

1/1/2025

# 2025 Shelby County Residential Sales Comparison Adjustments Report (The Gold Book)

Shelby County Assessor of Property



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# INTRODUCTION

In the Sales Comparison Approach, an opinion of market value is developed by comparing properties similar to the subject property that have recently sold. A major premise of the sales comparison approach is that an opinion of the market value of a property can be supported by studying the market's reaction to comparable and competitive properties. Comparative analysis of properties and transactions focuses on similarities and differences that affect value, called *elements of comparison*, which may include variations in property rights, financing terms, conditions of sale, market conditions, locational influences, and physical characteristics, among others. Appraisers examine market evidence using paired sales analysis, trend analysis, statistical analysis, and other recognized and accepted techniques to identify which elements of comparison within the data set of comparable sales are responsible for value differences, and the contributory value attributable to those differences.

A commonly accepted statistical technique used in property valuation is multiple regression analysis, a statistical technique for estimating unknown data based on known and available data. The application of regression analysis to comparable sales data is a natural and obvious extension of the traditional paired sales analysis of differences in the sales prices of comparable properties in the adjustment process.

The **2025 Shelby County Residential Sales Comparison Adjustments Report (The Gold Book)** is based on the Multiple Regression Analysis (MRA) conducted for the market modeling process to determine market value according to the sales comparison approach for residential properties in the 2025 Shelby County Reappraisal. A total of 16,967 residential sales from 2023 & 2024 were analyzed using multiple regression to estimate contributory value of various elements of comparison used in the sales comparison approach stratified by property characteristics, such as neighborhood, size, effective year built, grade (quality), condition, desirability & utility (CDU), .

The following report summarizes the analysis of the MRA coefficients of each variable measured against the average price of sales in each model. The variable coefficients represent the relative contributory value of each property characteristic for which adjustments are typically made in the sales comparison approach.



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## DATE OF SALE/TIME (MARKET CONDITIONS)

Sometimes referred to as a *time adjustment*, the adjustment for this element of comparison reflects a change in the market conditions (prices) between the effective date of appraisal and the sale date of the comparable sale. The **Market Conditions Adjustment Table** below expresses the change in market conditions as a percentage of sale price. To apply the market conditions adjustment, add a percentage of the sale price per month for the time that has passed since the sale date of the comparable and the effective date of the appraisal.

Example:

- If you are appraising a subject property located in Region 1, and the comparable sale sold 8 months ago for \$250,000, then the market conditions adjustment would be +\$6,788. The market conditions (time) adjusted sale price would be \$256,780.
  - $0.003394 \times 250,000 = 848.50$
  - $848.50 \times 8 = 6,788$
  - $6,788 + \$250,000 = 256,788$

### Market Conditions Adjustment Table

REGION	ANNUAL %	MONTHLY %
REGION 1	4.0725%	0.3394%
REGION 2	2.4418%	0.2035%
REGION 3	2.6852%	0.2238%
REGION 4	0.1990%	0.0166%
REGION 5	1.5976%	0.1331%
REGION 6	5.5389%	0.4616%

## LOCATION / SITE (LAND VALUE)

Location adjustments are used to reflect differences in the value of one location versus another. Site factors such as traffic, site size, shape, restrictions, topography and view amenities were considered to determine the land value of each parcel of real property for the reappraisal.

Adjustment for Location/Site is based on the Assessor's certified land value of the comparable sale properties compared to subject property land value. The procedure for this adjustment is as follows:

Subject Land Value minus Comparable Land Value Equals Adjustment for Location/Site:

$$LV_s - LV_c = \text{Adjustment for Location / Site}$$

Where

$LV_s$  = Subject Land Value

$LV_c$  = Comparable Sale Land Value

Example:

- If the subject property land value is \$75,000 and comparable sale land value is \$125,000, then the adjustment for Location / Site value would be -\$50,000.
  - $75,000 - 125,000 = -50,000$
- If the subject property land value is \$250,000 and the comparable sale land value is \$125,000, then the adjustment for Location / Site value would be +\$125,000
  - $250,000 - 125,000 = 125,000$

## QUALITY (GRADE)

The quality of construction of a residence will influence its cost. Examination of both materials and workmanship is fundamental when determining the overall quality of construction. While the quality of materials and workmanship of individual building components may vary, the overall quality will tend to be consistent for the entire residence. Furthermore, the quality of materials and workmanship will tend to influence each other. The Shelby County Assessor uses a grading system to adjust for differences in quality. The **Quality/Grade Adjustment Table** below shows the Assessor's construction grades and the approximate quality associated with those construction grades.

Grades found in the left column represent the subject property and grades found in the top row represent the comparable sales. To properly use the adjustments found in the Quality/Grade Adjustment table, find the subject quality/grade in the left column(s) and move across until you reach the column representing the comparable. Positive adjustments for grade, wherein the subject property grade is superior to the comparable sale, are found in the upper half of the table, while negative adjustments for grade, wherein the subject property grade is inferior to the comparable sale are located in the lower half of the table.

### Examples:

- If the subject property quality/grade is Average 40 and the comparable sale quality/grade is Average 35, then the adjustment is +12.50% of the comparable sale price. If the comparable sale price is \$275,000, then the adjustment for grade would be +\$34,375. If the comparable sale grade was instead Good 45, then the grade adjustment would be -10.00% of the sale price, or -\$27,500.
  - $0.125 \times 275,000 = 34,375$
  - $-0.10 \times 275,000 = -27,500$

## Quality / Grade Adjustment Table

SUBJECT QUALITY	GRADE MATRIX	10	15	20	25	30	35	40	45	50	55	60	65	70
LOW	10	0.00%												
LOW	15	21.82%	0.00%											
FAIR	20	41.82%	16.42%	0.00%										
FAIR	25	63.64%	34.33%	15.38%	0.00%									
AVERAGE	30	81.82%	49.25%	28.21%	11.11%	0.00%								
AVERAGE	35	103.64%	67.16%	43.59%	24.44%	12.00%	0.00%							
AVERAGE	40	129.09%	88.06%	61.54%	40.00%	26.00%	12.50%	0.00%						
GOOD	45	154.55%	108.96%	79.49%	55.56%	40.00%	25.00%	11.11%	0.00%					
GOOD	50	190.91%	138.81%	105.13%	77.78%	60.00%	42.86%	26.98%	14.29%	0.00%				
VERY GOOD	55	229.09%	170.15%	132.05%	101.11%	81.00%	61.61%	43.65%	29.29%	13.13%	0.00%			
VERY GOOD	60	289.09%	219.40%	174.36%	137.78%	114.00%	91.07%	69.84%	52.86%	33.75%	18.23%	0.00%		
EXCELLENT	65	329.09%	252.24%	202.56%	162.22%	136.00%	110.71%	87.30%	68.57%	47.50%	30.39%	10.28%	0.00%	
EXCELLENT	70	369.09%	285.07%	230.77%	186.67%	158.00%	130.36%	104.76%	84.29%	61.25%	42.54%	20.56%	9.32%	0.00%
EXCELLENT	70													0.00%
EXCELLENT	65												0.00%	-8.53%
VERY GOOD	60											0.00%	-9.32%	-17.05%
VERY GOOD	55										0.00%	-15.42%	-23.31%	-29.84%
GOOD	50									0.00%	-11.60%	-25.23%	-32.20%	-37.98%
GOOD	45								0.00%	-12.50%	-22.65%	-34.58%	-40.68%	-45.74%
AVERAGE	40							0.00%	-10.00%	-21.25%	-30.39%	-41.12%	-46.61%	-51.16%
AVERAGE	35						0.00%	-11.11%	-20.00%	-30.00%	-38.12%	-47.66%	-52.54%	-56.59%
AVERAGE	30					0.00%	-10.71%	-20.63%	-28.57%	-37.50%	-44.75%	-53.27%	-57.63%	-61.24%
FAIR	25				0.00%	-10.00%	-19.64%	-28.57%	-35.71%	-43.75%	-50.28%	-57.94%	-61.86%	-65.12%
FAIR	20			0.00%	-13.33%	-22.00%	-30.36%	-38.10%	-44.29%	-51.25%	-56.91%	-63.55%	-66.95%	-69.77%
LOW	15		0.00%	-14.10%	-25.56%	-33.00%	-40.18%	-46.83%	-52.14%	-58.13%	-62.98%	-68.69%	-71.61%	-74.03%
LOW	10	0.00%	-17.91%	-29.49%	-38.89%	-45.00%	-50.89%	-56.35%	-60.71%	-65.63%	-69.61%	-74.30%	-76.69%	-78.68%

## EFFECTIVE AGE

Effective age of a property is its age as compared with other properties performing like functions. It is the actual age minus the age which has been taken off by face lifting, structural reconstruction, removal of functional inadequacies, modernization of equipment, etc. It is an age which reflects a true remaining life for the property, taking into account the typical life expectancy of buildings or equipment of its class and its usage. It is a matter of judgment, taking all factors, current and those anticipated in the immediate future, into consideration. Determination of effective age on older structures may best be calculated by establishing a remaining life which, subtracted from a typical life expectancy, will result in an appropriate effective age with which to work. Effective age can fluctuate year by year or remain somewhat stable in the absence of any major renewals or excessive deterioration.

The procedure for making the effective age adjustment is to multiply the percentage amount located in the **Effective Age Adjustment Table** below by the sale price of the comparable sale and multiply the product by the difference in the effective age of the subject property and the effective age of the comparable sale.

$$(EA_s - EA_c) \times \text{Adj}\% = \text{Effective Age Adjustment}$$

Where

$EA_c$  = Comparable Sale Effective Age

$EA_s$  = Subject Property Effective Age

$\text{Adj}\%$  = Per Year of Effective Age Percent Shown in Table

Example:

- If the subject property is in Region 2 with an the effective age of 15 years, and the effective age of a comparable sale in the same Region with a sale price of \$230,000 is 5 years, then the adjustment for effective age is -\$8,970
  - $15 - 5 = 10$  years
  - $10 \times -0.0039 = -0.039$
  - $-0.039 \times 230,000 = -8,970$ .
- If the subject property had an effective age of 1, then the adjustment for effective age would be +\$3,588.
  - $1 - 5 = -4$
  - $-4 \times -0.0039 = 0.0156$
  - $0.0156 \times 230,000 = 3,588$



### Effective Age Adjustment Table

REGION		PER YEAR OF EFFECTIVE AGE
REGION 1		-0.367%
REGION 2		-0.390%
REGION 3		-0.603%
REGION 4		-0.357%
REGION 5		-0.489%
REGION 6		-0.471%

## CDU RATING

CDU is an acronym that stands for Condition, Desirability, and Utility. It represents the overall condition, desirability, and utility of the property, oftentimes relative to the neighborhood around it. Condition is the state of the property with regard to its appearance, quality, or working order. Properties with adequate maintenance may be in average or good condition, while properties receiving inadequate maintenance may be in fair or poor condition. Desirability is the appeal or attractiveness of the property and its surrounding area. Utility is the ability of the property to adequately satisfy a human want, need, or desire for shelter. The utility, or usefulness, of a property may relate to its size, design, location, and other specific characteristics.

To use the **CDU Rating Adjustment Table**, locate the CDU of the subject property in the left-most column. Then move across the table until you reach the CDU of the comparable sale located in the top row. Positive adjustments for CDU, wherein the subject property CDU is superior to the comparable sale, are found in the lower half of the table, while negative adjustments for CDU, wherein the subject property CDU is inferior to the comparable sale are located in the upper half of the table.

Example:

- If the subject property CDU is AV and the comparable sale is GD with a sale price of \$300,000, then the adjustment for CDU would be -16.67% or -\$50,010. If the CDU of the comparable sale is FR, then the adjustment for CDU would be +25.00% or +\$75,000.
  - $-0.1667 \times 300,000 = -50,010$
  - $0.25 \times 300,000 = 75,000$

### CDU Rankings

- EX = Excellent
- VG = Very Good
- GD = Good
- AV = Average
- FR = Fair
- PR = Poor
- VP = Very Poor
- UN = Unsound

## CDU Rating Adjustment Table

CDU MATRIX	EX	VG	GD	AV	FR	PR	VP	UN
EX	0.00%							
VG	-12.50%	0.00%						
GD	-25.00%	-14.29%	0.00%					
AV	-37.50%	-28.57%	-16.67%	0.00%				
FR	-50.00%	-42.86%	-33.33%	-20.00%	0.00%			
PR	-62.50%	-57.14%	-50.00%	-40.00%	-25.00%	0.00%		
VP	-65.63%	-60.71%	-54.17%	-45.00%	-31.25%	-8.33%	0.00%	
UN	-68.75%	-64.29%	-58.33%	-50.00%	-37.50%	-16.67%	-9.09%	0.00%
UN								0.00%
VP							0.00%	10.00%
PR						0.00%	9.09%	20.00%
FR					0.00%	33.33%	45.45%	60.00%
AV				0.00%	25.00%	66.67%	81.82%	100.00%
GD			0.00%	20.00%	50.00%	100.00%	118.18%	140.00%
VG		0.00%	16.67%	40.00%	75.00%	133.33%	154.55%	180.00%
EX	0.00%	14.29%	33.33%	60.00%	100.00%	166.67%	190.91%	220.00%

## SIZE (GROSS LIVING AREA)

Gross Living Area (GLA) is the total area of finished, above-grade residential space; calculated by measuring the outside perimeter of the structure and includes only finished, habitable, above-grade living space. Gross Living Area does not include garages, carports, porches, basements, attics, or outbuildings. Adjustments for above-grade GLA are usually uniform, and a single rate is often used across the sales comparison adjustment grid.

The **Size Adjustment Table** shows the contributory value of differences in GLA between properties sold in the market as a percentage of overall sale price per square foot. To use the Size Adjustment Table for this element of comparison, first determine the sale price per square foot of the comparable sale. Then multiply the sale price per square foot by the adjustment percentage shown in the table. Alternatively, to apply a single uniform rate of adjustment for this element of comparison, the appraiser may take the average of the sale prices per square foot of all the comparable sales to be used in the appraisal and multiply the average by the size adjustment percentage.

Example:

- If the subject property is in Region 5 containing 2,300 square feet of GLA, and the comparable sale containing 2,500 square feet of GLA sold for \$245,000, then the adjustment for difference in size is \$43.87 per square foot
  - $245,000 / 2,500 = 98.00$
  - $98.00 \times 0.4477 = 43.87$
- If the appraiser is using four comparable sales located in Region 5 with the following sales prices per square foot, \$99.50, \$98.00, \$97.46, \$95.53, then the uniform adjustment for size would be +/- \$43.70 per square foot.
  - $99.50 + 98.00 + 97.46 + 95.53 = 390.49$
  - $390.49 / 4 = 97.62225$  (round average to 97.62)
  - $97.62 \times 0.4477 = 43.70$

### Size Adjustment Table

REGION	Size Adjust as a % of SPPSF
REGION 1	39.68%
REGION 2	35.66%
REGION 3	35.77%
REGION 4	29.84%
REGION 5	44.77%
REGION 6	41.06%

## BATHROOM

A bathroom is a room in which people wash their bodies or parts thereof. A full bathroom contains three fixtures: a toilet, a sink, and a bathtub or shower. A half bathroom typically contains two fixtures: a toilet and sink. Each additional bathroom plumbing fixture in a home costs more and produces more utility for the occupants, thereby creating additional increments of value generally recognized in the market up to the point of diminishing returns. The **Bathroom Count Adjustment Table** below shows the contributory value of a full bathroom, half bathroom, and additional fixtures as a percentage of the overall sale price. To use the table to adjust for this element of comparison, find the difference between the number of full bathrooms and half bathrooms of the subject property and the comparable sale. Next, multiply the difference in bathrooms by the appropriate percentage in the table, then multiply the product by the sale price of the comparable sale.

Example:

- If a subject property in Region 6 contains 3 bathrooms and the comparable sale containing 3 and ½ bathrooms sold for \$175,000, then the adjustment for difference in bathroom count would be - 1.03% or -\$1,803.
  - $0 - 0.0103 = -0.0103$
  - $-0.0103 \times 175,000 = -1,802.5$
  - Since both properties contain three full bathrooms, the adjustment for full bathrooms is 0%. However, the comparable sale contains a half bathroom, whereas the subject property does not. Because the comparable sale is superior regarding this element of comparison, a negative or downward adjustment based on the half bath % table is warranted.

### Bathroom Count Adjustment Table

REGION	FULL BATH % ADJ	HALF BATH % ADJ	ADJ% PER ADDITIONAL FIXTURE
REGION 1	1.545%	1.030%	0.515%
REGION 2	1.845%	1.230%	0.615%
REGION 3	2.150%	1.433%	0.717%
REGION 4	2.955%	1.970%	0.985%
REGION 5	5.532%	3.688%	1.844%
REGION 6	3.433%	2.289%	1.144%

## HEATING / COOLING

A central air conditioner is a system that cools an entire building by distributing cooled air through a network of ducts. It is a whole house cooling solution, unlike window units or portable air conditioners which cool individual rooms. Central A/C systems typically consist of an outdoor unit (containing the condenser and compressor) and an indoor unit (containing the evaporator coil and air handler), working together to circulate cooled air throughout the home.

Forced air heat systems use air as the heat transfer medium, relying on ductwork, vents, and plenums as means of air distribution, separate from the outdoor air conditioning unit. The return plenum carries the air from several large return vents to the central air handler for re-heating. The air handler consists of an air filter, blower, heat exchanger/element/coil, and various controls that use a thermostat to control the forced air heating system. Forced air heating is the type of central heating most commonly installed in North America.

Other types of heating and cooling include wall furnaces, window units, boiler heating, and radiators. These alternative types of heating & cooling systems are generally less valuable to buyers and sellers in the market. The **Heating & Cooling Adjustment Table** below shows the contributory value of the heating & cooling as a percentage of the overall sale price. To adjust for this element of comparison, take the difference in the percentage of contributory value of the subject heating & cooling system and the comparable sale heating & cooling system, then multiply the result by the comparable sale price.

Example:

- If a subject property in Region 4 has central a/c & heat, and the comparable sale has forced air heat and sold for \$145,000, then the adjustment for heating & cooling is +\$5,003
  - $0.0985 - 0.0640 = 0.0345$
  - $0.0345 \times 145,000 = 5,002.5$

### Heating & Cooling Adjustment Table

REGION	CENTRAL A/C & HEAT	FORCED AIR HEAT	OTHER HEAT
REGION 1	6.09%	3.96%	1.52%
REGION 2	5.40%	3.51%	1.35%
REGION 3	9.76%	6.34%	2.44%
REGION 4	9.85%	6.40%	2.46%
REGION 5	5.04%	3.27%	1.26%
REGION 6	7.31%	4.75%	1.83%

## ATTACHED PARKING (GARAGES / CARPORTS)

A garage is a building or part of a building that may be attached to or separate from a house, designed primarily for storing and protecting vehicles, and sometimes provide additional space for storage and workshops. A one car garage contains approximately 200 square feet, while most two car garages contain approximately 400 square feet.

A carport is an open-sided automobile shelter that may be attached to or separate from a house. While a garage is a fully enclosed structure with four walls and a door, a carport is an open-air roofed shelter that provides adequate protection from overhead elements like sun and rain. Carports are cheaper and faster to install than garages, but garages provide superior protection from theft and weather, plus they offer versatile space for storage and workshops. Similar to garages, a one car carport generally contains approximately 200 square feet, while most two car carports contain approximately 400 square feet.

For this study, detached garages & carports were analyzed as outbuildings and yard items (OBYs). The adjustment for OBYs is based on their depreciated cost as contributory value. The **Attached Garage Adjustment Table** and the **Attached Carport Adjustment Table** below show the contributory value of attached garages and attached carports as a percentage of sale price. To calculate the adjustment for these elements of comparison, find the percent difference in parking contributory value between the subject property and the comparable sale shown in the tables, and then multiply the result by the sale price of the comparable sale. If the size of the garage or carport being analyzed is not the exact size shown in the table, it is appropriate to round to the nearest 100 square feet and/or interpolate between percentages.

### Examples:

- If the subject property is in Region 3 and has no parking, and the comparable sale that sold for \$168,000 has a 2-car garage, then the adjustment for garage parking is -\$10,080
  - $0.00 - 0.060 = -0.060$
  - $-0.060 \times 168,000 = -10,080$
- If the subject property has a 1-car garage and the comparable sale that sold for \$168,000 has a 2-car garage, then the adjustment for garage parking is -\$5,040
  - $0.030 - 0.060 = -0.030$
  - $-0.030 \times 168,000 = -5,040$

- If the garage is larger than the typical size for their car storage requirements, add the additional percentage of contributory value shown in the Adj% Per 100 SF column of the table. For example, if the comparable sale from the previous example had a 500 square foot garage, then the adjustment for contributory value would -\$7,560.
  - $0.030 - (0.060 + 0.015) = -0.0450$
  - $-0.0450 \times 168,000 = -7,560$
- If the subject property is in Region 5 and has no parking, and the comparable sale that sold for \$95,000 has a 1-car carport, then the adjustment for the lack of carport parking is -\$1,235.
  - $0.00 - 0.0130 = -0.0130$
  - $-0.0130 \times 95,000 = -1,235$
- If the subject property has a 2-car carport, then the adjustment for the superior carport parking is +\$1,235
  - $0.0260 - 0.0130 = 0.0130$
  - $0.0130 \times 95,000 = 1,235$
- If a subject property with a 2-car garage is in Region 4 and the comparable sale that has a 2-car carport sold for \$110,000, then the adjustment for the difference in parking is +\$308.
  - $0.0252 - 0.0224 = 0.0028$
  - $0.0028 \times 110,000 = 308$



### Attached Garage Adjustment Table

REGION	ADJ% PER 100 SF	ADJ% 1-CAR GARAGE (200 SF)	ADJ% 2-CAR GARAGE (400 SF)
REGION 1	0.96%	1.92%	3.84%
REGION 2	0.77%	1.54%	3.08%
REGION 3	1.50%	3.00%	6.00%
REGION 4	0.63%	1.26%	2.52%
REGION 5	1.26%	2.52%	5.04%
REGION 6	1.53%	3.06%	6.12%

### Attached Carport Adjustment Table

REGION	ADJ% PER 100 SF	ADJ% 1-CAR CARPORT (200 SF)	ADJ% 2-CAR CARPORT (400 SF)
REGION 1	0.45%	0.90%	1.80%
REGION 2	0.51%	1.02%	2.04%
REGION 3	0.45%	0.90%	1.80%
REGION 4	0.56%	1.12%	2.24%
REGION 5	0.65%	1.30%	2.60%
REGION 6	1.11%	2.22%	4.44%

## DECKS

A residential deck is an elevated, open, flat outdoor platform, usually made of wood or composite materials, attached to a house and serving as an extension of the living space designed for outdoor activities such as entertaining guests, dining, or simply relaxing and enjoying the fresh air. The **Deck Area Adjustment Table** for this element of comparison shows the contributory value of deck area as a percentage of the sale price. To use the table, calculate the difference in deck area between the subject property and the comparable sale, and then find or calculate the percentage that corresponds to the difference. Next, multiply the adjustment percentage by the sale price of the comparable sale. If the size of the deck being analyzed is not the exact size shown in the table, it is appropriate to round to the nearest 100 square feet and/or interpolate between percentages.

Examples:

- If a subject property in Region 1 has a 300 square foot deck and the comparable sold for \$246,000 having no deck, then the adjustment for the deck area would be +\$2,927
  - $300 \text{ SF} - 0 \text{ SF} = 300$
  - $0.0119 \times 246,000 = 2,927.40$
- If a subject property in Region 1 has a 300 square foot deck and the comparable sale sold for \$253,000 with a 500 square foot deck, then the adjustment for the deck area would be -\$1,887.
  - $300 \text{ SF} - 500 \text{ SF} = -200 \text{ SF}$
  - $-200 \text{ SF} / 100 \text{ SF} = -2$
  - $-2 \times 0.00373 = -0.00746$
  - $-0.00746 \times \$253,000 = -1,887.38$

### Deck Area Adjustment Table

REGION	ADJ% PER 100 SF OF DECK AREA	ADJ% FOR 300 SF DECK AREA
REGION 1	0.373%	1.119%
REGION 2	0.411%	1.233%
REGION 3	0.848%	2.544%
REGION 4	0.489%	1.467%
REGION 5	1.568%	4.704%
REGION 6	0.647%	1.941%

## FIREPLACE

A fireplace is a framed masonry space in a chimney made to hold an open fire and burn wood and is vented outside via the chimney. They are usually built with brick, stone, or tile, and they connect seamlessly to the chimney and flue. The **Fireplace Adjustment Table** below shows the contributory value of a fireplace as a percentage of sale price. To use the table to determine the adjustment for this element of comparison, find the difference in number of fireplaces between the subject property and the comparable sale. Then multiply the difference by the percentage shown in the table and multiply the result by the sale price of the comparable sale.

Example:

- If a subject property is in Region 5 with two fireplaces and the comparable sold for \$215,000 with one fireplace, then the adjustment for the difference in fireplace is +\$5,418
  - $2 \text{ FPs} - 1 \text{ FP} = 1 \text{ FP}$
  - $1 \times 0.0252 = 0.0252$
  - $0.0252 \times 215,000 = 5,418$
- If the subject property in Region 5 had no fireplaces and the comparable sold for \$235,000 with two fireplaces, then the adjustment for the difference in fireplace is -\$11,844
  - $0 \text{ FPs} - 2 \text{ FPs} = -2 \text{ FPs}$
  - $-2 \times 0.0252 = -0.0504$
  - $-0.0504 \times 235,000 = -11,844$

### Fireplace Adjustment Table

REGION	ADJ% OF PRICE PER FIREPLACE
REGION 1	2.52%
REGION 2	1.23%
REGION 3	2.35%
REGION 4	2.30%
REGION 5	2.52%
REGION 6	1.75%

## SWIMMING POOLS

A residential swimming pool is a private pool, located at a single family residence or dwelling for a small number of families, and used exclusively by the residents and their guests. The pool serves a private, recreational function for the owner and can be indoor or outdoor. The **Swimming Pool Area Adjustment Table** below shows the contributory value of a swimming pool based on its area as a percentage of the sale price. To determine the adjustment for this element of comparison using the table, find the difference in area between the subject property swimming pool and the comparable sale, then multiply the difference by the percentage shown in the table. Next take the result and multiply by the sale price of the comparable sale. If the size of the pool being analyzed is not the exact size shown in the table, it is appropriate to round to the nearest 100 square feet and/or interpolate between percentages.

Example:

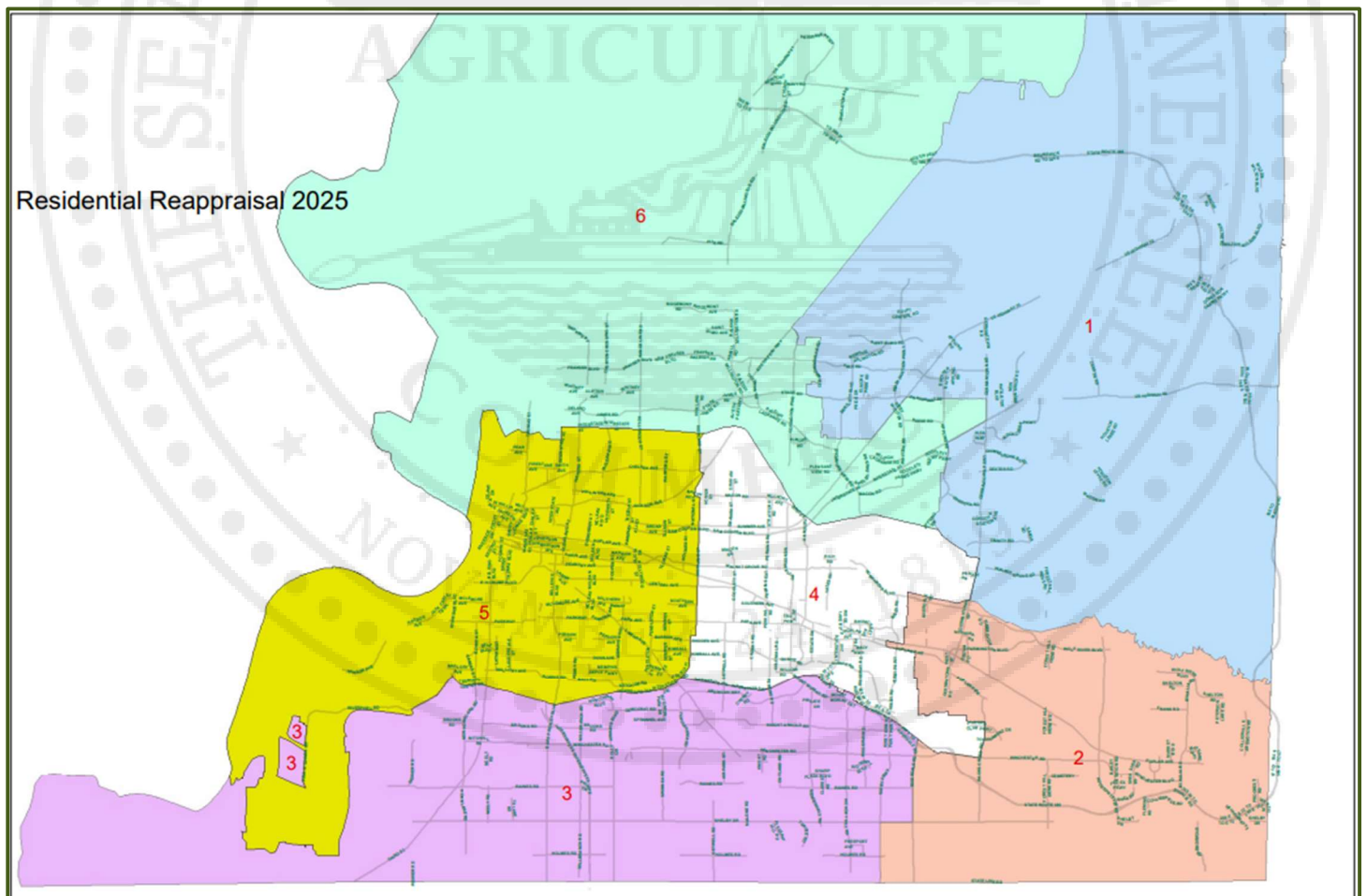
- If a subject property in Region 2 has a 600 square foot pool and the comparable sale sold for \$515,000 with a 300 square foot pool, then the adjustment for difference in pool area is \$8,807.
  - $600 \text{ SF} - 300 \text{ SF} = 300 \text{ SF}$
  - $300 \text{ SF} = 1.71\% \text{ of sale price}$
  - $0.0171 \times \$515,000 = +\$8,806.50$
- If a subject property in Region 2 has no pool, and the comparable sale sold for \$452,000 with a 400 square foot pool, then the adjustment for the difference in pool area would be \$10,306
  - $0 \text{ SF} - 400 \text{ SF} = -400 \text{ SF}$
  - $-400 / 100 = -4$
  - $-4 \times 0.0057 = -0.0228$
  - $-0.0228 \times 452,000 = -10,305.60$

### Swimming Pool Area Adjustment Table

REGION	ADJ% PER 100 SF POOL AREA	ADJ% FOR 300 SF POOL	ADJ% FOR 600 SF POOL
REGION 1	0.76%	2.28%	4.56%
REGION 2	0.57%	1.71%	3.42%
REGION 3	1.88%	5.64%	11.28%
REGION 4	0.55%	1.65%	3.30%
REGION 5	0.95%	2.85%	5.70%
REGION 6	1.21%	3.63%	7.26%

# RESIDENTIAL REGIONS BOUNDARIES/MAP

REGION	Northern Boundary	Southern Boundary	Eastern Boundary	West Boundary
Region 1	Next County	Wolf River	Next County	Part Appling Rd, part Stage RD, Part Austin Peay
Region 2	Wolf River	Mississippi	Riverdale	Next County
Region 3	HWY 240S and 385	Mississippi	MS River	Riverdale
Region 4	I40	HWY 240S and 385	Shelby Farms, Kirby, Hacks Cross	Highland
Region 5	I40	I240	Highland	MS River
Region 6	Next County	I40	Part Appling Rd, part Stage RD, Part Austin Peay	Miss River



# MULTIPLE REGRESSION MODELS RESULTS

- Region 1 MRA Models Results Statistics

MODEL#	Sum of Sales Used	Sum of R Squared	Sum of Standard Error	Sum of COV
11	3095	0.7916	55422.897	14.643
14	263	0.8385	84799.685	17.3395
15	950	0.928	39664.803	10.3216

- Region 2 MRA Models Results Statistics

MODEL#	Sum of Sales Used	Sum of R Squared	Sum of Standard Error	Sum of COV
21	736	0.7446	85277.983	15.5382
22	658	0.835	45132.223	10.0282
23	464	0.7088	26901.596	10.1335
24	1312	0.8763	93223.252	14.1464

- Region 3 MRA Models Results Statistics

MODEL#	Sum of Sales Used	Sum of R Squared	Sum of Standard Error	Sum of COV
31	1343	0.7219	20210.738	14.7311
32	482	0.5981	25828.392	13.3404
33	196	0.8634	20857.059	13.7891

- Region 4 MRA Models Results Statistics

MODEL#	Sum of Sales Used	Sum of R Squared	Sum of Standard Error	Sum of COV
41	1258	0.856	20450.976	12.4302
42	428	0.6866	29228.635	9.0257
43	185	0.6207	35303.993	9.0768
45	287	0.776	28552.852	9.6353
46	252	0.6998	33453.868	10.2378
80	499	0.7925	151741.083	17.9775

- Region 5 MRA Models Results Statistics

MODEL#	Sum of Sales Used	Sum of R Squared	Sum of Standard Error	Sum of COV
51	806	0.8529	14018.844	11.5149
53	762	0.8667	35602.256	12.7032
54	231	0.8993	74966.336	13.0209
55	271	0.8926	60034.209	13.3542

- Region 6 MRA Models Results Statistics

MODEL#	Sum of Sales Used	Sum of R Squared	Sum of Standard Error	Sum of COV
61	1278	0.7725	20889.425	16.8422
63	478	0.8806	35178.921	14.0194
64	733	0.6472	27975.585	13.3618

# ASSUMPTIONS & LIMITING CONDITIONS


- In mass appraisal, multiple regression analysis (MRA) works on the principle of estimating the regression constant and regression coefficients to minimize the sum of the squared differences between actual and predicted sales prices.
- The MRA models used for the reappraisal are additive models (linear MRA), which assume that the impact of property characteristics to value are independent.
- Additive MRA models assume linearity and additivity. Linearity means there is a straight-line relationship between the independent predictor variables (elements of comparison) and the dependent outcome variable (sale price). Additivity means the model assumes that the individual effects of each independent variable simply add up to determine the predicted dependent variable, without any interactive effects between the independent variables.
- Scalar transformations, binary transformations, coefficient constraints, independently modeled land values, and depreciated cost values of OBVs as coefficients were used in the calibration of the regression models.
- R-square (coefficient of determination) is the percentage of the variation in the dependent variable (sale price) explained by the independent variables (elements of comparison).
- Standard error of estimate is the standard deviation of the regression errors.
- Coefficient of variation (COV) is the standard error divided by the average value of the dependent variable (sale price).
- The opinion of contributory values for the elements of comparison contained in this report is based on an analysis of average independent variable coefficients and sizes in the regression model measured against the average sale prices in each respective model.



- Due to the linearity of the regression models, the law of variable proportions, sometimes called the law of diminishing returns, relative to the contributory value of each variable was not examined. An appraiser who uses this report to determine adjustments for the sales comparison approach must make an independent analysis to determine the point of diminishing returns for any element of comparison.
- The data characteristics of sold properties, captured by the appraisal staff of the Shelby County Assessor, is presumed to be accurate for MRA modeling purposes.
- The contributory values of the elements of comparison are assumed to be commensurate with the quality, condition, and effective age of the corresponding property. Analysis of the effects of variations in quality, condition, or effective age between a property and its elements of comparison was not performed for this report.
- Adjustments in this report should only be applied to properties in the Region for which the adjustments were developed. An adjustment percentage corresponding to Region 3 should not be applied to comparable sale in Region 2.
- Sales used in the modeling process are representative of arm's length transactions according to the definition of market value.
- Market value is defined as the most probable price, representing the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale, expressed in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto, that a property would bring if exposed for sale in the open market in an arm's length transaction between a willing seller and a willing buyer, both of whom are knowledgeable concerning all the uses to which it is adapted and for which it is capable of being used, according to its sound, intrinsic and immediate economic value, ascertained from the evidence of its sound, intrinsic and immediate value, for purposes of sale between a willing buyer and a willing seller, without consideration of speculative values, in accordance with such official assessment manuals as may be promulgated and issued by the state division of property assessments and approved by the state board of equalization pursuant to law.



- This report contains professional opinions and is expressly not intended to serve as any warranty, assurance, or guarantee of any particular value.
- If any new information or data inaccuracies are observed, the author of this report reserves the discretionary right to amend the report and the conclusions contained therein, as needed.
- The statements of fact contained in this report are true and correct, to the best of the author's knowledge.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in any property that is the subject of this report.
- I am employed by Melvin Burgess, the Shelby County Assessor of Property, as Manager of Appraisal Modeling, Analytics, and Appeal Operations.
- I have no bias with respect to any property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon the reporting of a predetermined value or the attainment of a stipulated result.



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