# FINAL REPORT

# THE 2016 SCARSDALE REVALUATION PROGRAM
## Applicable to the 2016 Tentative Assessment Roll

## Summary of Analysis, Modeling and Valuation Activities

## And

## Considerations in Understanding the Property Tax

Prepared By:
J.F. Ryan Associates, Inc.

June 1, 2016

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June 1, 2016

Nanette J. Albanese, SRA, IAO
Scarsdale Town/Village Assessor
Town/Village Hall
1001 Post Road - 2nd Floor
Scarsdale, NY 10583

Ms. Albanese:

The following report is intended to document the entire 2016 Scarsdale revaluation process associated with the analysis, review and reporting necessary to render credible opinions of value in accordance with *Standard 6* of the *Uniform Standards of Professional Appraisal Practice, 2016-2017 edition*. In order to promote public understanding and enhance public trust and confidence in the 2016 revaluation program, additional commentary and background information is provided to explain the property tax system and how it impacts the valuation process.

**The Intended Use:** to provide the technical processes that were the bases for the valuation of all real property in the Town of Scarsdale for the June 1, 2016 tentative assessment roll, as set forth in the contract agreement between the firm J.F. Ryan Associates, Inc. and the Town of Scarsdale;

**The Intended Client:** The Town of Scarsdale municipal officials;

**Other Report Users:** include the public and property owners in the Town of Scarsdale

**The Effective Date of Value:** July 1, 2015;

**Type and Definition of Value Utilized:** The type of value expressed in this report is market value and reflects New York State RPTL Article 3, which requires an annual assessment roll that reflects market value, as of the applicable statutory valuation date.

The term "**market value**" is defined as "the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

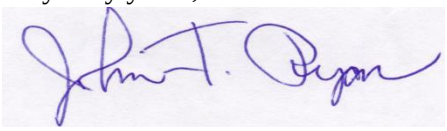
1. buyer and seller are typically motivated;
2. both parties are well informed or well advised, and are acting in what they consider their best interest;
3. a reasonable time is allowed for exposure in the open market;
4. payment is made in cash in U.S. dollars or in terms of financial arrangements comparable thereto; and;
5. the price represents a normal consideration for the property sold unaffected by special, creative financing, or sales concessions granted by anyone associated with the sale."[1]

[1] The Appraisal of Real Estate, Appraisal Institute, 14th Edition, 2013, page 59.

**Property Rights Assessed:** Fee Simple. Fee simple is defined as:
*Absolute ownership unencumbered by any other interest or estate; subject only to the limitations imposed by the government powers of taxation, eminent domain, police power and escheat (the right of government to take title to property when there are no apparent heirs.)*

**Extent of Property Inspections:** As part of the 2014 revaluation program, interior and exterior inspections were performed by the 2014 revaluation contractor, Tyler Technologies, where permitted. Subsequently, the Town of Scarsdale Assessor's office completed additional interior and exterior property inspections, when required. In accordance with contract terms, J.F. Ryan Associates, Inc., completed an exterior review from the public-right-of-way for all properties in the Town.

Very truly yours,



John F. Ryan, CAE
J.F. Ryan Associates, Inc.

# Certification of Value:

- The undersigned certifies that, to the best of my knowledge and belief that:
- The statements of fact contained in this report are true and correct;
- 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 the properties that are the subject of this report and I have no personal interest with respect to the parties involved;
- I have no bias with respect to any properties that are the subject of this report, or to the parties involved with this assignment;
- My engagement in this assignment was not contingent upon developing, or reporting predetermined results;
- My compensation for completing this assignment is not contingent upon the reporting of a predetermined value, or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal;
- The analyses, opinions and conclusions that were developed, as well as this report have been prepared in conformity with Standard 6 of the *Uniform Standards of Professional Appraisal Practice (USPAP, 2016-2017);*
- I have not made a personal inspection of the properties that are the subject of this report. Mr. Gerd Semmelroggen, Senior Appraiser, completed an exterior review of each property from the public way;
- My opinion of the total market value for the properties identified in this report, as of the July 1, 2015 effective valuation date, is subject to the final adjustments made by the Town, as a result of the appeal process with property owners/taxpayers.

John F. Ryan, CAE
J.F. Ryan Associates, Inc.

June 1, 2016

# Scope of Work

The scope of work of this mass appraisal that underlies this report is set forth in our professional services agreement with the Town of Scarsdale. The agreement required the provision of expert valuation services and support to assist in the generation of individual property valuations for all property in the Town for the June 1, 2016 tentative assessment roll.

All sales were reviewed and stratified by location, size, quality, age and condition. This review and analysis was completed to assist in the calibration process to generate market value estimates as of July 1, 2015.

All pertinent factors, including physical, legal, and economic considerations were considered and recognized, subject to the assumptions and limiting conditions referenced above.

Our preliminary analysis of market data included sales that occurred in 2014 through the end of September 2015. Working with the Town's software vendor, a complete CAMA (computer-assisted mass appraisal) system was developed, which yielded an initial market model that was installed on the Town's computer system in early 2016. Continuous calibration of the model was executed throughout the field review process, which commenced in late January 2016, continuing through mid-April 2016. This field review, in combination with additional market data analyses, was completed. That review generated additional adjustments to the market model to reflect the additional considerations of the market for Scarsdale property, as of July 1, 2015. Values were reviewed upon final model calibration, which was completed in late May 2016.

For commercial properties, values were derived, reviewed and adjusted based on the income approach to value. Values were generated using spreadsheet software, which were predicated upon confidential income and expense data provided by property owners, as well as other market data available through published sources. In correspondence mailed in March 2016 to all commercial property owners, actual calendar year 2015 property income and expense data was requested from each property owner.

# Revaluation and Property Taxation Background

The overarching concept behind revaluation or reassessment (the two words are interchangeable) is simple; *fairness of taxation*. To understand ***fairness***, it is important to understand a variety of realities; not the least of which is that complete (or perfect) fairness is never possible. Suggesting that complete fairness is obtainable implies that everyone's property value can be derived with perfect accuracy, time and time again. This is simply not possible, given one reality – that the judgements of all market participants (buyers and sellers) involved in establishing market values are fundamentally subjective in nature.

Market sellers and buyers are driven by a host of personal and marketplace considerations. Just a few personal considerations include; pressure, or lack thereof, to buy or sell quickly or not; ease or difficulty concerning buyer financing, interest rates, personal affordability, as well as the relative price placement between an individual subject property and other available properties at a given point in time.

Subject property, marketplace characteristics and circumstances that might come into play are virtually unlimited. For instance; a particular buyer might have firm requirements such as the size of the house, number of baths, a particular style or layout of the house or the need of a fenced-in yard for the dog, etc. The presence of the potentially unlimited number of personal preferences coupled with the obvious fact that people ascribe different levels of importance (and implied value) to the dozens, or hundreds of personal and marketplace considerations is what creates a situation where the degree of discrepancy between a single market participant's perception of various considerations and the tendencies of the collective market participants gets translated into what might be called a "market-price inconsistency" (also known as "error.")

Thus, given that all market place participants routinely incorporate their subjective views of the importance of various considerations into the establishment of specific property values, it is not surprising that all appraisals (assessments) are nothing more than informed "opinions" of value, predicated upon an interpretation of the collective subjective actions of all marketplace participants.

As stated, the primary goal of reassessment is straightforward; fairness of property taxation. It is equally as important to understand what fairness does not involve. Fairness does not involve discussion of tax bases, or the legitimacy of budgets *per se*.

The property tax is fundamentally different than most other forms of taxation. For instance; governments typically set income tax rates first and then generate whatever revenue is required, as calculated for each taxpayer using applicable income tax rates. If the total revenue generated is not sufficient to fully fund the annual budget, one option is simply to increase the tax rate.

For the property tax, the sequence is reversed. The task is to determine both the total tax base (sum of all individual property assessments) and a total budget and then to determine the tax rate. A tax rate is calculated by dividing the budget by the tax base. The property tax system is a balanced budget system and does not generate a deficit.

Thus, we come back to the issue of what is *fairness*? Fairness, (also referred to as uniformity) in theory, is when all properties are assessed at a level percent of value. For instance: *fairness* would exist if all properties were valued at 100% of market value. Interestingly, *fairness* exists equally if all properties were valued at only 50% - however, the tax rate would be double.

The following simple example on the following page illustrates this concept:

| | |
|---|---|
| Total budget = $ 25,000,000 | Total budget = $ 25,000,000 |
| Total tax base= $ 1,250,000,000 (assessed @ 100% value) | Total tax base= $ 625,000,000 (assessed @ 50% value) |
| Tax Rate = $ 2.50 per $100 of assessment | Tax Rate = $ 5.00 per $100 of assessment |
| Individual assessment =$ 1,000,000 | Individual assessment = $500,000 |
| Individual tax bill = $ 25,000 | Individual tax bill = $ 25,000 |

Therefore, understanding that any discussion of property tax fairness does not involve budgets and rates, attention is properly focused on the two aspects of assessment that are relevant; accuracy and uniformity. The following is a brief discussion of how we went about analyzing market data in order to estimate individual 2016 property assessments for all Scarsdale properties.

## Sales Validation

Prior to establishing fair and equitable assessments for each and every property, it is important to have an understanding not only of the market place in general, but to also examine each individual property sale to gain insight in to what specific considerations and conditions are driving the market values for the individual properties that sold.

Our initial review encompassed a two year period prior to July 1, 2015, where there were over 400 sales of both improved parcels and the equivalent of residential sites ready for immediate development. The starting goal is to determine which of the sales are valid/invalid by definition and which sales that may be "valid" by definition, but are inconsistent with the insight gained by examination of the overwhelming majority of other sold properties.

The technical definition of a *valid* sales price is straightforward. For a sale to be valid, the property should be broadly exposed to the market place and adequately advertised. The transaction must have occurred between unrelated parties, both buyer and seller should be well informed about the market place and neither party should be unduly affected by pressure to either buy or sell.

There are many situations that may exist that will cause a sale to be rejected (invalidated) for use in the final model. A sale driven by foreclosure, even if listed by a local real estate agency, is immediately rejected by virtue of the common desire of lenders to get the property off its books, because lenders are just that – lenders, not property managers, or investors. Additionally, it is often difficult to determine if the property has been exposed to the market place in a sufficiently broad manner, assuring an adequate number of potential buyers at the auction sale.

In any group of sold properties that meet the technical definition of valid, arm's length transactions, there may exist properties for which the selling price is intuitively inconsistent, or unexplainable when compared to the majority of sale price indicators from all other transactions. These type of property sales are additionally invalidated, so as not to distort the statistical indicators shown by the other known and valid selling prices. A couple of examples:

If one was to scan even a hundred sales of improved residential properties in Scarsdale, it is readily seen that some 85% - 90% of the sold properties transacted between $350 - $600 per square foot (sf) of above-grade, gross living area (sf = selling price divided by above-grade, gross total living area/sf). Detailed statistical analysis performed demonstrated there are many legitimate reasons for the range of selling prices per square foot. Houses with higher quality and condition typically sell for more per square foot than houses with lower quality and condition. Properties with better or worse site characteristics will also cause a variance in the per square foot price. While the majority of houses sold in the interval of $400 - $500/sf, a few sold for over $1,000/sf. It is extremely important to determine why one house sells for $500/sf and another house sells for $1,000/sf – if research and investigation cannot ascertain the rationale for the abnormally high selling price, then typically that property sale is invalidated and excluded from the analysis and modeling process. The analysis and modeling tasks are designed to illuminate such anomalies and serve to guide those in making consistent judgements about establishing the final appraised values.

Another sales validation issue is that of "tear downs." It is not uncommon in highly-desirable, high property-valued communities, where vacant land is very scarce, that buyers will purchase an older, improved property and tear it down. When they cannot find an existing house, or property they desire and that meets their needs, they will simply buy an improved property in their location of choice, tear down the house in order to obtain and build the property of their dreams. In theory, when a house is not considered to add value to the site, the total selling price paid in this scenario, represents the site value only and is not included with the improved property sales file for modeling.

## Statistical Analysis

There are many statistical techniques to assist in analyzing selling prices and property data. Without overwhelming the reader with statistics, or making this discussion inordinately complex, it is important to discuss the relevant points and considerations.

First, it is important to understand that regardless of the analytic methods employed, there are pros and cons, pitfalls, difficulties and inconsistencies associated with every statistical technique, or method. For instance; a reasonable starting point (after sales validation) is to stratify the sold properties into groups – say, by neighborhood. Upon stratification, a calculation that indicates the average selling price and average selling price/sf for each neighborhood can be performed, with results that may appear as follows (see next page):

| | NBH 1 | NBH 2 | NBH 3 |
|---|---|---|---|
| Average Selling Price | $1,000,000 | $2,000,000 | $3,000,000 |
| Average Selling Price/sf | $ 400 | $ 550 | $ 500 |
| Average total gross GLA | 2,500 | 3,636 | 6,000 |
| Number of Sales | 3 | 18 | 12 |

Neighborhood (NBH) #3 clearly has the highest average selling price, neighborhood #2 is second and neighborhood #1 is the least expensive. If there were no more to the story than the facts indicated above, it is clear that neighborhood #2 is the most desirable on a sale price/sf (SPSF) basis. Neighborhood #3 is about 10% less and neighborhood #1 is 20% less than neighborhood #3. In other words, simply knowing the neighborhood, the number of sales in each neighborhood and the living area of each property, a few simple calculations would produce accurate property values; but of course, there is more to the story - much more.

For instance, while the above table uses *average* selling price, selling price per/sf and total above-grade, gross living area (sf) – which is a known, accepted and recognized legitimate and informative appraisal industry calculation and measure – the number of sales in neighborhood #1 catches the eye; i.e. there were only 3 sales. Whenever there are a limited number of occurrences, statistics and results are skewed very quickly. What if the 3 individual sales indicated SPSF of $500, $475 and $225, yielding a $400 *average?* Yet, two of the three sales indicate a SPSF amount significantly higher than the average of $400. There is good reason to conclude:

a) The low sale is likely not valid and should be excluded, or
b) Further investigation is necessary to discover why it sold so much lower than the other sales.

While the *average* statistic is a useful tool, it has the potential to result in misleading conclusions. If I put one hand in the freezer and one hand in a hot oven, am I "on average" comfortable? Of course not. This is the reason, depending upon the amount of data and number of occurrences, that the most common measure of central tendency used is the *median* statistic. In applying descriptive statistics when testing the results of our modeling efforts, we relied on the *median* statistic to achieve more accurate results.

As a result, it brings us to the reality that there are many property characteristics that impact value. The analysis and modeling processes are undertaken with the sole focus of identifying what characteristics are relevant and to what degree market values are affected.

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The property characteristics identified through our analysis of market data, as relevant to the Scarsdale marketplace, are as follows:

Land:

- Land Size
- Neighborhood
- Location influences

Building

- Total Above-Grade, Gross Living Area (SFLA)
- Style
- Quality
- Overall Condition
- Number of Bathrooms
- Number of ½ Bathrooms
- Lack of Air Conditioning
- Finished Basement
- Finished Recreation Room

The starting point for characteristic data analysis is the existing database of property data. Scarsdale established and implemented a complete database of property data during the 2014 reassessment, when the Town did a full on-site inspection of each property. During the 2016 reassessment efforts, sales were inspected on site, where possible, by staff from the Town Assessor's Office. Also, there is an ongoing daily operations in the Assessor's Office for the process of updating records, based on the issuance of building permits. On-site inspections have also occurred for various other reasons. In any discussion of data relevance, a question is often posed; are the data elements cited above the only data relevant to appraisal/valuation efforts? The answer is not absolute.

We can say with a high level of certainty, that when the Scarsdale data is thoroughly examined and analyzed the answer is broadly "yes." For instance, there are statistics that will show the degree to which two or more data elements are correlated. In other words, as a descriptive data element such as living area varies, does a property's market value also change? All of the data characteristics on file were subjected to correlation analysis and those with meaningful correlations were used in the development of the final valuations.

One of the reasons why appraisal accuracy is often difficult to obtain is that there is tension between an appraiser's knowledge, experience and intuition and statistical indicators. Let's say a correlation coefficient is calculated for the relationship between market value and the presence of a garage and the analysis indicates that "there is no relationship between having a garage and market value." Based on even a rudimentary understanding and intuition about the local marketplace, how is that possible, In other words, how can having a garage NOT affect market value? The answer involves the issues of data characteristics and data variability. Hypothetically, how much is a garage worth to a buyer? The "how much" part of the question can only be determined if there are both a reasonable number of sold properties with and without garages and sufficient variation in the data for garage size and market values.

To make the example simple, in the negative: if no one in town had a garage, how much is one worth in the market place? Statistically, the answer is zero. Likewise, if everyone in town has a two-car garage, how much is a two-car garage worth? Statistically, again the answer is zero. Alternatively, let's say 85% of houses do not have garages and 15% do, but by some strange coincidence, there have been no sales of houses that have a garage. In all three cases, there is no variation in the data between garages and market values – yielding a situation for which there is simply no evidence of what the correct value is for garages.

Appraisers often rely on their *experience in estimating* the contributory value of garages (say $15,000) into their valuation analysis; however, because there is no statistical information to support such an estimate, the result is simply the addition of error to the model estimate (the degree to which the estimated $15,000 differs from the true, but unknown and uncalculatable value of the garage). The same situation exists if the frequency of properties that have sold (for any given characteristic) is insufficient. For instance: if only a single property sold with an 8-person hot tub, is it possible to determine the contributory value of the hot tub? The answer is no. The bottom line is there must be both frequent observations and variation in the data to empirically determine component values.

Given the great potential and frequent difficulties that arise from the lack of and infrequency of consistent data, how are the two primary goals of reassessment – accuracy and uniformity - obtained? A two-step process becomes necessary - valuation modeling and value review.

## Valuation Modeling

Before discussing valuation modeling and value review, it is important to illuminate the distinction between mass appraisal (thousands of properties valued at one point in time) and fee appraisal (a single property valued at any one point in time).

Fee appraisals are completely singularly - one at a time. For each appraisal, the appraiser examines the sales base and typically based on informed experience, determines what characteristics are important and by how much. If there are 100 appraisals are required, the process is repeated 100 times. The reality is that over the few months required to complete such appraisals, the appraiser may have some good and not so good days. When one is doing all of this analysis, the degree to which the contribution of various characteristics and dollar value applied in the comparison often varies and is often significant. In one appraisal, the appraiser assigns a 10% difference between a property judged to be in good condition and a property judged to be in average condition. In another appraisal, the difference in property conditions might be applied at only 5%. The key point to understand is that while the appraiser certainly has in mind that the goal is an accurate appraisal – in a fee appraisal, there is little, if any, requirement/concern that the resulting value conclusions were predicated upon the use of the same dollar adjustments for the same category of characteristic, nor for the uniformity of values between like properties that were appraised in the same neighborhood. This is a significant difference between mass appraisals that are completed for municipal-wide property revaluations.

During revaluations, the goal is not only accurate assessments, but also uniform assessments - property value to property value. Thus, the appraisal methodology employed must be structured and restructured to facilitate the attainment of both goals of accuracy and uniformity.

Most mass appraisal efforts begin with the application of a variety of statistical techniques and analysis, which result in a *market model*. The model specifications result in the characteristics that are relevant and by how much the different variation among the characteristics matter to the differences in market value between properties.

It is strongly emphasized here that *the establishment of one or more market models is only a starting point in the process of the determining the appraised values*. In other words, the market models simply establish a base line for value calculations, where the same data characteristics are being used for all properties. Call these values, preliminary, or DRAFT values. Once the preliminary/draft values are calculated, the real and substantive work begins – value review. Value review is a critical component in the attainment of accurate and uniform assessments.

## Value Review

As previously discussed, in any marketplace and property characteristic database, there are a variety of complications; inconsistent data, erroneous data relevant to value and a host of pertinent data elements that may be important to accurate valuation, but for any number of reasons might not be present in the existing database. Thus, critical and essential to the outcome, most or all of the preliminary values must be reviewed by knowledgeable assessors/appraisers that use their judgement and experience to adjust and modify the preliminary values to meet the dual goals of accuracy and uniformity. Upon such review processes, either statistical or manual, the preliminary values are finalized.

Once the municipal assessing jurisdiction completes the revaluation, the assessed values are subject to an appeal process. Upon completion of the appeals process, the assessments become official and the basis for generating property tax bills.

## Market Model

The market model employed for developing Scarsdale property values is best illustrated on the 2016 VALUATION DETAIL SHEET that was created and implemented for this project. This document was mailed to every residential property owner in Scarsdale pertinent to their individual property.

There are three sections to the report that cover the three main components that constitute the total value of the property: dwelling, outbuildings and land.

A copy of this document is shown below:

**2016 RESIDENTIAL VALUATION DETAIL SHEET** June 1, 2016

**PROPERTY LOCATION**

| | |
|---|---|
| PARCEL ID | 22.06.14 |
| ADDRESS | 15 ARDMORE RD |
| PROPERTY CLASS CODE | 210 Single Res |

**DWELLING SIZE**

| | |
|---|---|
| TOTAL LIVING AREA (SFLA) sf | 3,439 |
| FINISHED BASEMENT AREA | 1,625 |
| REC ROOM AREA | |

**Site # 1**

**DWELLING COMPONENTS**

| UNIT NAME | COEFFICIENT | UNITS | AMOUNT |
|---|---|---|---|
| SFLA (square root SFLA) | $5,000 | 3,439 (58.64) | 293,214 |
| Finished Basement | $75 | 1,625 | 121,875 |
| Finished Rec Room | $30 | | |
| | | subtotal | 415,089 |
| Grade | B+ | factor | 1.25 |
| SUBTOTAL SF = subtotal x grade factor = | | | 518,861 |

| UNIT NAME | COEFFICIENT | UNITS | AMOUNT |
|---|---|---|---|
| # Bathrooms | $20,000 | 4 | 80,000 |
| # 1/2 Bathrooms | $10,000 | 1 | 10,000 |
| Elevator | $50,000 | | |
| No Central Air | $-22 | | |
| Attached Garage | $80 | 588 | 47,040 |
| Basement Garage | $18,000 / bay | | |
| Subtotal SF + Units | | | 655,901 |

| UNIT NAME | DESCRIPTION | MULTIPLIER |
|---|---|---|
| Overall Condition | Excellent | 1.25 |
| Neighborhood | Heathcote | 1.15 |
| Traffic | Light | 1.00 |
| Residential Adjustment | 1.1 | 1.10 |
| Partial % Complete | | 0.60 |
| DWELLING COMPONENT OF TOTAL PROPERTY VALUE | | 622,285 |

**OUTBUILDING(S) COMPONENTS**

| UNIT NAME | COEFFICIENT | UNITS | GRADE ADJ | COND ADJ | AMOUNT |
|---|---|---|---|---|---|
| Detached Garage | $80 | | 0.00 | 0.00 | |
| Pool | $95 | | 0.00 | 0.00 | |
| Pool Cabana | $95 | | 0.00 | 0.00 | |
| Guest Cottage | $95 | | 0.00 | 0.00 | |
| Tennis Court | $10 | | 0.00 | 0.00 | |
| OUTBUILDING(S) SUB-TOTAL | | | | | |
| BUILDING COMPONENT OF TOTAL PROPERTY VALUE | | | | | 625,000 |

Rounded to the nearest $25,000

**LAND COMPONENTS**

| LOT SIZE | ACREAGE | AMOUNT |
|---|---|---|
| 13,068 | 0.30 | 811,700 |

| UNIT NAME | DESCRIPTION | MULTIPLIER |
|---|---|---|
| Neighborhood | Heathcote | 1.15 |
| Traffic | Light | 1.00 |
| Influence | | 1.00 |
| LAND COMPONENT OF TOTAL PROPERTY VALUE | | 925,000 |

Rounded to the nearest $25,000

**2016 TOTAL PROPERTY ASSESSMENT**

| | |
|---|---|
| 2016 TOTAL PROPERTY ASSESSMENT | **1,550,000** |

Dwelling components and calculations included and shown in the above report are:

1) the total living area of the dwelling (SFLA), finished basement area (sf) and finished recreation room area (sf,) all of which are adjusted by the dwelling construction grade;

2) Since the value of additional living area is shown to increase at a decreasing rate, living area is transformed using the square root function. The result is multiplied by the coefficient for square root of living area, or $5,000, as also shown in the report;

3) The sum of the calculated amounts for these three characteristics is then adjusted by a multiplier associated with quality/grade of construction, which ranges from D to AAA+, as shown below:

| Grade | Multiplier |
|---|---|
| D | 0.10 |
| C- | 0.20 |
| C | 0.45 |
| C+ | 0.55 |
| B- | 0.85 |
| B | 1.00 |
| B+ | 1.25 |
| A- | 1.40 |
| A | 1.60 |
| A+ | 1.80 |
| AA- | 2.20 |
| AA | 2.30 |
| AA+ | 2.60 |
| AAA- | 3.00 |
| AAA | 3.20 |
| AAA+ | 4.00 |

Additional dwelling characteristics, as shown on the 2016 VALUATION DETAIL SHEET, include full bathrooms, half bathrooms, attached garages, basement garages, elevators and central air conditioning. The respective coefficients for each unit are multiplied by the number of units, if any, and then summed. Note that the model assumes houses in Scarsdale have central air-conditioning; therefore, a negative adjustment is applied only when a property does NOT have central air-conditioning. In instances where a house contains only partial central air conditioning, no deduction was applied.

This sum of all dwelling components is then adjusted by multipliers associated with a dwelling's overall condition and location, as designated and shown on the report. In some instances, additional adjustments are made for traffic influence, a residential adjustment for recently-built homes (1.10 for homes built after 2012; 1.05 for houses built in 2012) and in situations where new construction, or dwelling renovations are not complete, a parcel-specific adjustment, labeled *Partial % Complete* was applied to reflect the amount of construction completed, as of the May 1, 2016 Taxable Status Date

The multipliers for overall condition, neighborhood location and traffic influence are shown in the following tables:

| Overall Condition | Multiplier |
|---|---|
| Poor | 0.60 |
| Fair | 0.70 |
| Normal | 0.80 |
| Good | 1.10 |
| Very Good | 1.15 |
| Excellent | 1.25 |

| Neighborhood | Multiplier |
|---|---|
| Edgewood | 1.10 |
| Fox Meadow | 1.30 |
| Heathcote | 1.15 |
| Greenacres | 1.10 |
| Quaker Ridge | 1.10 |

| Traffic | Multiplier |
|---|---|
| None | 1.00 |
| Light | 1.00 |
| Light/Medium | 1.00 |
| Medium | 0.95 |
| Medium/Heavy | 0.90 |
| Heavy | 0.75 |
| Very Heavy | 0.70 |
| Parkway | 0.70 |
| Hi-way | 0.50 |

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Outbuildings, or detached improvements, if any, are also listed on the 2016 VALUATION DETAIL SHEET. The type of outbuilding is listed (Unit Names,) along with the associated coefficients and number of units, typically shown in square footage. Each unit is adjusted by the respective multipliers for grade and condition. The designation options for outbuilding grades are A, B, C and D and the designation options for condition are Excellent, Good, Normal, Fair and Poor. The associated multipliers for each outbuilding grade and condition option were derived and applied in the same amount as those for dwelling grade and condition, which are shown in the Grade and Condition Tables.

The land component section, as set forth on the following page, indicates the area of the parcel, shown in both acres and square footage (1 acre = 43,560 sf). Similar to living area, the land component increases at a decreasing rate. The table also shows the application of the neighborhood multiplier. As the table illustrates, both at the high and low ends of parcel size, some neighborhoods have few, if any smaller size parcels, while other neighborhoods have lot sizes larger than 2 acres.

| Acres | SF Lot size | Edgewood | Fox Meadow | Heathcote | Greenacres | Quaker Ridge |
|---|---|---|---|---|---|---|
| 0.01 | 500 | 170,000 | | | | |
| 0.02 | 1,000 | 220,000 | 260,000 | | | |
| 0.03 | 1,500 | 275,000 | 330,000 | | | |
| 0.05 | 2,000 | 330,000 | 390,000 | | 330,000 | |
| 0.06 | 2,500 | 385,000 | 460,000 | | 390,000 | |
| 0.07 | 3,000 | 440,000 | 520,000 | | 440,000 | |
| 0.08 | 3,500 | 495,000 | 590,000 | | 500,000 | |
| 0.09 | 4,000 | 550,000 | 650,000 | | 550,000 | |
| 0.10 | 4,500 | 605,000 | 720,000 | | 610,000 | 610,000 |
| 0.11 | 5,000 | 660,000 | 780,000 | | 660,000 | 660,000 |
| 0.13 | 5,500 | 676,500 | 800,000 | 710,000 | 680,000 | 680,000 |
| 0.14 | 6,000 | 693,000 | 820,000 | 720,000 | 690,000 | 690,000 |
| 0.15 | 6,500 | 709,500 | 840,000 | 740,000 | 710,000 | 710,000 |
| 0.16 | 7,000 | 726,000 | 860,000 | 760,000 | 730,000 | 730,000 |
| 0.17 | 7,500 | 742,500 | 880,000 | 780,000 | 740,000 | 740,000 |
| 0.18 | 8,000 | 759,000 | 900,000 | 790,000 | 760,000 | 760,000 |
| 0.20 | 8,500 | 775,500 | 920,000 | 810,000 | 780,000 | 780,000 |
| 0.21 | 9,000 | 792,000 | 940,000 | 830,000 | 790,000 | 790,000 |
| 0.22 | 9,500 | 808,500 | 960,000 | 850,000 | 810,000 | 810,000 |
| 0.23 | 10,000 | 825,000 | 980,000 | 860,000 | 830,000 | 830,000 |
| 0.24 | 10,500 | 822,250 | 970,000 | 860,000 | 820,000 | 820,000 |
| 0.25 | 11,000 | 836,000 | 990,000 | 870,000 | 840,000 | 840,000 |
| 0.26 | 11,500 | 849,750 | 1,000,000 | 890,000 | 850,000 | 850,000 |
| 0.28 | 12,000 | 863,500 | 1,020,000 | 900,000 | 860,000 | 860,000 |
| 0.29 | 12,500 | 877,250 | 1,040,000 | 920,000 | 880,000 | 880,000 |
| 0.30 | 13,000 | 891,000 | 1,050,000 | 930,000 | 890,000 | 890,000 |
| 0.32 | 14,000 | 918,500 | 1,090,000 | 960,000 | 920,000 | 920,000 |
| 0.34 | 15,000 | 946,000 | 1,120,000 | 990,000 | 950,000 | 950,000 |
| 0.37 | 16,000 | 968,000 | 1,140,000 | 1,010,000 | 970,000 | 970,000 |
| 0.39 | 17,000 | 990,000 | 1,170,000 | 1,040,000 | 990,000 | 990,000 |
| 0.41 | 18,000 | 1,012,000 | 1,200,000 | 1,060,000 | 1,010,000 | 1,010,000 |
| 0.44 | 19,000 | 1,034,000 | 1,220,000 | 1,080,000 | 1,030,000 | 1,030,000 |
| 0.46 | 20,000 | 1,056,000 | 1,250,000 | 1,100,000 | 1,060,000 | 1,060,000 |
| 0.48 | 21,000 | 1,061,500 | 1,250,000 | 1,110,000 | 1,060,000 | 1,060,000 |
| 0.51 | 22,000 | 1,078,000 | 1,270,000 | 1,130,000 | 1,080,000 | 1,080,000 |
| 0.53 | 23,000 | 1,094,500 | 1,290,000 | 1,140,000 | 1,090,000 | 1,090,000 |
| 0.55 | 24,000 | 1,111,000 | 1,310,000 | 1,160,000 | 1,110,000 | 1,110,000 |
| 0.57 | 25,000 | 1,127,500 | 1,330,000 | 1,180,000 | 1,130,000 | 1,130,000 |
| 0.60 | 26,000 | 1,144,000 | 1,350,000 | 1,200,000 | 1,140,000 | 1,140,000 |
| 0.62 | 27,000 | 1,160,500 | 1,370,000 | 1,210,000 | 1,160,000 | 1,160,000 |
| 0.64 | 28,000 | 1,177,000 | 1,390,000 | 1,230,000 | 1,180,000 | 1,180,000 |
| 0.67 | 29,000 | 1,193,500 | 1,410,000 | 1,250,000 | 1,190,000 | 1,190,000 |
| 0.69 | 30,000 | 1,210,000 | 1,430,000 | 1,270,000 | 1,210,000 | 1,210,000 |
| 0.73 | 32,000 | 1,271,050 | 1,500,000 | 1,330,000 | 1,270,000 | 1,270,000 |
| 0.78 | 34,000 | 1,298,550 | 1,530,000 | 1,360,000 | 1,300,000 | 1,300,000 |
| 0.83 | 36,000 | 1,326,050 | 1,570,000 | 1,390,000 | 1,330,000 | 1,330,000 |
| 0.87 | 38,000 | 1,353,550 | 1,600,000 | 1,420,000 | 1,350,000 | 1,350,000 |
| 0.92 | 40,000 | 1,381,050 | 1,630,000 | 1,440,000 | 1,380,000 | 1,380,000 |
| 1 | 43,560 | 1,430,000 | 1,690,000 | 1,500,000 | 1,430,000 | 1,430,000 |
| 2 | 87,120 | 2,475,000 | 2,930,000 | 2,590,000 | 2,480,000 | 2,480,000 |
| 5 | 217,800 | | | 4,030,000 | | 3,850,000 |
| 10 | 435,600 | | | 9,470,000 | | 9,060,000 |
| 15 | 653,400 | | | | | 9,780,000 |

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Adjustments for neighborhood, traffic and other land influences were then applied to the land component. The neighborhood and traffic influence multipliers are the same in the tables listed earlier in this report.

"Other" land influences are typically negative adjustments for shape/parcel configuration, size, location, floodplain/wetness that vary in the amount that they are considered to influence a particular property's value. The amount of the influence is typically based on review and analysis of market data within the specific area, or for a specific site feature, i.e., a portion of the site is in the 100-year floodplain, odd, or unusual lot configuration that limits the usefulness of the site, ae parcel is bisected between municipal jurisdictions.

While most parcels in the Town are considered primary sites that support development, there are some parcels that are not suitable for development and, therefore, are designated residual parcels. Residual parcels are sites that are either accessory to an adjacent parcel's use, or where they cannot individually support the development of a residence. A parcel that is split between municipalities is also considered a residual parcel, even when it is improved with a single-family dwelling, or a portion thereof. Residual parcels are assigned a value based on a percentage of a primary-designated site that is equal to, or of similar land area. A primary site is one that is developable under the current zoning code

## Property Assessment Performance Statistics

The results of a revaluation program, as well as evaluating the quality of the resulting property assessments, in general, is achieved by generating assessment-to-sale-price ratio studies. These studies provide descriptive statistics that evaluate the level (market value) and uniformity of assessments in a jurisdiction. Industry standards recognized by the New York State Office of Real Property Tax Services set forth acceptable performance standards, which are shown on the following page[2]:

[2] *Standard on Ratio Studies – 2013*, International Association of Assessing Officers, 2013, page 17.

| Type of property—General | Type of property—Specific | COD Range** |
|---|---|---|
| Single-family residential (including residential condominiums) | Newer or more homogeneous areas | 5.0 to 10.0 |
| Single-family residential | Older or more heterogeneous areas | 5.0 to 15.0 |
| Other residential | Rural, seasonal, recreational, manufactured housing, 2–4 unit family housing | 5.0 to 20.0 |
| Income-producing properties | Larger areas represented by large samples | 5.0 to 15.0 |
| Income-producing properties | Smaller areas represented by smaller samples | 5.0 to 20.0 |
| Vacant land | | 5.0 to 25.0 |
| Other real and personal property | | Varies with local conditions |

*These types of property are provided for guidance only and may not represent jurisdictional requirements.*

** Appraisal level for each type of property shown should be between 0.90 and 1.10, unless stricter local standards are required.*

*PRD's for each type of property should be between 0.98 and 1.03 to demonstrate vertical equity.*

*PRD standards are not absolute and may be less meaningful when samples are small or when wide variation in prices exist. In such cases, statistical tests of vertical equity hypotheses should be substituted (see table 1-2).*

*** CODs lower than 5.0 may indicate sales chasing or non-representative samples.*

Appraisal, or assessment levels, as shown above, that fall be between 0.90 and 1.10 are considered to reflect market value. The typical statistic used to measure assessment level is a *median*. Assessment fairness, or uniformity, is evaluated using a statistic known as the *coefficient of dispersion,* or COD. This statistic measures the degree to which individual assessments, on average, deviate from market value. As discussed earlier, conceptually this is typically considered 'assessment error,' recognizing that in any jurisdiction, there is an underlying error rate that results from the random variation of prices in the marketplace. What this simply means is that no amount of appraisal effort can entirely mitigate random error; hence the note in the chart above that states: *COD's lower than 5% may indicate sales chasing, or non-representative samples*. Sales chasing is a term, or concept whereby the methodology of assessing properties that have recently sold is strictly based upon the recent sale price. Conversely, it is where assessments of only sale properties are reduced to the recent sale price.

Finally, the *price-related differential* or PRD provides an indication of the degree to which the level of assessment remains constant across all value ranges. In other words, are high valued properties assessed at a similar level of assessment/value (median assessment/sale price ratio) compared with low value properties? PRD's that fall within a range of 0.98 – 1.03 indicate that there is resulting assessment fairness, or uniformity across all value ranges.

The following performance statistics are based on valid sales that occurred during the period July 2014 and through September 2015. While the valuation date is July 1, 2015, generally accepted appraisal practice allows the use of sales after the effective date of valuation. Given that sales that were recorded within a reasonable time frame after the effective date of valuation are considered to reflect the market perceptions of buyers and sellers, as of the date of value, sales that were recorded through the end of September 2015, therefore, were considered in our analyses.

There are 220 sales from this period used in the analyses that follow. There were more than 220 actual sale transactions that occurred during this period; however, as indicated earlier in this report, only valid sales are used in order to complete meaningful sales ratio studies. Sale prices were then compared to their assessed values, as of the date of value, which showed that certain sales had to be excluded from the analyses, owing to physical changes made after the sale.

The overall level of assessment for the 2016 Scarsdale Revaluation, as measured by the median assessment-to-sale-price ratio is 94%. The COD is 7.0 and the PRD is 1.01, all of which are shown in the following:

| **Year** | **Count** | **Median** | **PRD** | **COD** |
|---|---|---|---|---|
| July – December 2014 | 86 | 95 | 1.02 | 7.0 |
| January – September 2015 | 134 | 94 | 1.01 | 7.0 |
| Total | 220 | 94 | 1.01 | 7.0 |

The sales ratio analysis was further stratified by various components used in the market model, as follows:

| **Neighborhood** | **Count** | **Median** | **PRD** | **COD** |
|---|---|---|---|---|
| Edgewood | 43 | 99 | 1.01 | 6.6 |
| Fox Meadow | 45 | 94 | 1.00 | 6.4 |
| Heathcoat | 47 | 94 | 1.01 | 7.0 |
| Greenacres | 35 | 92 | 1.02 | 8.6 |
| Quaker Ridge | 50 | 93 | 1.01 | 6.0 |
| Total | 220 | 94 | 1.01 | 7.0 |

| **Traffic Influence** | **Count** | **Median** | **PRD** | **COD** |
|---|---|---|---|---|
| Light | 141 | 95 | 1.01 | 7.6 |
| Medium | 44 | 93 | 1.02 | 6.3 |
| Medium/Heavy | 26 | 94 | 1.01 | 5.4 |
| Heavy | 1 | 84 | 1.00 | 0.0 |
| Very Heavy | 6 | 94 | 1.01 | 4.6 |
| Parkway | 2 | 87 | 1.00 | 2.8 |
| Total | 220 | 94 | 1.01 | 7.0 |

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**Site Influence**

| Percent | Count | Median | PRD | COD |
|---|---|---|---|---|
| 0 | 170 | 94 | 1.01 | 7.2 |
| 55 | 1 | 96 | 1.00 | 0.0 |
| 60 | 1 | 96 | 1.00 | 0.0 |
| 70 | 2 | 92 | 1.00 | 1.3 |
| 80 | 4 | 95 | 1.00 | 5.9 |
| 85 | 2 | 99 | 1.00 | 6.1 |
| 90 | 7 | 98 | 1.00 | 8.7 |
| 95 | 17 | 94 | 1.02 | 8.6 |
| 110 | 7 | 93 | 1.00 | 3.3 |
| 115 | 2 | 92 | 0.99 | 5.5 |
| 120 | 6 | 91 | 1.01 | 2.4 |
| 140 | 1 | 96 | 1.00 | 0.0 |
| Total | 220 | 94 | 1.01 | 7.0 |

| Full Baths | Count | Median | PRD | COD |
|---|---|---|---|---|
| 1 | 7 | 98 | 1.00 | 8.1 |
| 2 | 46 | 95 | 1.01 | 7.8 |
| 3 | 67 | 95 | 1.02 | 7.0 |
| 4 | 54 | 92 | 1.01 | 7.4 |
| 5 | 28 | 93 | 1.00 | 5.2 |
| 6 | 13 | 96 | 1.01 | 4.4 |
| 7 | 3 | 94 | 1.00 | 2.4 |
| 8 | 1 | 96 | 1.00 | 0.0 |
| Total | 219 | 94 | 1.01 | 7.1 |

Note: The total parcel count here is 219, as one sale did not have improvements.

| Central AC | Count | Median | PRD | COD |
|---|---|---|---|---|
| No | 21 | 99 | 1.02 | 7.2 |
| Yes | 198 | 94 | 1.01 | 6.9 |
| Total | 219 | 94 | 1.01 | 7.1 |

**Basement**

| Garage | Count | Median | PRD | COD |
|---|---|---|---|---|
| 0 | 139 | 94 | 1.01 | 7.1 |
| 1 | 17 | 95 | 1.02 | 9.0 |
| 2 | 58 | 93 | 1.01 | 6.4 |
| 3 | 4 | 97 | 1.01 | 5.4 |
| 5 | 1 | 99 | 1.00 | 0.0 |
| Total | 219 | 94 | 1.01 | 7.1 |

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| Grade | Count | Median | | PRD | COD |
|---|---|---|---|---|---|
| AAA+ | 1 | 94 | 1.00 | 0.0 | |
| AAA | 1 | 89 | 1.00 | 0.0 | |
| AAA- | 2 | 84 | 1.01 | 6.3 | |
| AA+ | 7 | 99 | 1.00 | 4.6 | |
| AA | 12 | 94 | 1.00 | 3.4 | |
| AA- | 6 | 93 | 1.01 | 8.3 | |
| A+ | 19 | 93 | 1.00 | 4.6 | |
| A | 22 | 93 | 1.01 | 7.7 | |
| A- | 8 | 91 | 1.02 | 6.2 | |
| B+ | 26 | 91 | 1.01 | 6.7 | |
| B | 51 | 96 | 1.02 | 8.1 | |
| B- | 12 | 93 | 1.00 | 5.8 | |
| C+ | 24 | 94 | 1.00 | 5.1 | |
| C | 24 | 97 | 1.02 | 7.7 | |
| C- | 4 | 96 | 1.10 | 10.4 | |
| Total | 219 | 94 | 1.01 | 7.1 | |

| Condition | Count | Median | PRD | COD |
|---|---|---|---|---|
| Fair | 1 | 102 | 1.00 | 0.0 |
| Normal | 40 | 97 | 1.03 | 6.6 |
| Good | 82 | 94 | 1.01 | 7.3 |
| Very Good | 17 | 94 | 1.00 | 6.0 |
| Excellent | 79 | 93 | 1.01 | 6.9 |
| Total | 219 | 94 | 1.01 | 7.1 |

# Conclusion

A few last points of understanding are important. First and foremost is that there is a tremendous amount of work that goes into the effort of establishing accurate and uniformed values. The results of this work generate for the Town, accurate and reliable estimates of value for use in property taxation. Such efforts are consistent with the Town's responsibility and goal to ensure fairness in taxation to the extents reasonable and possible.

Having said that, the second important fact to understanding reassessment (or any appraisal process for that matter) is to recognize that perfectly accurate assessments are simply unachievable. As stated earlier, market value estimates are as much subjective as objective. Because both buyers and sellers incorporate their own subjectivity into the process of buying and selling properties, there will always exist unexplainable variation among market value selling prices and, therefore, resulting assessed values. It is from this perspective that reasonable people can legitimately disagree about whether, or not an individual property value is correct.

Decades of academic and professional study across thousands of taxing jurisdictions have determined that typically good (acceptable) overall assessment performance is accomplished if valuations are accurate to within about 10% for residential properties. In other words, if a property is valued/assessed at $500,000; true, but impossible to know with 100% certainty, property value probably lies somewhere in the range of $450,000 to $550,000 (+/- 10 %).

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Yet while this is empirically, statistically, and/or methodologically true in all 50 states, state laws demand the use of a single-point value estimate as the basis of property taxation. Thus, while an assessor/appraiser must state unequivocally a specific assessed value, they do intellectually grasp that their estimate is simply that - their best estimate of the likely selling price of a property as of the date of value.

As such, all assessors have a vested interest in working objectively in doing their best to identify and validate the most accurate values for use in property taxation. It is also important that they objectively convey to all parties the difficulties in establishing accurate property values, which are impacted by subjective influences.

Finally, this project could not have been completed without the daily interaction with and input from all of the highly-qualified and dedicated professional staff in the Scarsdale Assessor's Office. As noted in the enclosed certification, Gerd Semmelroggen, Senior Appraiser with our firm, was instrumental in ensuring a consistent application of the valuation model throughout the Town. Edgar Hayes, Senior Consulting Associate, provided timely data assembly and analysis support for the valuation modeling efforts. Lastly, while he was unable to complete his assignment for this project due to a serious illness, Roland Gosselin, Project Manager, provided significant and important input both in the planning and early phases of this revaluation program.