable when measuring the effects of location on various commercial and industrial properties. The comparison method compares properties of similar use against properties of compatible use. By establishing a broad range of use classes, such as zoning categories, land-to-building ratios, and current and probable uses, the assessor develops standards for each neighborhood. The standards determine the basis for comparison between the properties within the neighborhood and other neighborhoods. The assessor applies sales information or written qualified real estate professional estimates to the standards. The use of an appropriate unit value makes values comparable between the various neighborhoods.

### **Determining Influence Factors for Commercial and Industrial Land**

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Influence factors are applied to small tracts of commercial and industrial acreage in the same way that they are applied to platted lots. When the township assessor establishes base rates for a neighborhood, the assessor establishes rates for the base acreage tract. The calculated value of this base entity becomes the standard to which all remaining acreage tracts within the neighborhood are compared. Often, there are conditions peculiar to specific tracts within a neighborhood that must be analyzed on an individual basis. These conditions require the assessor to make an adjustment to the value of the tract. This adjustment is an influence factor.

“Influence Factor” refers to a condition peculiar to the lot that dictates an adjustment to the estimated value to account for variations from the base lot on which the base unit land value for the subject neighborhood is predicated. A single digit numeric code, shown in Table 2-17, is used to indicate the nine most prevalent factors and provide for the application of other (code O) factors not elsewhere coded. Any time code “O” is used, a description of the specific factor is to be annotated on the property record card. The influence code is entered to the left of the brackets. The percentage is entered to the right of the brackets. In the brackets, a plus (+) or minus (-) indicates whether the percentage is an increase or a decrease.

The examples below illustrate how to identify and calculate influence factors for commercial and industrial acreage.

**Example 1:** In a commercial neighborhood, there is a small acreage tract of less than 1 acre that is vacant and is being held for future development. The remaining tracts within the neighborhood are equal in size to the subject and are developed. The vacant small acreage parcel is considered unimproved and a negative influence factor adjustment equivalent to the cost of improving the parcel is applied to the parcel.

**Example 2:** The small acreage commercial tracts located in Neighborhood #32 are similar in size and used for commercial purposes. The base acreage value was established for the neighborhood to reflect the typical tract which is a parcel that has restricted access to the highway due to the small number of crossovers located in the highway. However, parcel Z, located at the intersection of the same highway and a similar highway, has very good access from both roads. The township assessor has determined through the analysis of a sale of a comparable corner tract that parcel Z has a higher value than the tracts used to establish the base value for the area. The assessor determines that a positive influence factor is necessary to adjust parcel Z's value. The difference between the higher value and the estimated value is expressed as a percentage and applied to parcel Z 's estimated value. The corner influence associated with parcel Z is the reason for assigning this positive influence factor adjustment.

### **Completing the Land Data and Computations Portion of the Property Record Card for Commercial and Industrial Acreage**

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This section describes how to complete the “Land Data and Computations” section of a commercial and industrial Property Record Card, shown in Figure 2-22, for commercial or industrial acreage tracts. The steps describe how to use the acreage method to calculate the value of the acreage. The steps for completing the property record card are grouped into two tasks, described in the sections below:

Task 1—Record the necessary data for the lot.

Task 2—Calculate the true tax value for the lot.

**Note:** The procedures for calculating the front foot base rate and the true tax value of commercial platted lots is identical to the procedures for residential platted lots. Instructions are provided in the section ***Completing the Land Data and Computations Section of the Property Record Card for Platted Lots*** in this chapter.

Parcel number		Ownership		Transfer of Ownership		Card No. of	
County	Township	Reason for Change	Date	Grantor	Grantee	Rec. #	Sale Price
		Assessment Year	20	20	20	20	20
		Revaluation					
		TRUE TAX VALUE					
		ASSESSED VALUE					
		Total AV					
		Improvements					
		Land					
		Total TTV					
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**Task 1—Recording the Necessary Data**

Space is provided on the commercial and industrial Property Record Card to compute the true tax value of platted lots and acreage tracts used for commercial or industrial purposes. Enter the data into a series of columns using one row per entry.

To enter the data for a commercial or industrial acreage, perform these steps:

Step 1 In the “Land Type” column, enter the code corresponding to the land type classification of the entry. Table 2-16 describes the land type options for commercial and industrial acreage tracts.

**Table 2-16. Land Type Options for Commercial and Industrial Acreage Tracts**

This option	Indicates
11	The amount of land entered in the “Acreage” column is classified as commercial or industrial primary land
12	The amount of land entered in the “Acreage” column is classified as commercial or industrial secondary land
13	The amount of land entered in the “Acreage” column is classified as commercial or industrial usable undeveloped land
14	The amount of land entered in the “Acreage” column is classified as commercial or industrial unusable undeveloped land

Step 2 In the “Acreage” column, enter the acreage (in acres) designated as each specific land type.

Step 3 In the “Depth Factor” column, enter 1.00 as the acreage size adjustment factor for all commercial and industrial acreage tracts of one acre or more. For commercial and industrial acreage tracts of less than one acre, the size adjustment factor is derived by comparing the parcel acreage or square feet size to the Acreage Size Adjustment Table included in Table 2-11. This table compares smaller improved tracts of land to an established one acre standard. In the “Acre” column of the size adjustment table, locate the row corresponding to the actual size of the tract. Find the intersection of the selected row and the “Factor” column. Note the number that you find. This is the size adjustment factor for the tract.

Step 4 In the “Base Rate” column, enter the acreage value as determined by the township assessor and approved by the Property Tax Assessment Board of Appeals.

Step 5 In the “Influence Factor” column, indicate any condition peculiar to the acreage tract that requires an adjustment to the estimated value to account for variations from the norm, if necessary:

- a. Enter the influence code to the left of the brackets.
- b. Enter the percentage adjustment to the right of the brackets.
- c. Within the brackets, enter a plus (+) to indicate an increase. Enter a minus (–) to indicate a decrease. Table 2-17 describes the influence factor codes. Information about determining influence factors is provided in the section ***Determining Influence Factors for Commercial and Industrial Land*** in this chapter.

**Table 2-17. Influence Factor Codes for Commercial and Industrial Property**

This code	Indicates
1 Topography	A decrease based on adverse topographical features.
2 Under Improved	A decrease based on the under improvement of landscaping, driveways and private walkways, and utility hookups.
3 Excess Frontage	A decrease based on the lower utility value of frontage that is significantly in excess of the base lot frontage.
4 Shape or Size	<p>A decrease based on an irregularity in shape that limits the use of the parcel <b>or</b> a decrease for an oversized lot whose variations are not accounted for elsewhere.</p> <p>An increase based on an irregularity in shape that enhances the use of the parcel <b>or</b> an increase for an undersized lot whose variations are not accounted for elsewhere.</p>
5 Misimprovement	A decrease indicating a lot that has been valued higher than its current use. The value must be lowered to the level of comparable properties in the subject neighborhood.
6 Restrictions	A decrease based on encumbrances, restrictive covenants, or obstructions that limit the use of the land.
7 Traffic Flow	A decrease to account for the nuisance of significantly heavier traffic flow that affects the base lot and is not considered in the base lot value.
8 View	<p>A decrease to account for variations in view from the subject lot and not from the base lot that detracts from the subject lot.</p> <p>An increase to account for variations in view from the subject lot and not from the base lot that enhances the subject lot.</p>

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9 Corner Influence	<p>A decrease to account for building restrictions, such as double set backs and increased traffic flow, that detract from the subject lot and are not considered in the base lot value.</p> <p>An increase to account for building restrictions, such as double set backs and increased traffic flow, that offer commercial benefits and are not considered in the base lot value.</p>
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O Other	<p>An influence, not described above, such as the following. Describe the factor in the memorandum section.</p> <ul style="list-style-type: none"> <li>■ <b>Golf course</b>—An increase to account for a particular location enhancement, not characteristic of the base lot.</li> <li>■ <b>Water frontage</b>—An increase to account for proximity to a water front, not characteristic of the base lot.</li> <li>■ <b>Cul-de-sac</b>—An increase to account for shape or size enhancements due to a cul-de-sac location, not characteristic of the base lot.</li> <li>■ <b>Location</b>—An increase or decrease to account for the influence of a particular location and not considered in the base lot.</li> <li>■ <b>Soil conditions</b>—A decrease to account for adverse soil conditions that prohibit the subject lot being used the same as the base lot.</li> <li>■ <b>Drainage</b>—A decrease to account for drainage limitations, indicated by standing water, not characteristic of the base lot.</li> <li>■ <b>Flooding susceptibility</b>—A decrease to account for a lot or a portion of a lot being in a flood plain, not characteristic of the base lot.</li> <li>■ <b>Noise nuisance</b>—A decrease to account for extraneous noise or other such nuisances not characteristic of the base lot.</li> <li>■ <b>Excess depth</b>—A decrease to account for a disproportionate frontage depth not accounted for in the size adjustment factor.</li> <li>■ <b>Limited access</b>—A decrease to account for ingress or egress limitations not characteristic of the base lot.</li> </ul>
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Step 6 Repeat Step 1 through Step 5 for each commercial or industrial acreage tract entry.

## Task 2—Calculating the True Tax Value

Next, use the data that you entered on the property record card to calculate the true tax value for the commercial or industrial acreage. Perform these steps:

Step 1 Calculate the adjusted rate for the commercial or industrial acreage tract entry by multiplying the base rate by the size adjustment factor:

$$\text{Adjusted rate} = \text{Base rate} \times \text{Size Adjustment factor}$$

Round the adjusted rate to the nearest \$1 and enter it in the “Adjusted Rate” column.

- Step 2 Calculate the estimated value of the entry by multiplying the acreage or square footage by the adjusted rate:

$$\text{Estimated value} = \text{Adjusted Rate} \times \text{Acreage or Square Footage}$$

Round the estimated value to the nearest \$10 and enter it in the “Estimated Value” column.

- Step 3 Calculate the true tax value of the entry by adjusting the estimated value by the influence factor:

$$\text{True tax value} = \text{Estimated value} \times (1.00 - \text{Influence factor percentage})$$

Round the true tax value to the nearest \$10 and enter it in the “True Tax Value” column.

**Note:** A positive influence factor would be an addition to the influence factor percentage of 1.00. If there is no influence factor, the true tax value is the same as the estimated value.

- Step 4 Perform Step 1 through Step 3 for each commercial and industrial acreage entry.

- Step 5 Calculate the total true tax land value by summing all of the entries in the “True Tax Value” column.

Enter the total true tax land value rounded to the nearest \$100, for all of the commercial or industrial acreage entries for the parcel in the “Total True Tax Land Value” row.

**Example 1:** A small acreage parcel of .74 acres is developed with a commercial business. The acreage base rate for the neighborhood has been established at \$120,000 per acre.

- The “Land Type” column for the parcel is designated as 11 (primary land).
- The “Acreage” column for the parcel is .74.
- The “Factor” column indicates the size adjustment factor for .74 acres is 1.26.
- The township assessor determines the base rate for the neighborhood to be \$120,000.
- The adjusted base rate for the parcel is

$$\text{Adjusted Base Rate} = \text{Base Rate} \times \text{Size Adjustment Factor}$$

$$\$151,200 = \$120,000 \times 1.26$$

- The estimated value of the acreage is

$$\text{Estimated Value} = \text{Adjusted Base Rate} \times \text{Acreage Size}$$

$$\$111,890 = \$151,200 \times .74$$

**Example 2:** A 10-acre industrial parcel contains a small manufacturing facility. The parcel has six acres designated as primary land and four acres designated as undeveloped usable land. The average base rate for this industrial

neighborhood is \$25,000 per acre for the primary land and \$20,000 per acre for the undeveloped usable land.

- The “Land Type” column for the parcel is entered as separate line entries
  - 11 for the primary land
  - 13 for the undeveloped usable land
- The “Acreage” columns for the parcel are
  - 6.00 for the primary land
  - 4.00 for the undeveloped usable land
- The “Factor” column is 1.00 for both land types because the parcel is larger than 1.00 acre.
- The base rates are
  - \$25,000 for the primary land
  - \$20,000 for the undeveloped usable land

- The adjusted base rates are

$$\text{Adjusted Base Rate} = \text{Base Rate} \times \text{Size Adjustment Factor}$$

$$\text{Primary} = \$25,000 = \$25,000 \times 1.00$$

$$\text{Undeveloped Usable} = \$20,000 = \$20,000 \times 1.00$$

- The estimated values are

$$\text{Estimated Value} = \text{Adjusted Base Rate} \times \text{Acreage Size}$$

$$\text{Primary} = \$150,000 = \$25,000 \times 6.00 \text{ acres}$$

$$\text{Undeveloped Usable} = \$80,000 = \$20,000 \times 4.00 \text{ acres}$$