

2021 RREHMRA Comp Grid Explanation



Comp Grid Descriptors:	Data Regarding property specific characteristics and sale information
Quick Ref ID:	WCAD property identifier
Situs Address:	Physical location of the property
Neighborhood Code:	Group of properties with similar market characteristics
Acres:	Total acres of single property account (does not include adjoining accounts)
Eff Year Built / Class:	Effective Year Built indicates current condition of property (example: updated); Class indicates quality of construction
Actual Year Built:	Indicates actual age
Living Area SF:	Outside measurement of living area (rounded to nearest foot)
Story Height:	Indicates One- or Two-Story Home
Garage / Porch SF:	Total square footage of attached and/or detached garage. Total square footage of all open porch areas
Deck / Patio:	Total square footage of all decks and/or patios
Pool SF:	Total square footage of pool
Land Value:	Value of lot or acres
Land Table:	Valuation table associated with a group of land
NBHD Location Factor:	WCAD hierarchy ranking of Neighborhood Codes based upon the median value within each Neighborhood
Sale Date:	Date of sale contract
Sale Price:	Contract Sale Price (Line 101 of settlement statement)

RREHMRA		
Variables	Coefficients	F Test
Time (DSSF)	-1.2852	660.91
Location (NBHDVar)	36496.0305	52.091
Land Value (LV)	1	1623.701
Size/Class (SEGCLASSFACTVAR)	64.7803	12809.887
Depreciation (AgeSF)	-0.2199	61.762
Garage (GARAGEVAR)	23.9052	286.072
Open Porch (OPNPRCHVAR)	50.4479	513.448
Deck (DeckVAR)	49.8708	76.388
Patio (PATIOVAR)	21.1238	39.788
PoolVARSQFT	101.7504	611.228
Fireplace	8042.5558	84.107
Misc. nonMA (NonMA_RCN_Other)	1	483.253
CONST	64533.8141	3058.895

Unit price scale factor	
R0 = .42	R5 = 1.30
R1 = .71	R6 = 1.67
R2 = .76	R7 = 2.03
R3 = .86	R8 = 2.25
R4 = 1.00	R9 = 2.50

Unit Price Scale - A unit price scale was developed using the median unit price per Classification of build. This was used in modeling the size and classification of home.

Coefficients: Coefficients: WCAD has identified market areas for analysis through for MRA and utilized thirteen property characteristics as variables in the development of a specified valuation model. The resulting model can be used for either estimating market values or determining adjustments to apply for differences when comparing sold to unsold properties. The model is shown above and identifies the property characteristics utilized as variables in the market value analysis along with their corresponding coefficients which are used in a sales comparison grid to establish value.

Adjustments	How To Calculate Market Adjustments
Time Adj (DSSF)	(Difference in months from Appraisal date to Sale date * DSSF coefficient) * Square feet of Comparable
Location Adj (NBHDVar)	(Subject NBHD Location Factor - Comparable NBHD Location Factor) * NBHDVar coefficient
Land Value Adj (LV)	Subject Land Value - Comparable Land Value
Size/Class Adj (SEGCLASSFACTORVAR)	(Unit price scale factor * Subject Square Foot * SEGCLASSFACTORVAR) – (Unit price scale factor * Comparable Square Foot * SEGCLASSFACTORVAR)
Depreciation Adj (AgeSF)	AgeSF = (Appraisal Year - Eff Year Built) * Living Area SF. Once you have the AgeSF for each property you can calculate the adjustment. (Subject AgeSF * AgeSF coefficient) - (Comparable AgeSF * AgeSF coefficient)
Garage Adj (GARAGEVAR)	(Unit price scale factor * Subject Garage SF) - (Unit price scale factor * comparable Garage SF) * GARVAR coefficient
Open Porch Adj (OPNPRCHVAR)	(Unit price scale factor * Subject OpenPorch SF) - (Unit price scale factor * comparable OpenPorch SF) * OPNPRCHVAR coefficient
Deck Adj (DeckVAR)	(Subject Deck SF - Comparable Deck SF) * DECKVAR coefficient
Patio Adj (PATIOVAR)	(Subject Patio SF - Comparable Patio SF) * PATIOVAR coefficient
Pool Adj (PoolVARSQFT)	(Subject Pool Sqft * PoolVARSQFT) - (Comparable Pool sSqft * PoolVARSQFT)
Fireplace Adj	(Subject Fireplace count - Comparable Fireplace count) * Fireplace coefficient
Misc. nonMA Adj (RCN)	Subject Cost of Miscellaneous Improvements – Comparable Cost of Miscellaneous Improvements
Adj Sale Price (MASP)	Sale Price plus or minus the adjustments explained above
Indicated Value	Final determined value based on MASPs, Subject MRA value, and a weighted sales calculation. Subject MRA value is calculated from the coefficients provided by the model formula. Weighted sales calculation: $1/((M/2)^2 + D^2 + (2M \times P)^2)$, where M is the maximum set comparability distance (300), D is the comparability distance between a sale and the subject, and P is the percentage adjustment to a sale. MASPs, subject MRA value, and weighted sale are arrayed and middle three are averaged
Comparability Index	Numeric weights used to provide a measure of comparability between the subject property and sold properties. Calculated using the sum of square weighted differences between the subject and sold properties and used to select sales most like the subject. Criteria and example located below.
MRA Model Value Estimate	MRA Value = Constant + Land Value + {Unit price scale factor (Property Class) * Property Square Foot * SEGCLASSFACTORVAR} + {(2021 - Property Effective age) * AgeSF} + {Property Garage Sqft * ATTGARVAR} + {Property Open Porch Sqft * OPNPRCHVAR} + {Property Deck Sqft * DECKVAR} + {Property Patio Sqft * PATIOVAR} + {Property Pool sSqft * PoolVARSQFT} + {Property NBHD Variable * NBHDVar}

Example

Variable	Subject	Sale	Diff	Weighted	Squared
Neighborhood Group	ERRGRP10	ERRGRP10	0	0	0
Neighborhood	R549699C	R545698D	1	100	10000
Class	R2	R4	1	40	1600
Story Height	2	2	0	0	0
NMFVD	0	5	5	5	25
TotLivArea	2745	2685	60	12	144
XCOORDLONG	-97.5976854	-97.51128937	-0.0863961	-0.000172792	2.98571E-08
YCOORDLAT	30.5147904	30.51128937	0.0035011	7.0021E-06	4.90294E-11
Sum of squared					11769
Square root					108.485022
Comparability Index					108

Comparable Selection Criteria

Variable	Type	Weight
Neighborhood Group	Qualitative	150
Neighborhood	Qualitative	100
Class	Qualitative	40
Story Height	Qualitative	20
NMFVD	Quantitative	1
TotLivArea	Quantitative	0.2
XCOORDLONG	Quantitative	0.002
YCOORDLAT	Quantitative	0.002

*Qualitative variable gets a difference of 1 if values differ

2021 RREHMRA Equity Grid Explanation



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Actual Year Built:	Indicates actual age
Living Area SF:	Outside measurement of living area (rounded to nearest foot)
Garage / Porch SF:	Total square footage of attached and/or detached garage. Total square footage of all open porch areas
Deck / Patio:	Total square footage of all decks and/or patios
Pool SF:	Total square footage of pool
Fireplace	Total number of fireplaces
Land Value:	Value of lot or acres
Total Appr Value	WCAD's Appraised value

Adjustments	How To Calculate Equity Adjustments
Land Value Adj (LV)	Subject Land Value - Comparable Land Value
Size/Class Adj (SEGCLASSFACTVAR)	$(\text{Unit price scale factor} * \text{Subject Square Foot} * \text{SEGCLASSFACTORVAR}) - (\text{Unit price scale factor} * \text{Comparable Square Foot} * \text{SEGCLASSFACTORVAR})$
Depreciation Adj (AgeSF)	$\text{AgeSF} = (\text{Appraisal Year} - \text{Eff Year Built}) * \text{Living Area SF}$. Once you have the AgeSF for each property you can calculate the adjustment. $(\text{Subject AgeSF} * \text{AgeSF coefficient}) - (\text{Comparable AgeSF} * \text{AgeSF coefficient})$
Garage Adj (GARAGEVAR)	$(\text{Unit price scale factor} * \text{Subject Garage SF}) - (\text{Unit price scale factor} * \text{comparable Garage SF}) * \text{GARVAR coefficient}$
Open Porch Adj (OPNPRCHVAR)	$(\text{Unit price scale factor} * \text{Subject OpenPorch SF}) - (\text{Unit price scale factor} * \text{comparable OpenPorch SF}) * \text{OPNPRCHVAR coefficient}$
Deck Adj (DeckVAR)	$(\text{Subject Deck SF} - \text{Comparable Deck SF}) * \text{DECKVAR coefficient}$
Patio Adj (PATIOVAR)	$(\text{Subject Patio SF} - \text{Comparable Patio SF}) * \text{PATIOVAR coefficient}$
Pool Adj (PoolVARSQFT)	$(\text{Subject Pool Sqft} * \text{PoolVARSQFT}) - (\text{Comparable Pool sSqft} * \text{PoolVARSQFT})$
Fireplace Adj	$(\text{Subject Fireplace count} - \text{Comparable Fireplace count}) * \text{Fireplace coefficient}$
Misc. nonMA Adj (RCN)	Subject Cost of Miscellaneous Improvements – Comparable Cost of Miscellaneous Improvements
Adj Value	WCAD's appraised value plus or minus the adjustments explained above
Median Adjusted Value	Median value of all the Comparable Adjusted Values