

State Tax Commission



Equalization Director Guide to Overseeing a Reappraisal

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Contents

Introduction:	1
Planning:	2
Land Values:	5
Economic Condition Factors:	7
Fieldwork Verification:	8
Exempt Parcels:	9
Data Review:	10
Concluding the accepted reappraisal:	23
Sales studies after a reappraisal:	24

Introduction:

Local assessing units may choose to conduct a reappraisal to improve their assessing records and practices. When this occurs it is important for the Equalization Director to be involved in the process and ultimately approve the reappraisal in place of an equalization study. Because the reappraisal will be used for setting true cash value instead of a traditional sale or appraisal study the Equalization Director must be confident with the methods and valuation concepts that were used.

Throughout this guide you will find screenshots and tutorials to aid in the extraction and analysis of data from the CAMA vendor BSA Software. BSA Software is not the only CAMA vendor used in the State of Michigan and this guide should not be construed to be an advertisement or a recommendation to use BSA Software.

This guide was created to assist Equalization Departments in overseeing and reviewing a local unit reappraisal. This guide is not meant to be a guide on how to conduct the reappraisal itself.

Planning:

Equalization departments should be notified of a reappraisal before any work begins on the reappraisal itself. This should allow time for the department to sit down with the local assessor and/or the reappraisal firm conducting the work. If the local assessor is not the individual that is actually conducting the reappraisal then the firm should be included in the planning meeting as well as the local assessor. Ultimately the assessor is the responsible party for the reappraisal regardless of who conducts the actual work. A planning meeting ensures that everyone understands the expectations of what the final product should look like and who has what duties.

The State Tax Commission may order or request the local unit periodically file a Reappraisal Status Report with both the STC and County Equalization. This report will require the reappraisal details and timeline to be documented in order to ensure the proper completion of the project.

Below are some of the items that should be discussed during a planning meeting.

Progress meetings

It is suggested that biweekly or monthly progress meetings be held with all parties involved in the reappraisal. This creates a mechanism for the Equalization Director to determine if the reappraisal is on track to be finished in time to take place of a traditional sale or appraisal study. This is also a good way to talk about any issues and possible solutions as they arise. Deficiencies should be discovered early in the process so that a viable solution can be timely implemented. If deficiencies are discovered too late in the process, it may become impossible to execute a solution before the reappraisal is due.

Regular meetings may also create a good opportunity to facilitate the exchange of database backups as well. The Equalization Director will want a plan to receive regular updates of the working dataset to perform spot-checking and stay ahead any potential issues.

Conversely, there needs to be a plan for how information will be communicated back to the local unit from the Equalization Department. Then beyond that, there needs to be a plan for digesting and incorporating that information. For instance, if the Equalization Department discovers that land improvements aren't being depreciated in some cases, then the involved parties should expect some form of a list to be exchanged highlighting the affected parcels. A plan needs to be formulated and implemented to correct the issue and follow-up needs to take place to ensure it was properly handled.

Assigned duties

It is important to establish the delegation of work early in the process to avoid issues down the road. If the Equalization Director discovers halfway through the reappraisal that land areas are not being updated, the last thing anyone wants is for the involved parties to suddenly have to dispute ownership of the responsibility. It is better to have work assignments in writing upfront. Some items to consider may include:

- a. Who will supervise the workflow and track progress?
- b. Who will calculate land areas for each parcel?
- c. Who will determine property classes?
- d. Who will verify continued eligibility for exempt status?
- e. Who will develop land values and ECFs?
- f. Who will perform the field work?
- g. Who will enter data and price the field work?
- h. Who will determine New, Loss, Additions, and Losses for value changes?
- i. Who is responsible for valuing Special Act parcels?

It is often times assumed who will be doing certain work when in fact, the other party may be under a different assumption. Even a seemingly insignificant task can be easily taken for granted and cause complications down the road if an understanding is not initially laid out.

Standards for data collection and analysis

The planning phase is a good opportunity to set standards and expectations. Standards for data handling can potentially be broken into three categories.

1. Data Gathering Standards

It will be useful to agree upon and outline a process for collecting information. Will field appraisers perform on-site data collection and what will the deployment grid look like? What is the expectation for the number of photos per building and from what perspectives? Will orthographic or oblique aerial imagery be relied on to collect data and to what extent? How will sales information be discovered and what questions will be asked? Will there be a checklist of items to document per improvement? What information will be collected to verify the status of exempt properties?

Compartmentalizing data collection as an independent part of the process is conducive to maintaining an organized workflow. The larger the scale of the operation, the more likely it is to require task delegation. Having a framework for data collection will enable workers with the assigned task to operate with greater accuracy and increased autonomy.

2. Data Cataloguing Standards

How data will be recorded is a different consideration than how data will be collected. A good plan should have a procedure to accommodate transitioning collected data to established databases and in a uniform way. For example, if “use codes” are going to be applied, what standards will be established? Similarly, what will be the standard for building styles? Will each parcel feature a land sketch? What format will be used to add comments to parcels or buildings and under what circumstances will they be necessary? How will large buildings be handled when they are comprised of several smaller and unique component structures?

The plan should also include a standard metric for tracking completed work. Will appraisers use activity fields within the database to monument, who did a task, when they did it, and what they did?

3. Data Review Standards

It is also worth discussing standards with respect to how conclusions will be determined. For example, uniform models for verifying sales, estimating depreciation, determining building qualities, and the handling of New Loss Additions and Losses considerations should be agreed upon and properly implemented.

Identify and plan for known obstacles or challenges

Each local unit has its own unique characteristics and it is important to identify and get ahead of them. It may be the case that the local unit is the home of a unique and high-value specialty property that will require special considerations. There may also be certain locations where field appraisers should be accompanied by a police escort because of known safety concerns. It’s important to have a plan to address any unique elements within a particular local unit.

Timeframe and deadlines

It may be the case that the reappraisal is planned in phases. There should be a timeline regarding the expectation of completed work at certain points. Project goals with deadlines are important for measuring the trajectory of the overall reappraisal. If field work is not keeping pace with the other components, for example, there needs to be a process of measuring and making that determination. The alternative means discovering problems after it becomes too late to course correct them. It is not enough to simply say that the reappraisal needs to be completed by a certain date. A tangible calendar of objectives should be made available to all parties and closely followed. Good projection of deadlines mitigates having to be reactive to problems and stimulates efficient progress.

Land Values:

Overseeing a reappraisal will require verification that an appropriate land value study was performed. Ultimately a land value study should consist of two components: The analysis to determine land table boundaries (land neighborhoods) and the analysis to set values within those land tables.

Determining Land Table Boundaries

The local unit will need to conduct an analysis to determine land table boundaries. The analysis may take on any number of formats but from an oversight perspective, it is necessary to establish that the analysis is supportable, that it was performed competently, and that the conclusions are realistic. The methodology for review may vary depending on the format of the analysis but in all cases, the use of Geographic Information Systems (GIS) data will be instrumental.

Determining the Land Values

Reviewing that land values were supportably and properly determined requires checking a number of components of the land value study.

1. Land value analysis grids.

Were land value analysis grids utilized? Do the grids contain the necessary data and are they easily understood?

2. Were the sales verified?

The Equalization Director should be reviewing and verifying sales as part of conducting the annual equalization study. Conveniently, the sales relied on by the local unit should therefore be in concert with the sales relied on for the equalization study.

3. Are the considered sales representative of the appropriate land table?

Each land table should have its own corresponding land value analysis grid. It is important that the sales be listed on the correct grids and are not outside of their neighborhoods.

4. Were the indicated sale prices per unit properly determined?

The most important element of a land value grid is the indicated price per unit of each sale.

- a. Were the sale prices of vacant sales properly divided into each unit? (Price per square foot, price per front foot, price per site, etc...)
- b. Were land residuals properly calculated from improved sales using the abstraction (extraction) or allocation methods? Building values should be as of the date of sale.
- c. Were sales outside of the study timeframe properly time adjusted to the midpoint of the sales period? By extension, was a paired sales analysis performed to determine the time adjustment rate?
- d. Was a supportable analysis performed to remove sales that misrepresent trends e.g.; outlier sales?

- e. Was a unit of comparison analysis performed to determine the most representative price per unit?

5. Are the concluded land value rates supported by the indicated sales and were they developed competently?

A properly constructed land value analysis grid will paint a generally conclusive picture. However, there is a need for reasonable discretion in concluding and applying rates. The Equalization Director will want an understanding of the rationale that was used. Are rates being averaged to form conclusions? Are graduations or subsets of data being considered at certain intervals? Are concluded rates per unit decreasing as parcel sizes are increasing to adjust for economies of scale? There may be multiple correct results but ultimately, the conclusions have to be reasonable and supportable.

Economic Condition Factors:

Similar to the land value study, the ECF study firstly requires that ECF neighborhoods are established and then secondly that the factors themselves are properly calculated.

Determining ECF Neighborhoods (not the factors themselves)

The ECF neighborhood analysis should indicate that the neighborhoods are homogeneous and that they embrace properties within one local market. The Equalization Director's role should be to verify that the analysis appropriately accomplishes its goal. It may be the case that the local unit's ECF neighborhoods mirror the land tables and follow geographic constraints. Though it can also be appropriate if neighborhoods have been created around similar properties irrespective of their physical location, such as bi-level properties or manufacturing properties. In any case, the local unit will need to have an analysis supporting the neighborhood parameters.

Determining the factors

The Equalization Director should review the local unit's ECF analysis to verify that the applied methodology is proper. There are a number of items to consider.

1. Completion of land values

The land value study should have been completed prior to performing the ECF analysis. It's important that land values are first updated so that the correct adjusted sale price can be relied on in the ECF calculations.

2. Sale dates and verification

Verified sales from the correct time periods should be used. The time period should be the same time period as the 24-month (or 12-month) sales study.

3. Building values

The building values for ECF calculations should be reflective of depreciated cost new as of the time of sale.

4. Updated physical characteristics

Sales files should be updated to reflect the correct information.

5. Negative ECFs

Sales indicating a negative ECF value should be reviewed for errors and removed from the analysis as needed.

6. Outlier sales

Included sales should support, not distort, the indicated trend. Outliers should be investigated and removed as warranted.

7. Weighted conclusion

The net building residual sale price of all included sales should be divided by the net depreciated building cost of all included sales to produce a weighted ECF calculation as opposed to averaging the indicated ECFs.

Fieldwork Verification:

Similar to the equalization process a reappraisal should feature a quality control metric and independent conclusions regarding a sample of the work. In particular, it is beneficial for the equalization department to perform independent field inspections on a sample of properties that the reappraisal has finalized. There is an acceptable threshold or tolerance regarding observed discrepancies but many observations should be more or less consistent across the board. The reappraisal should not be showing two story buildings when in fact the buildings are one and a half stories, for example. The best method to find problems with field work and pricing is to have a second appraisal that is unbiased and objective.

Additionally, the Equalization Director is still responsible for studying every class of property even during a local unit reappraisal. Even with the best planning, complications are inevitable. In the event that complications become catastrophic, it may no longer be viable to accept the reappraisal. In such a case, having already completed a sample of independent appraisals will be the only reliable means of meeting the study requirements in the eleventh hour.

Exempt Parcels:

A complete reappraisal will also include reviewing exempt property valuations and statuses. Properties that were exempt prior to the reappraisal should be verified for continued eligibility and conformity. Similarly, properties to become newly exempt will have to undergo the same verification process.

Inventory & Price

Improvements on exempt parcels should be inventoried like any other and the parcels should be priced normally regardless of their exempt status. An appropriate land table that is properly valued will need to be selected as well as a suitable ECF neighborhood. A completed appraisal is important to have on exempt parcels for a number of reasons.

Objectively, even the most blatantly exempt parcel could easily become taxable given a particular change in circumstances. Pricing exempt properties not only efficiently facilitates any potential transition to a taxable classification, it also helps to mitigate any predisposition that might lead to taking the property's status for granted as being exempt. In other words, because eligibility can easily change, it is important to regularly evaluate properties that are exempt. If exempt parcels are neglected, changes in eligibility status may be missed.

Having up-to-date appraisals on exempt properties is also beneficial in a disaster situation. In the event of catastrophic or even moderate property damage, having a reliable estimation of value readily available can become important for damage assessment purposes.

Verified for Status

Depending on the situation, it may be prudent to send out some form of mailer or questionnaire that informs exempt property owners of an ongoing review of exempt parcels as part of the reappraisal and that certain information is being collected to validate and correctly categorize exempt parcels on the upcoming assessment roll.

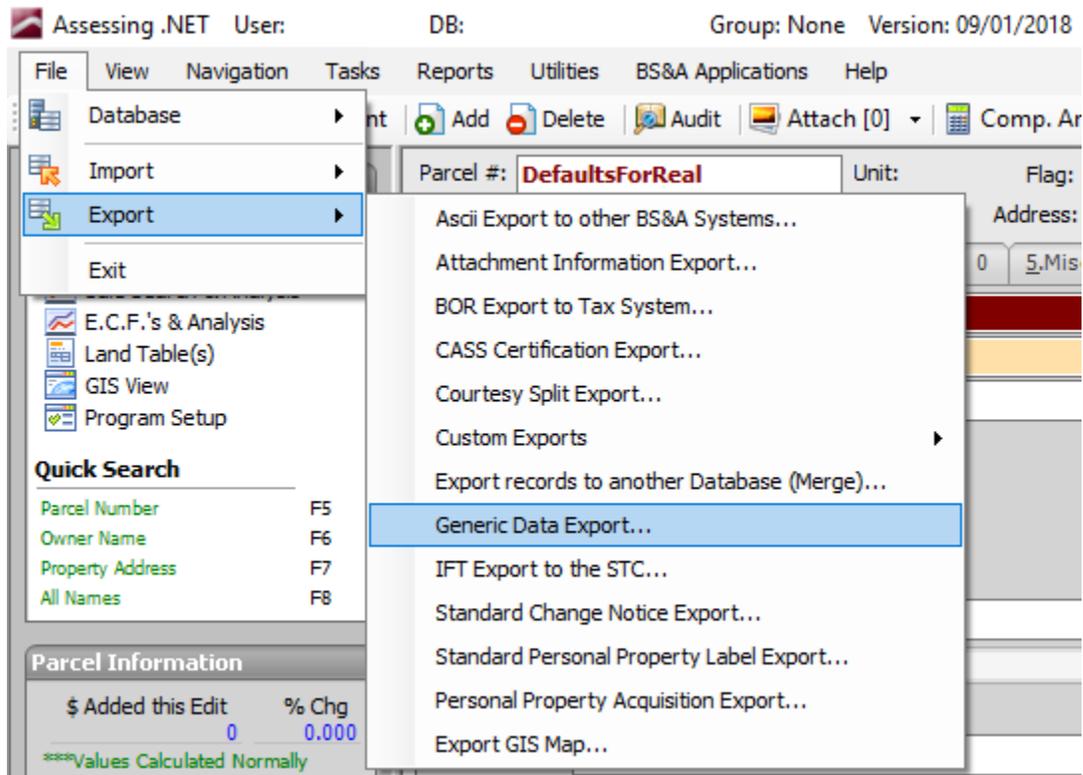
The local unit would benefit from having a standardized exemption application on hand to be kept on file as exemptions are granted. Arguably the most important element of an exemption application is a location denoting which Michigan Compiled Law the exemption is being sought under. It is the burden of the applicant to substantiate the eligibility of a sought exemption and the underlying criteria is variable depending on the pertaining exemption law. Only by denoting the exemption law can eligibility be determined. Not only does this provide a framework for the application process, it also enables the reappraisal to evaluate eligibility. For example, many exemption laws require a particular owner but they also require a particular use or occupancy of the property. The occupancy qualifier can be verified via a mass mailer, by field verification, by interview, or by some other means. The process is an integral part of any local unit reappraisal.

Data Review:

The local unit should provide periodic data sets to Equalization for review. This creates an opportunity to comb through the data and ensure that the plan is being followed accurately. Essentially everything that was outlined in the planning phase should be verified.

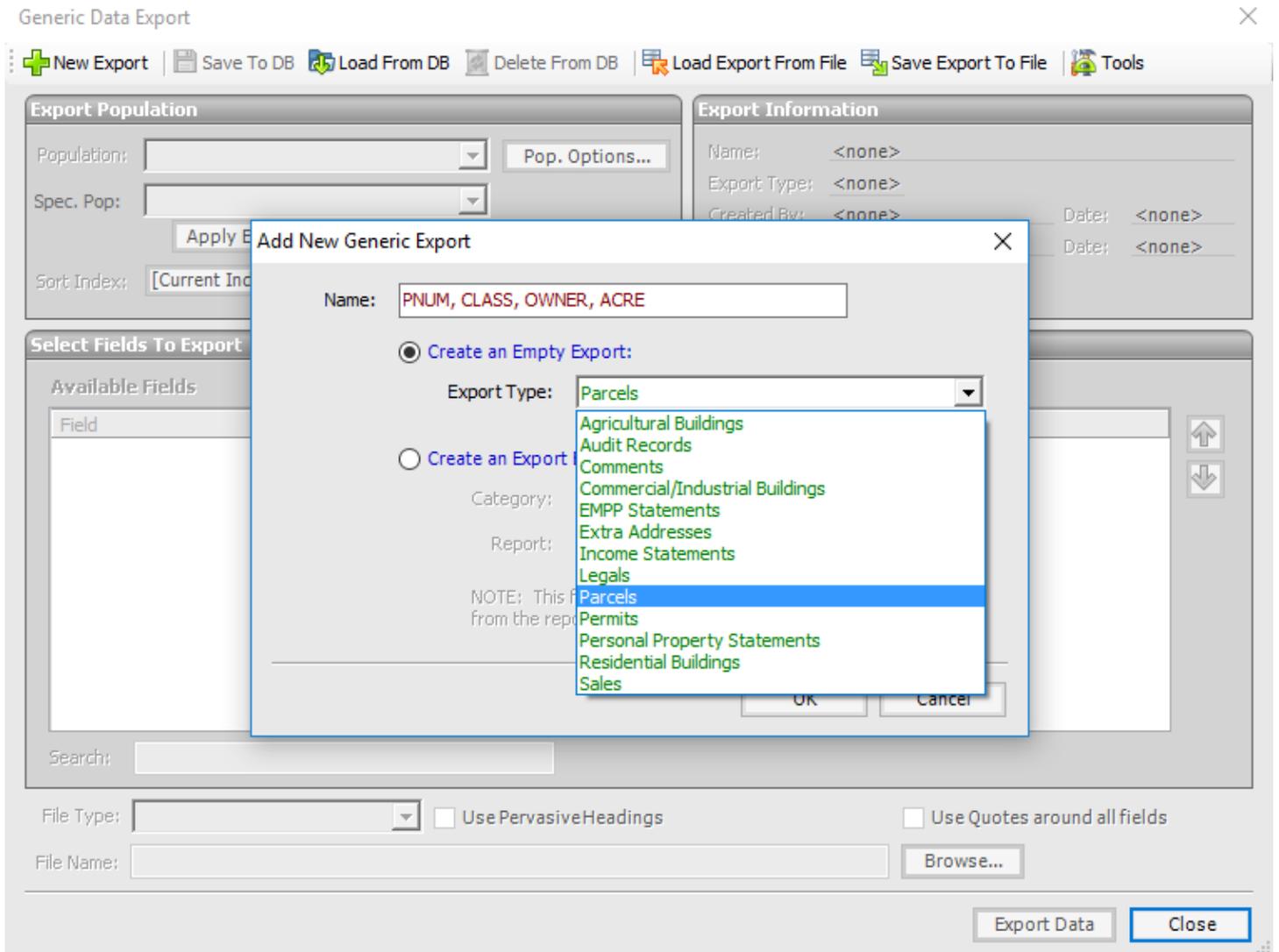
Generic Data Export

Extracting relevant data and arraying it for analysis is a very comprehensive method of combing through a database. Computer assisted mass appraisal applications typically feature an export utility for exactly that purpose.

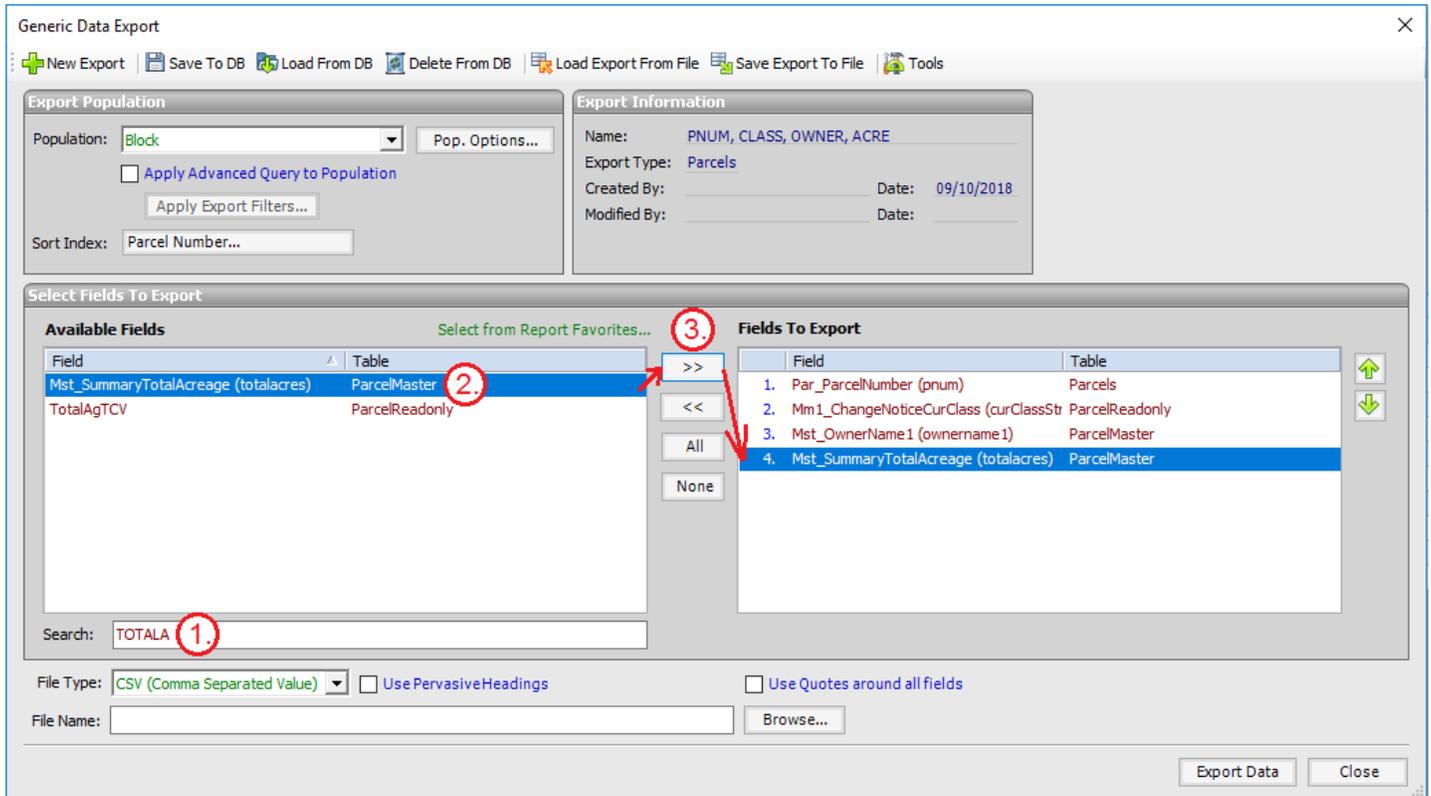


A saved export is a compilation of data fields in a specific order which is then run against a specified population of records. An example export might feature Parcel Numbers, Property Classes, Owner Names, and Net Acres. Running the export on a population (a block of parcels, for example) enables users to generate spreadsheets populated with the selected data. A reviewer can use the spreadsheets to perform analysis and generate conclusions. Following the example, it would be possible to determine the number of parcels in a particular class that fall within a specified acre range. Or a reviewer would be able to determine the mean parcel size of a particular class. The possibilities are endless.

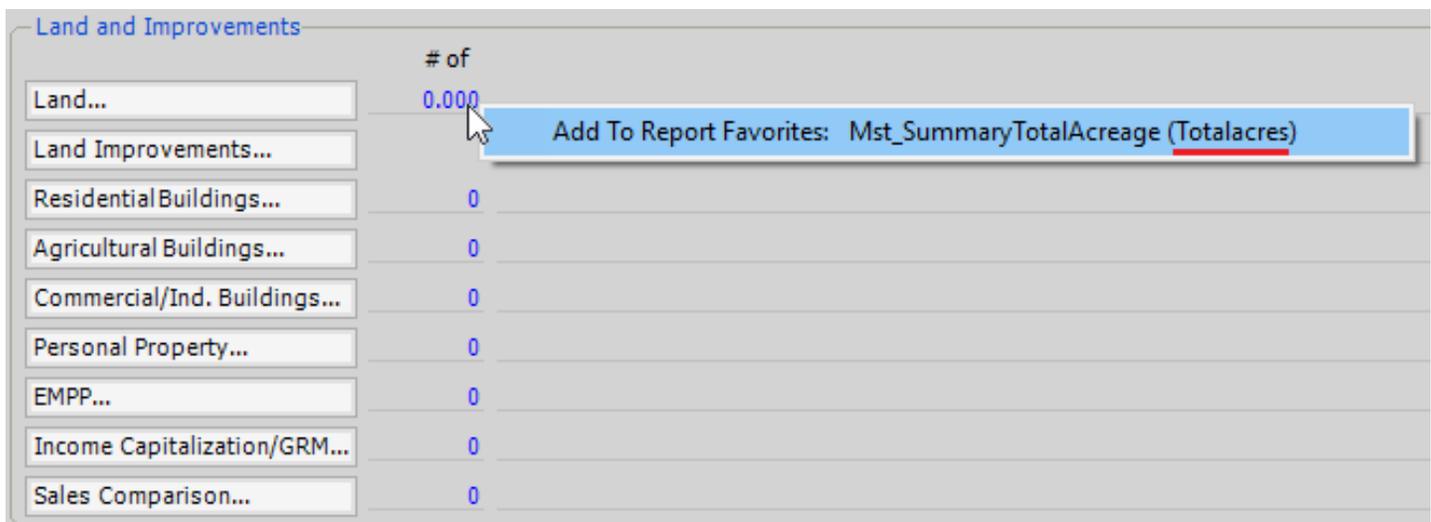
It is important to know the type of data that needs exported. Databases feature multiple tables such as a parcel table, a residential buildings table, a sales table, etc. The type of export necessary will depend on the table housing the sought data. For example, the Export Type may be Parcels (assessed values, owner information, and PRE info, etc...) or it may be Sales (sale price, sale date, liber/page, etc...).



The available fields can be narrowed to the desired fields using the search area. Once a sought field is identified, it can be added to the fields to export.



In most cases field names can be determined by right clicking them.



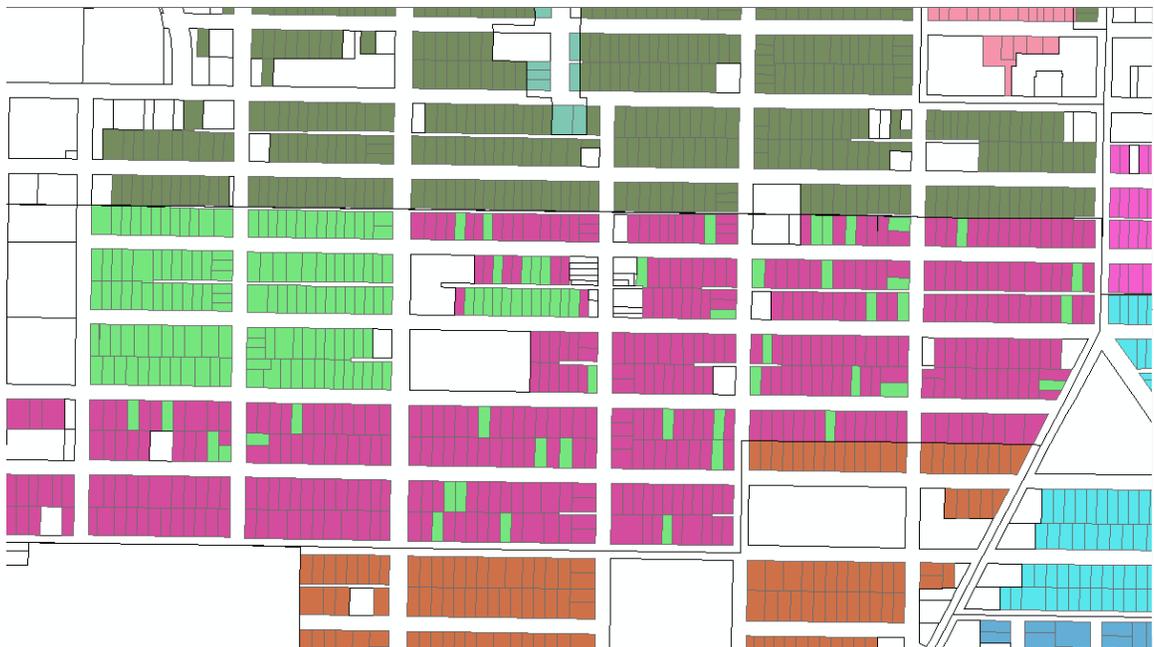
Exports can be saved for later use. An adept analyst will have a number of exports on hand for regular use featuring commonly needed data fields. Saved exports are not database specific nor are they user specific. An export created and saved by one user for a particular database may be used by another user with adequate permissions on an entirely different database. Further, exports can be shared via exporting the export itself to then be input into another organization's system.

Land Values

Previously a review of the methods used to establish land tables and set their values should have been performed. As part of the data review, a separate review should be conducted to ensure the values are being properly applied.

1. Are the parcels in the correct land tables?

A thematic land table map can provide efficient visual indications of potential problems or "island parcels". Land tables are typically comprised of contiguous parcels or areas of contiguous parcels. If a parcel is surrounded by parcels in a different land table, it typically is not done intentionally and is worth verifying. There are a number of programs and resources available for producing a thematic land table map and producing one should be a fundamental step of any local unit reappraisal. If not provided one by the local unit, it would be a valuable review tool for an Equalization Director to develop.



As seen above, there are green parcels in the middle of magenta parcels. This would point to the fact that they are coded with the wrong land table

2. Adjustments should be explained

At this point, land values have been well established through supportable sales analysis. Any deviation from what the supporting data indicates must be explained by extenuating supporting data.

A generic data export can be run to extract all parcel numbers, land adjustment percentages, and all accompanying adjustment reason fields. With the pertaining data exported, a spreadsheet can be sorted on adjustment percentages to locate adjustments not equal to 100%. If the adjustment percentage is not equal to 100%, the accompanying reason field should be populated with an explanation.

Bear in mind that land can be valued by frontage/site/lot, by acre table, by square foot table, or by rate table. Given the multiple valuation types, there are several fields that will need to be exported and checked. Similarly, land that has been flat valued should also be checked to ensure a reason has been indicated.

Economic Condition Factors

Similar to land values, the ECF calculation methods should have already been reviewed. This review involves ensuring that ECFs have been correctly applied and that parcels are in the intended neighborhoods. The review process will differ depending on how ECF neighborhoods were established.

1. Are parcels in the correct ECF neighborhoods?

If ECF neighborhood boundaries are geographic, then a thematic ECF map can be created to spot parcels that appear to be outside of their intended neighborhood. A parcel sitting on its own that is surrounded by parcels in an entirely different neighborhood is quite possibly an error. This again would be an opportunity to create a thematic map like was done for the land tables and look for island parcels.

ECF neighborhoods may be formed using like properties, irrespective of their location. In such a case the characteristics of each neighborhood will need to be determined. For example, there may be a neighborhood for retail occupancies, for office occupancies, or for apartment occupancies to name a few. It may be useful to list the defining attributes of each neighborhood and prepare an export that features the pertaining characteristics as well as the ECF that has been assigned. A spreadsheet can be utilized to isolate instances where the property attributes do not align with the assigned neighborhoods so that the affected parcels can be investigated further.

Parcels .pnum	CommercialBuildings .buildnum	ParcelReadOnly .curClassStr	CommercialBuildings .occ_String	ParcelReadOnly .ecftableDesc
41-05-52-78	1	201 (COMMERCIAL)	Apartment	2101 COM APARTMENTS
23-26-46-17	1	201 (COMMERCIAL)	Apartment	2101 COM APARTMENTS
71-90-77-25	2	201 (COMMERCIAL)	Apartment	2101 COM APARTMENTS
52-07-32-61	1	201 (COMMERCIAL)	Office Buildings	2102 COM OFFICES
87-09-93-37	1	201 (COMMERCIAL)	Office Buildings	2102 COM OFFICES
50-90-75-47	1	201 (COMMERCIAL)	Office Buildings	2102 COM OFFICES
87-43-70-94	1	201 (COMMERCIAL)	Office Buildings	2102 COM OFFICES
84-46-52-49	2	201 (COMMERCIAL)	Office Buildings	2104 COM RETAIL
72-60-51-69	2	201 (COMMERCIAL)	Office Buildings	2102 COM OFFICES
28-92-05-89	2	201 (COMMERCIAL)	Restaurants	2103 COM Restaurants
15-02-88-96	2	201 (COMMERCIAL)	Restaurants	2102 COM OFFICES
83-62-77-08	1	201 (COMMERCIAL)	Restaurants	2103 COM Restaurants
36-96-21-84	1	201 (COMMERCIAL)	Restaurants	2103 COM Restaurants

2. ECFs of 1.000

An ECF of 1.000 can potentially be used if the ECF analysis supports it. However, in all probability, applied ECFs of 1.000 are likely unintentional. As an example, a commercial ECF neighborhood may be developed and applied. Hypothetically, a commercial property is correctly using the neighborhood but the parcel so happens to feature an agricultural building as well. It may be the case that the developed neighborhood may not have been adjusted to account for agricultural buildings as only commercial buildings were expected. The resulting undeveloped ECF for agricultural buildings in that neighborhood of 1.000 would be unintentionally applied. Running an export for each type of building that shows the applied ECF per building is an easy way to check for the issue.

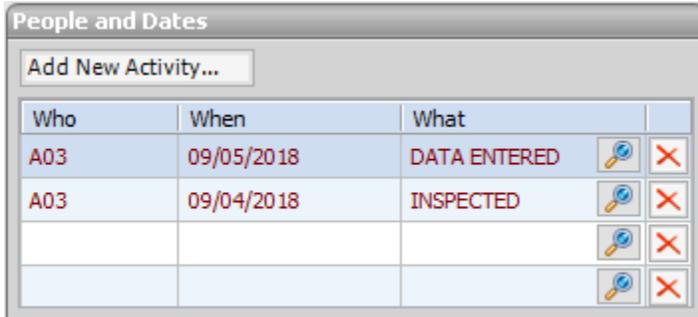
Standards

A consensus for data standards should have been reached during the initial planning phase. A necessary part of overseeing a reappraisal requires verification that the established standards are being consistently followed. Reviewing a sample of records for uniformity should be a regular part of the process. Though bear in mind that samples need to be representative. If multiple appraisers are working on a project, samples for review should include a proportional amount of work from each.

Some items to take stock of when reviewing a sample of records may include:

- **Photos**
Are an adequate number of photos being taken and are the perspectives meaningful? Also, are the photos being catalogued (attached) and captioned in concordance with the agreed upon standard?
- **Sketches**
Are land sketches being done as expected? Similarly, do the building sketches consistently include all of the desired attributes? It may be the case that a particular sketch layout has been established as the typical model. For example, does there need to be a layout page showing the building footprints and relative locations of the buildings with the details for each on the following page/s? In any case, consistency should be sought.
- **Parcel & Improvement Attributes**
It is important that building features not be missed and that they are appropriately identified and catalogued. Segregated cost or unit in place cost items should conform to the agreed upon data model. Also, things like Use Codes should be populated in a manner consistent with the established standards and expectations.
- **Tracking Work & Progress**
There needs to be a metric tracking the progress of tasks associated to the reappraisal. The Equalization Director should be apprised of the production

metric and have regular access to reviewing its status. If the reappraisal is using fields in the database to track appraisal activity, for example, it makes the reviewer's job much easier.



The screenshot shows a window titled "People and Dates" with a button "Add New Activity...". Below the button is a table with columns "Who", "When", and "What". The table contains three rows of data, each with a magnifying glass icon and a red 'X' icon in the right margin.

Who	When	What
A03	09/05/2018	DATA ENTERED
A03	09/04/2018	INSPECTED

- **New, Loss, Additions, Losses**

Characterizing value changes can be very challenging but it is a crucial step that has far reaching and long lasting effects. It is important to properly identify the source or cause of value changes so that they can be correctly categorized. Having another person looking over value change considerations can be very useful and the Equalization Director is well positioned for the task. The State Tax Commission Guide to Basic Assessing covers examples of how value changes from various sources should be handled.

- **Data Exports**

Some review items may be best analyzed through extraction and rearranging of the data. In particular, New, Loss, Additions, Losses, and Adjustment values can be exported along with other helpful data fields such as property class, previous class, assessed value, previous assessed value, true cash value, land value, percent change, etc. For many operations, reviewing exported data in a spreadsheet is a much more versatile platform than attempting to spot check within a database. The meaningful manipulation of exported data in spreadsheets is an imperative skill that should be cultivated in the role of an Equalization Director overseeing a reappraisal.

Review Percent Change

Given that a reappraisal is occurring, it is not uncommon that the new assessed values will be unusually higher or lower from the previous year's assessed values. However, it is worth investigating instances where the value increases or decreases appear extreme or unusual. Significant changes should be explainable. Bear in mind, however, that small initial values may indicate a significant percent change with only a small lump sum change. For instance, adding a mere 500 to 1,000 is a 50% increase while adding 500 to 100,000 is a 0.05% increase. Consequently it may be useful to consider the current assessed and previous assessed values along with the percent change.

A database can be sorted directly by the percent change and it would be helpful to see the previous assessed and current assessed columns as neighbors. Alternatively, the aforementioned fields can be exported along with parcel numbers and other useful fields for a more comprehensive analysis in a spreadsheet.

Assessing .NET DB: Group: Version: 09/01/2018

File View Navigation Tasks Reports Utilities BS&A Applications Help

Number of Records: **100,493** Sort Index: **% Chgd.**

% Chgd.	Prev. MBOR Asmt	Current MBOR Asmt	Parcel Number
1,350.000	800	11,600	
1,350.000	200	2,900	
1,350.000	200	2,900	
1,400.000	1,100	16,500	

Depreciation

The originally outlined plan will have covered standards for cataloguing depreciation. Though as part of the review process, checks should be run to verify that the percentages make sense and that they are supported.

For example, it doesn't make a lot of sense for a building that is three years old to be depreciated at 60% good. It is an easy enough process to export the year built, the year remodeled, the effective age, the physical percent good, and the depreciation table. All of the aforementioned fields should support each other. A building with an actual age of 5 years would typically have an effective age of the same. If the building is depreciating at 2% per year, the remaining percent good will be 90%. The older a building is, the more difficult it becomes to verify the plausibility of the numbers as they relate to each other, but the underlying principal is the same.

Every instance of non-physical depreciation (functional, external, abnormal physical) needs to feature an explanation. Additionally, the applied percentages must be believable. Exporting and arraying all the depreciation fields will help to identify situations that need investigated. For example, if several buildings have exactly 65% functional, the situation should be further examined. It is likely that an unsupported and broad consideration has been applied in mass as a forgone conclusion. The appropriateness of the practice should be weighed to consider if the characteristics leading to the 65% conclusion can be quantified on a building by building basis.

Parcel Size Reconciliation

If the county has Geographic Information Systems data, a parcel layer with attributes can be helpful in verifying parcel sizes. While in a perfect world, all data is consistently infallible, in the real world, there are numerous reasons for potential discrepancies between a parcel's indicated size according to the GIS representation and the size according to the assessment roll. Therefore disparity should be expected and tolerated between the two datasets. That being said, if a parcel is on the roll for 5 acres but the GIS data indicates that the parcel is 15 acres, an investigation becomes warranted. Acreage fields from each dataset can be merged into one dataset so that a percent difference can be calculated.

A common analysis mistake comes from not properly merging datasets. If one dataset contains parcel numbers and acres, it should not be assumed that another dataset is arrayed the same way or that it even contains the same parcel numbers. If the parcel numbers are not in the same order between the two sets it would be incorrect to attempt to compare the acres in each row between the two sets. Similarly, if a parcel number is missing from one dataset but appears in another, it needs to be properly accounted for.

Incorrect (unmerged datasets)					
	Dataset 01		Dataset 02		Acre
	Par Num	Acreage	Par Num	Acreage	% Difference
1	19-72-38-72	2.006	19-72-38-72	2.161	07.73%
2	77-88-13-62	1.802	77-88-13-62	1.920	06.55%
3	88-13-28-15	3.481	88-13-28-15	3.610	03.71%
4	59-97-18-38	4.127	59-97-18-38	4.036	-02.20%
5	63-56-25-55	0.036	31-84-45-40	0.041	13.89%
6	31-84-45-40	0.042	63-56-25-55	0.037	-11.90%
7	60-30-68-36	1.735	60-30-68-36	1.773	02.19%
8	21-35-94-75	2.974	21-35-94-75	3.014	01.34%
9	46-52-56-25	0.987	46-52-56-25	0.979	-00.81%
10	67-98-34-85	4.462	67-98-34-85	4.229	-05.22%
11	49-86-53-24	6.728	49-86-53-24	6.475	-03.76%
12	23-90-92-20	5.325	23-90-92-20	5.673	06.54%
13	74-95-99-75	9.923	74-95-99-75	9.718	-02.07%

The parcel numbers are not in the same order between the datasets. It would be incorrect to compare the acreage differences across rows.

Correct (merged datasets)				
	Parcel Number	Acres Dataset 01	Acres Dataset 02	Percent Difference
1	19-72-38-72	2.006	2.161	07.73%
2	77-88-13-62	1.802	1.920	06.55%
3	88-13-28-15	3.481	3.610	03.71%
4	59-97-18-38	4.127	4.036	-02.20%
5	63-56-25-55	0.036	0.037	02.78%
6	31-84-45-40	0.042	0.041	-02.38%
7	60-30-68-36	1.735	1.773	02.19%
8	21-35-94-75	2.974	3.014	01.34%
9	46-52-56-25	0.987	0.979	-00.81%
10	67-98-34-85	4.462	4.229	-05.22%
11	49-86-53-24	6.728	6.475	-03.76%
12	23-90-92-20	5.325	5.673	06.54%
13	74-95-99-75	9.923	9.718	-02.07%

All parcel numbers from all datasets have been consolidated into one list. Attributes are pulled in from other datasets using the parcel number as an index and are then compared.

Exempt Properties

As previously discussed, exempt properties need to be inventoried and priced but also verified for exempt status as part of the reappraisal. Reviewing the reappraisal will likely require sampling exempt parcels that have been processed and spot-checking them for consistency.

Each exempt parcel in a sample should have an application or supporting documentation on file that substantiates the exemption. From the data, the pertaining exemption law can be determined. Parcel class codes can then be compared against the pertaining exemption law on file to ensure that they match.

Reviewing a sample of exempt parcels will also involve quality control regarding the appraisals. Just like with taxable properties, an independent valuation should be performed on a selection of exempt parcels to confirm that the applied pricing considerations are reasonable and appropriate. Valid land values, ECFs, and improvement attributes still need to be applied uniformly.

Special Acts

A reappraisal is an ideal time to cleanup special act parcels and verify that the relevant information has been properly catalogued. Industrial Facilities Tax certificate numbers and expiration dates should be populated, for example. It also makes sense to have commentary and notes in a uniform and consistent location. Beyond that, the association between special acts parcels and their corresponding ad valorem parcels should be clearly defined and documented. A database field for identifying a related parcel is ideal for tracking the relationship. If such a field is utilized not only does it simplify the review process, it also strengthens the integrity and maintenance of the assessment roll going forward. If a related parcels field has been consistently applied, it can be used for analysis purposes to link the comment fields between the two rolls and validate that the correct information is appearing on both parcels.

1.General 2.Owner Info.(*) 3.Tax Info.(*) 4.PRE: 0 5.Misc.

Classification/Special Acts

Classification: IFT - Post 1994 Rates

Prev. Classification: IFT - Post 1994 Rates

Certificate #: 2014-XXX Exp. Date: 12/30/2026

Amt Appr.: 2,000,000 Ren. Zone Info...

Override SET rate: 6 Mills Summer **Special Act**

Brownfield Info...

1.General 2.Owner Info.(*) 3.Tax Info.(*) 4.PRE: 0 5.Misc. 6.Linked App Info 7.Attach [0] 8.Sketches [0]

Land Div. Info....

MTT Status...

Misc. (Generic Fields)...

Miscellaneous Fields

Pers./Real Parcel #: [dropdown] Goto Parcel Parcel Ends Block

Prev. School: [dropdown] Parcel Ends Section

Data Cleanup & Best Practices

Information should be entered into the database in a manner that is consistent with the originally outlined plan. But beyond that, there are some considerations for best practices that a reappraisal creates an ideal opportunity to review. Some expected standards may vary from unit to unit but in any case, being familiar with the expected standard will identify what should be looked for during the data cleanup process. All of the considerations outlined here can be checked for fairly easily using spreadsheets and a series of exports.

- **Placeholder Buildings**

Sometimes buildings are created in a database to serve as a placeholder for other miscellaneous items even though the created building does not actually exist. Not only does this potentially create a false indication of an improved parcel, it is also a less organized way to catalogue the information and it goes against the database's intended design. Also, it may be the case that because the parcel was not intended to actually have that type of building, the parcel's ECF neighborhood is not representative of the items being added. However, a local unit may determine that placeholder buildings are an acceptable standard.

- **Residential Bathrooms**

Residential buildings should always have a bathroom unless they truly are deficient in that capacity.

- **Zero Value Buildings**

Buildings should not have zero value. Sometimes override values of zero can make their way into the system. Also sometimes buildings are given obsolescence such that they do not have a concluded value. While there may be a justification for an extenuating circumstance, typically best practices would expect that buildings calculate a replacement cost new. In any case, at the very least, a well-documented justification should be present for any deviations from consistency.

- **Zero Value Parcels**

Inactive, retired, and exempt parcels can justifiably have a concluded assessed value of zero for the pertaining assessment year. Parcels with a zero assessment outside of the aforementioned circumstances will need to be investigated and corrected as necessary.

- **Property Classes**

Beyond simply aligning property classes with the use that contributes the greatest value, property class codes should also align with the property characteristics. For example, if the adopted property class codes make a distinction between vacant and improved parcels, the parcel features should appropriately correspond.

- **Flat/Override Values**

Buildings with override values or flat values should have well documented and supported explanations. There may be a logistical justification for handling some improvements with an override value such as putting a certain percentage of a building's overall calculated value on two different parcels. However, an override value should not be used in place of an acceptable valuation method. Also, even in the aforementioned override example, the building's value would need to be recalculated each year to prevent a stagnant flat value from perpetually driving the appraisal. Therefore, avoiding override values whenever possible would be the best practice.
- **Weight Factors**

Buildings are sometimes priced using a weight factor for the calculator or segregated cost methods where a certain percentage of the cost is applied rather than the full calculated cost. In such cases, easily understood comments will need to be documented detailing the basis and the calculations behind the applied percentages.
- **Parcel Status & Class**

Parcel status and parcel class should be in concert with each other. It may be the case that newly retired parcels are kept in active status because the previous class will need to stay active in the database for balancing purposes. However, it would be unusual for inactive parcels to have an active current class, for example.

Concluding the accepted reappraisal:

Line 7 on the L-4023

Accepting a completed reappraisal will mean it will take the place of a traditional equalization study for the local unit. The reappraised concluded assessed value, having been approved, will be recognized as being 50% of true cash value. The True Cash Value difference necessary between lines _01 and lines _08 to achieve a 50.00 ratio must consequently be input to line _07 of the L-4023. The assessed value on line _08 multiplied by 2 is the desired True Cash Value for line _08. The calculated line _08 True Cash Value should be modified by the Line _07 value to equal the desired line _08 value.

Before Example:

300	Real Property	#Pcls.	Assessed Value	% Ratio	True Cash Value
301	Industrial	51	17,099,700	49.10%	34,826,273
302	LOSS			49.10%	
303	SUBTOTAL		17,099,700	49.10%	34,826,273
304	ADJUSTMENT		2,485,400		
305	SUBTOTAL		19,585,100	56.24%	34,826,273
306	NEW		313,000	56.24%	556,543
307					
308	TOTALS	52	19,898,100	56.24%	35,382,816

In the above example, the Assessed Value in line 308 of 19,898,100 multiplied by 2 equals the desired True Cash Value for line 308 of 39,796,200. Subtracting the True Cash Value Subtotal line 305 amount of 34,826,273 and TCV New line 306 amount of 556,543 from the desired line 308 amount of 39,796,200 equals the necessary line 307 amount of 4,413,384 to balance line 308 at 50.00% as shown in the below example.

$$19,898,100 \text{ (Assessed Total 308)} * 2 = 39,796,200 \text{ (Desired True Cash Total 308)}$$

$$39,796,200 \text{ (Desired TCV 308)} - 35,382,816 \text{ (TCV Subtotal 305 + TCV New 306)} \\ = \text{TCV line 307 amount of } 4,413,384$$

After Example:

300	Real Property	#Pcls.	Assessed Value	% Ratio	True Cash Value
301	Industrial	51	17,099,700	49.10%	34,826,273
302	LOSS			49.10%	
303	SUBTOTAL		17,099,700	49.10%	34,826,273
304	ADJUSTMENT		2,485,400		
305	SUBTOTAL		19,585,100	56.24%	34,826,273
306	NEW		313,000	56.24%	556,543
307					4,413,384
308	TOTALS	52	19,898,100	50.00%	39,796,200

See [STC Bulletin 13 of 1996](#) for more information.

Sales studies after a reappraisal:

Handling the L-4017 form 2793

For a two-year sales study, adjustment modifiers are calculated using lines _03 and _05 from the previous two years L-4023s. The difference between lines _03 and _05 being the adjusted amount will give credit for the subsequent increase or decrease. However, the process assumes that the adjustment amount is attributable to market change. In the case of a reappraisal, there is likely a significant amount of previously unreported new value that has been reported as an adjustment. Therefore lines _03 and _05 cannot be relied on for the calculation of adjustment modifiers following a reappraisal as the adjustment amount is not exclusively attributable to changing market conditions.

For the year in which the calculation is influenced by the reappraisal, the ratios from lines _01 and _08 from the L-4023 should be used in place of the assessed values from lines _03 and _05 to calculate the adjustment modifier for the purposes of a sales study.

In the below example, three years of L-4023 values are shown for the industrial property class.

2016 - 2017

300	Real Property	#Pcls.	Assessed Value	% Ratio	True Cash Value
301	Industrial	52	15,643,700	45.39%	34,465,080
302	LOSS		374,800	45.39%	825,733
303	SUBTOTAL		15,268,900	45.39%	33,639,347
304	ADJUSTMENT		1,490,800		
305	SUBTOTAL		16,759,700	49.82%	33,639,347
306	NEW		340,000	49.82%	682,457
307					
308	TOTALS	52	17,099,700	49.82%	34,321,804

(For years not affected by a reappraisal, use assessed values from lines _03 and _05 normally)

2017 - 2018

300	Real Property	#Pcls.	Assessed Value	% Ratio	True Cash Value
301	Industrial	52	17,099,700	49.10%	34,826,273
302	LOSS		0	49.10%	0
303	SUBTOTAL		17,099,700	49.10%	34,826,273
304	ADJUSTMENT		2,485,400		
305	SUBTOTAL		19,585,100	56.24%	34,826,273
306	NEW		313,000	56.24%	556,543
307					4,413,384
308	TOTALS	52	19,898,100	50.00%	39,796,200

(For years affected by a complete reappraisal, use ratios from lines 01 and 08)

2018 - 2019

	#Pcls.	Assessed Value	% Ratio	True Cash Value
300 Real Property				
301 Industrial	52	19,898,100	50.12%	39,700,918
302 LOSS		315,300	50.12%	629,090
303 SUBTOTAL		19,582,800	50.12%	39,071,828
304 ADJUSTMENT		-157,200		
305 SUBTOTAL		19,425,600	49.72%	39,071,828
306 NEW		221,200	49.72%	444,891
307				
308 TOTALS	52	19,646,800	49.72%	39,516,719

(For years not affected by a reappraisal, use assessed values from lines _03 and _05 normally)

In the example, a complete reappraisal was accepted to set the 2018 assessed values. A sales study occurring in the following year would require using the starting and ending ratios for the reappraisal year in place of the assessed values from lines _03 and _05 as can be seen on the L-4017 example below. This is necessary because the line _07 adjustment that occurred is not reflected in the assessed values but is realized in the concluded ratio and true cash value projection.

2018 24 and 12 Month Sales Ratio Study for Determining the 2019 Starting Base

This form is utilized with your Sales Ratio Study to determine the ratio and true cash value amounts entered on Form 603, *Analysis for Equalized Valuation*
NOTE: PAGE 2 CONTAINS INSTRUCTIONS THAT SHOULD BE REVIEWED PRIOR TO COMPLETING THIS FORM

County Name:	City or Township Name:
Classification of Property (Ag, Com, Res, etc.)	
3 Industrial Sales Study	

2016 to 2017 Adjustment Modifier

1. Enter the assessed valuation after adjustment from the 2017 form L-4023 line 305.....	1. 16,759,700
2. Enter the assessed valuation before adjustment from the 2017 form L-4023 line 303.....	2. 15,268,900
3. 2016 to 2017 Adjustment Modifier. Divide line 1 by line 2	3. 1.0976

2017 to 2018 Adjustment Modifier following a 2018 reappraisal

4. Enter the ratios from the 2018 form L-4023 line 108	4. 50.00%
5. Enter the ratios from the 2018 form L-4023 line 101	5. 49.10%
6. 2017 to 2018 Adjustment Modifier. Divide line 4 by line 5	6. 1.0183

2016 to 2018 Adjustment Modifier

7. 2016 to 2018 Adjustment Modifier. Multiply line 3 by line 6	7. 1.1177
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The above example shows a sales study occurring in 2018 to set the 2019 base where the reappraisal was used to set the 2018 base. The same adjustment procedure will similarly carry through to a sales study occurring in 2019 to set the 2020 base as can be seen below.

2019 24 and 12 Month Sales Ratio Study for Determining the 2020 Starting Base

This form is utilized with your Sales Ratio Study to determine the ratio and true cash value amounts entered on Form 603, *Analysis for Equalized Valuation*
NOTE: PAGE 2 CONTAINS INSTRUCTIONS THAT SHOULD BE REVIEWED PRIOR TO COMPLETING THIS FORM

County Name: 	City or Township Name:
Classification of Property (Ag, Com, Res, etc.) 3 Industrial Sales Study	

2017 to 2018 Adjustment Modifier following a 2018 reappraisal

1. Enter the ratios from the 2018 form L-4023 line 108	1. 50.00%
2. Enter the ratios from the 2018 form L-4023 line 101	2. 49.10%
3. 2017 to 2018 Adjustment Modifier. Divide line 1 by line 2	3. <u> 1.0183</u>

2018 to 2019 Adjustment Modifier

4. Enter the assessed valuation after adjustment from the 2019 form L-4023 line 305.....	4. 19,425,600
5. Enter the assessed valuation before adjustment from the 2019 form L-4023 line 303.....	5. 19,582,800
6. 2018 to 2019 Adjustment Modifier. Divide line 4 by line 5	6. <u> 0.9920</u>

2017 to 2019 Adjustment Modifier

7. 2017 to 2019 Adjustment Modifier. Multiply line 3 by line 6	7. <u> 1.0102</u>
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