Cost Approach & How to Use the Real Property Assessment Guidelines – Book 1

2024 Level I Tutorials

Agenda

- Real Property Assessment Manual
- Information for Assessment
- 2021 Real Property Assessment Guidelines
- Chapter 1 – Assessment Information
- Chapter 2 – Land
- Chapter 3 – Residential Dwelling Units
- Chapter 4 – Mobile and Manufactured Homes

Agenda Continued

- Chapter 5 – Residential and Agricultural Yard Structures
- Appendix A – Grade
- Appendix B – Depreciation
- Appendix C – Cost Schedules
- Rest of class time will be spent working problems.

What You Will Learn

- Content of the Manual
- Content of each Chapter of Book 1
- How to use the Schedules in the Appendix
- How to properly fill out a property record card

- Material will cover:
  - Book 1, Real Property Assessment Guidelines

Real Property Manual

- The guidelines adopted by the Department of Local Government Finance provide procedures and schedules that are acceptable in determining true tax value under the cost approach.

- Formula for the cost approach is: V = LV + (RCN – D)
  - * This is a good formula to keep in mind

  - Where V = value
  - LV = land value
  - RCN = replacement/reproduction cost new
  - D = depreciation

Real Property Manual

- The resulting value of the previous slide is what is called True Tax Value.
- In the case of agricultural land True Tax Value shall be the value determined in accordance with the Guidelines and IC 6-1.1-4-13. (This process will be detailed in Chapter 2)
- In the case of all other real property, true tax value shall mean market value-in-use which is defined as follows:
- The market value in use of a property for its current use, as reflected by the utility received by the owner or a similar user.

Information for Assessment

- The primary method of valuation outlined in the Guidelines is the cost approach to value.
- The cost to be estimated by the Assessor is made up of all the direct labor and material costs plus the indirect expenses required to construct an improvement.

Information for Assessment

Examples of Direct Costs and Labor:

- Labor
- Materials
- Supervision
- Utilities used during construction
- Equipment Rental

Information for Assessment

Examples of Indirect Expenses:

- Building Permits
- Fees
- Insurance
- Taxes
- Construction Interest
- Profit
- Overhead
- Professional Fees

Information for Assessment

- Two major concepts of cost:
  - Reproduction cost
  - Replacement cost

Information for Assessment

- Reproduction cost – The cost of constructing a new improvement, reasonably identical with the subject improvement, using the same materials, construction standards, design, and quality of workmanship.
- Building your local Courthouse exactly as it appears today with the same details, craftsmanship and materials as was used when it was built so that you have a reasonably identical structure is **reproduction cost**.

Information for Assessment

- Replacement cost – cost of constructing a building having the same utility as the improvement being valued, but using modern materials, design and workmanship.
- Building a modern Courthouse with today's materials and technology so it has the same utility as your present courthouse is **replacement cost**.

- * It is good to understand of Replacement Cost.

Assessment Date

- The assessment date for all real property in 2015-pay-2016 was March 1.
- SEA 420 changed the assessment date to January 1 starting with the 2016-pay-2017 tax cycle.

Chapter 1
General Assessment Information

Chapter 1

- Mission of reassessment is to inventory, verify and value all real estate parcels.
- The general reassessment has been replaced by a cyclical reassessment.
- IC 6-1.1-4-4.2 stipulates that a reassessment plan be submitted to the DLGF and separated into four groups, one for each year.
- Each group of parcels must contain approximately 25% of the parcels within each class of property in the county (Residential, Agricultural, Commercial/Industrial/Other).

Chapter 1

4 Year Cyclical Reassessment	
Date	Action
5/1/2021	County Assessor must submit a cyclical reassessment plan to DLGF before this date.
1/2/2022	DLGF must review and approve the plan before this date.
5/1/2022	Reassessment starts on the first 25% of the parcels within each property class.
12/31/2022	Reassessment of the first 25% of the parcels must be completed.
5/1/2023	Reassessment starts on the second 25% of the parcels within each property class.
12/31/2023	Reassessment of the second 25% of the parcels must be completed.
5/1/2024	Reassessment starts on the third 25% of the parcels within each property class.
12/31/2024	Reassessment of the third 25% of the parcels must be completed.
5/1/2025	Reassessment starts on the fourth 25% of the parcels within each property class.
12/31/2025	Reassessment of the fourth 25% of the parcels must be completed.
5/1/2025	County Assessor must submit plan to DLGF before this date for the next cyclical reassessment.
5/1/2026	Reassessment of first 25% of the parcels within each property class for the next four-year cycle begins.

Chapter 1

- Real property is assessed at the place where it is situated, and it is assessed to the person liable for the taxes as provided in IC 6-1.1-2-4(b)(c).
- The township assessor, (if any), otherwise the county assessor, keeps the reassessment data and records current by securing the necessary field data and making changes in the assessed value of real property as changes occur in use.

Chapter 1

- The assessing official or PTABOA must give notice to the taxpayer by mail, or by using electronic mail that includes a secure Internet link to the information in the notice, of the amount of the assessment or reassessment.
- The notice of assessed value is given on Form 11.

Chapter 1

- A taxpayer may appeal their assessed value (on a subjective appeal) not later than the following:
- For assessments before January 1, 2019, the earlier of:
  - forty-five (45) days after the date on the notice of assessment.
  - forty-five (45) days after the date on the tax statement mailed by the county treasurer.
- For assessments after December 31, 2018, the earlier of:
  - June 15 of the assessment year if the Form 11 is mailed by the county before May 1 of the assessment year.
  - June 15 of the year in which the tax statement is mailed by the county treasurer, if the Form 11 is mailed by the county on or after May 1 of the assessment year.

Chapter 1

- During a period of cyclical reassessment, the assessing official must provide notice of assessment by the earlier of: (1) 90 days after the completion of the appraisal of a parcel; or (2) February 10 of the year containing the assessment date for which the assessment or reassessment first applies (e.g., for a January 1, 2019 assessment date, by February 10, 2019).

Chapter 1

- Property Reassessment Fund (IC 6-1.1-4-27.5 and IC 6-1.1-4-28.5)
  - Every county has one – The auditor of each county shall establish a Property Reassessment Fund. County council must levy enough to pay for reassessment costs.
  - County treasurer deposits tax collections into fund and invests surplus funds.
  - County council must approve any appropriations from the fund.

Chapter 1

- Property Reassessment Fund
  - Money in fund may only be used to pay for:
  - Costs of general reassessment
  - Computerization of assessment records
  - Updating of plat books (A plat is a map, plan, or chart of a city, town, section, or subdivision, indicating the location and boundaries of individual properties. A map of a town or a section of land that has been subdivided into lots showing the location and boundaries of individual parcels with the streets, alleys, easements, and rights of use over the land of another. A plat is usually drawn to scale. The following Indiana Code gives a short description which would also apply. IC 6-1.1-5-4 Transfer books: Sec. 4. (a) Except as provided in section 9 of this chapter, the county auditor shall keep a transfer book, arranged by townships, cities, and towns. In the transfer book he shall enter a description, for the purpose of taxation, of land that is conveyed by deed or partition, the date of the conveyance, the names of the parties, and the post office address of the grantee.)

Chapter 1

- Property Reassessment Fund Continued
  - Development or updating of soil survey data
  - Making annual adjustments
  - Payments to assessing officials or PTABOA members for training by the DLGF
  - Salaries for permanent or temporary staff
  - Sales Disclosure Verification

Chapter 1

- The use of a unit of machinery, equipment or structure determines its classification as real or personal property.

- Table 1-1 (Real Property Assessment Guidelines, Chapter 1, beginning on pg. 8) contains listing of real and personal property.

Chapter 2
Land

Chapter 2

- All property within a jurisdiction must be established as part of a neighborhood defined by the assessing official. The assessing official shall define neighborhoods according to:
  - Common development characteristics.
  - Average age of majority of improvements.
  - Size of lots or tracts.
  - Subdivision plats/zoning maps.
  - School and other taxing district boundaries.
  - Distinctive geographical boundaries.
  - Any manmade improvements that significantly disrupt the cohesion of adjacent properties.

Chapter 2

- Sales statistics.
- Other characteristics deemed appropriate to assure equitable determinations.
- All neighborhoods must be identified on easily read maps.
- All neighborhoods shall be assigned a code number for identification.

Chapter 2

- Neighborhoods shall be classified according to majority use as residential homesite, agricultural homesite, commercial, or industrial. (Homesite: A land area of one (1) acre per residential site on a parcel containing one (1) or more acres. If a developed residential site is less than one (1) acre, the homesite is the entire land area. The value of the homesite is set based on improved land sales in that neighborhood.)
- Three methods of Evaluating sales information when establishing land values
  - Sales comparison method
  - Abstraction method
  - Allocation method

Chapter 2

- Sales comparison method
  - One of the most reliable methods of estimating land value
  - Sale prices of similar properties are compared
  - Most reliable when numerous sales are available
  - Page 12, Examples 1 and 2

Chapter 2

- Abstraction method
  - Used to determine the indicated value of residential land if sample of vacant land sales is insufficient
  - Most reliable when minimum amount of depreciation has occurred on improvements
  - Value of land is determined by subtracting the depreciated value of improvements from the sale price
  - Page 12, Example 3

Chapter 2

- Allocation or percentage of sale method
  - Used to determine indicated value of land if sample of sales for a neighborhood represent improved properties
  - Depends on analysis of various neighborhoods to determine percentage contribution of land to the total sale
  - Page 13, Example 4

Chapter 2

- Class Codes (Table 2-1, page 19) and Subclass Codes (Table 2-2, pages 19 - 22).
- The class codes provide an index to identify the class of property for each individual parcel. A one-digit code represents the general property class and a two-digit suffix code is added for the subclass.

Chapter 2

- Example: 1 represents Agricultural taxable land and improvements used primarily for agricultural purposes.
- A subclass suffix of 03 would identify it as a Dairy Farm.
- So, 103 would be a Dairy Farm

Table 2-2. Subclass Codes

Class Code 1 Agricultural taxable land and improvements used primarily for agricultural purposes			
100 Vacant land	**104** Poultry farm	**110** Hog farm	**149** Agricultural land with personal property mobile home
101 Cash grain/general farm	**105** Fruit & nut farm	**111** Beef farm	**198** Structure on leased land
102 Livestock other than dairy and poultry	**106** Vegetable farm	**120** Timber	**199** Other agricultural use
103 Dairy farm	**107** Tobacco farm	**141** Agricultural land with mobile home	
	108 Nursery		
	109 Greenhouses		

Chapter 2

- Determining Depth Factors for Platted Lots
  - A platted lot is a piece of land within a plat that has its dimensions, location, other attributes drawn to scale in order to identify it for various purposes.
  - Twp. assessor, if any, or the county assessor must designate the base lot size for each neighborhood.
  - Depth factor is a multiplier that is applied to a unit land value to adjust the value of a particular lot to account for the depth of the lot.
  - The Depth Charts are located on pages 41, 42, and 43.
  - Example 1 starting on page 39 is a good example to use.

Chapter 2, Pg. 40 Example 1

- The standard lot for Neighborhood #6 is 100 feet by 150 feet deep.
- Lot #1 is 100 feet wide by 125 feet deep.
- The base rate in the area is $100.
- In the lot depth table for 150 feet standard depth (pg. 42), locate 125 feet (the lot being valued) and the corresponding depth factor (.92).
- To determine the adjusted value of Lot #1, multiply the base rate (given) by the depth factor. $100 x .92 = $92
- Then, multiply the adjusted rate by the front footage of the lot being valued, Lot #1, $92 x 100 = $9,200.

Example 1 continued

- It is important to remember the width will be first, and the depth will be second. Always find the standard lot depth, this is the Standard Depth table that will be used from Chapter 2.
- On that table find the depth of the lot you are working on.
- Multiple the base rate of the area (given in the problem) by the multiplier found in the chart for your lots depth to get an adjusted rate.
- Then multiply the adjusted rate by the front foot of the lot you are working on. This will give you the value.

Chapter 2

- Valuing Residential Acreage and Agricultural Homesites
  - Parcel size does not determine the property classification or pricing method for the parcel. It is determined by the property's use or zoning.
  - Land area of up to one acre per residential dwelling unit is assigned to agricultural parcels and residential parcels priced on an acreage basis.
  - Parcel's value is influenced by its location – lake front property vs. remote rural area
  - Additional information in the guidelines.

Chapter 2

- Valuing Residential Acreage Parcels Larger Than One Acre
- Residential acreage parcels of more than one acre and not used for agricultural purposes are valued using the residential homesite base rate and the excess acreage base rate established by the township assessor, if any, otherwise the county assessor.

Chapter 2

- Residential acreage parcels containing one acre or less are valued using the base rate (per acre) determined by the Township Assessor, if any, otherwise the County Assessor, and the appropriate factor from the Acreage Size Adjustment Table.
- A good example to use is located on page 55 at the bottom of the Acreage Size Adjustment Table.
- Influence Factors for Residential Acreage.
  - Applied the same way to residential acreage as they are to platted lots.

Acreage Size Adjustment Example

- A .33 acre tract is located in a neighborhood where 1 acre tracts are valued at $20,000 per acre. Find the value of the .33 acre tract:
- Use table 2-11 (pg. 55) and locate .33 acre to find the factor to be used (1.79).
- Take the per acre value times the Factor from the chart, this gives an adjusted value per acre. Now take the adjusted value times the acreage of the lot in question to get the value of that lot.
- The estimated value of the .33 acre tract is calculated as:
- $20,000 x 1.79 = $35,800 x .33 acres = $11,814 or $11,810.

Acreage Size Adjustment Example

- To show it another way
- The estimated value of the .33 acre tract is calculated as:
- 1st

$20,000	Value per acre given
X 1.79	Factor from Acreage Size Adjustment Table
$35,800	Adjusted Value per acre

- 2nd

$35,800	Adjusted Value per acre
X .33	Acreage from problem
$11,814	Or $11,810 Value rounded

Cost Approach Problems and Answers

- Please go to the Cost Approach Problem / Answer packet with audio and work Class Problems #1 - #6.

Commercial/Industrial Land

Chapter 2

- Commercial/Industrial Land Valuation
  - Similar procedure to valuing other types of land
  - However, sales information is less reliable and available
  - Assessing Official should draw on expertise with the community to establish basis for valuation and neighborhoods with common characteristics

  - Common characteristics that define neighborhoods:
    - Zoning
    - Major roads or streets
    - Natural geography (lakes or terrain)
    - Availability of transportation

Chapter 2

- Four categories of commercial and industrial land:
  - Primary
  - Secondary
  - Usable Undeveloped
  - Unusable Undeveloped

Chapter 2

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

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

*Chart can be found on page 68

Chapter 2

- Primary Land – The primary building or plant site. The following are examples of primary land:
  - Land located under buildings
  - Regularly used parking areas
  - Roadways
  - Regularly used yard storage
  - Necessary support land

  The base rate represents the value of land and costs associated with the development of the land. Costs that may include sanitary and storm sewers, potable water lines, fire prevention lines, gas lines, septic, water wells, grading of improvements, and landscaping.

Chapter 2

- Secondary Land – Land used for purposes that are secondary to the primary use of the land. The following are examples of secondary land:
  - Parking areas that are not used regularly
  - Yard storage that is not used regularly

  The base rate represents the value of land and costs associated with the development of the land. Normally, this acreage does not include development costs for water and sewage. However, the costs for storm sewers and grading are normally included.

Chapter 2

- Usable Undeveloped Land – The amount of acreage that is vacant and held for future development.

  The base rate represents the vacant or raw land that is zoned for commercial or industrial purposes. This type of land has incurred no on-site development cost. This does ***not*** include land utilized for agricultural purposes as stated in IC 6-1.1-4-13.

Chapter 2

- Unusable Undeveloped Land – The amount of vacant acreage that is unusable for commercial or industrial purposes, and not used for agricultural purposes.

  The base rate represents the value of undeveloped land that is zoned for commercial or industrial purposes. This type of land has incurred no on-site development cost and normally represents an area of vacant land with restrictions. Restrictions could be related to environmental hazards associated with building an improvement or the area is designated as a federally protected wetland. This does ***not*** include land utilized for agricultural purposes as stated in IC 6-1.1-4-13.

Chapter 2

- Establishing Use Classes for Commercial/Industrial Properties
  - Assessing Official may establish broad classes based on use or probable use of properties
  - Ensures similar properties are analyzed/valued consistently by the assessing official
  - Broad classes may be based on apartments, retail stores, offices, and other zoning
  - By doing this, the assessing official can compare unit values and establish base rates to treat all properties equitably

Chapter 2

- Table 2-15 (page 64)

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

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

Chapter 2

- Building Density Ratio
  - Compares the size of the improvements in relation to the size of the site .
  - Properties require a range of different densities based on the use and size of each site.
  - Example – a 20,000 sq. ft. facility needs less building space and parking than a comparable 40,000 sq. ft. facility.
  - Formula – Sq. ft. of improvement(s)/Total Land Sq. ft.
  - Ex. 80,000 sq. ft. strip center/217,800 sq. ft. site = 2.72 or 2.7 building density
  - By analyzing building density ratios in a defined neighborhood, an assessing official can determine what the norm is for the neighborhood.
  - This then helps the official determine what should be classified as primary land.

Chapter 2

- For valuation of larger acreage tracts, the assessor may use one of the following methods.
  - Land Development Method
    - For newer tracts that have the latest on-site development costs available.
    - Sums the development costs and the purchase price of the vacant land.
  - Comparison Method
    - Measures the effects of location on various Commercial/Industrial Properties.
    - Uses sales information and applies it to the standards of the neighborhood, thus creating an appropriate unit value.

Chapter 2

- Influence Factors
  - Base rates are standard pricing for a neighborhood, based on a typical lot.
  - However, certain tracts of land may have atypical conditions that require a positive or negative adjustment to the base rate to account for this atypical condition.
  - These conditions are (but not limited to) adverse topography, under improved, excess frontage, shape or size, mis-improvement, restrictions, traffic flow, view, and corner influence.
  - Examples 1 and 2 on page 67.

Chapter 2

- Other Influences
- Table 2-17, page 70

An influence, not described above, such as the following. Describe the factor in the memorandum section.

- **Golf course**—An increase to account for a particular location enhancement, not characteristic of the base lot.
- **Water frontage**—An increase to account for proximity to a water front, not characteristic of the base lot.
- **Cul-de-sac**—An increase to account for shape or size enhancements due to a cul-de-sac location, not characteristic of the base lot.
- **Location**—An increase or decrease to account for the influence of a particular location and not considered in the base lot.
- **Soil conditions**—A decrease to account for adverse soil conditions that prohibit the subject lot being used the same as the base lot.
- **Drainage**—A decrease to account for drainage limitations, indicated by standing water, not characteristic of the base lot.
- **Flooding susceptibility**—A decrease to account for a lot or a portion of a lot being in a flood plain, not characteristic of the base lot.
- **Noise nuisance**—A decrease to account for extraneous noise or other such nuisances not characteristic of the base lot.
- **Excess depth**—A decrease to account for a disproportionate frontage depth not accounted for in the size adjustment factor.
- **Limited access**—A decrease to account for ingress or egress limitations not characteristic of the base lot.

Problems

- Please go to questions 7 and 8 in the Cost Approach Problems and Answers with Audio.

Agricultural Land

Chapter 2

- Valuing Agricultural Land
  - Based on productive capacity of the land, regardless of the land's potential or highest and best use.
  - Income capitalization approach, where use-value is based on net income that will accrue to the land from agricultural production.

Chapter 2

- The base rate for agricultural land in Indiana is set each year by the Department of Local Government Finance. The Department promulgates a memo each year providing the agricultural land base rate value. That value is used throughout the State of Indiana.
- Adjusted based on detailed soil maps, aerial photography and local plat maps.
- Commercial/Industrial land devoted to agricultural use should be valued using the agricultural land assessment formula.
- To evaluate and categorize land according to productivity, measurements are calculated from the detailed soil maps published by the USDA.

Chapter 2

- Agricultural land assessment formula values farmland in part by productivity.
- The more productive land has a higher value.

Chapter 2

- Soil maps show where different soils are located.
- Soils are classified based on soil series and soil map units.
- Each soil map unit in Indiana is assigned a productivity rating.
- Soil productivity ratings in Indiana are based on corn yield estimates.

Chapter 2

- There is a wide array of soil productivity Factors in Indiana. The higher the Productivity Factor, the more productive the land type. The lower the Productivity Factor, the less productive the land type.
- Soil types and productivity of land are obtained from detailed soil maps published by the USDA.

Farm Land Q & A

- How is the base rate adjusted for high- and low-quality soils? Assessors adjust the base rate using soil productivity factors developed from soil maps published by the United State Department of Agriculture (USDA). These factors are used by local assessing officials to adjust the base rate to account for the soil's ability to produce a crop.
- Note: A parcel could have multiple soil types and multiple productivity factors. Click on the following hyperlink for further information on USDA/Natural Resources Conservation Service for soil survey.

Farm Land Q & A

- How are farms assessed?
- The agricultural land assessment formula involves the identification of agricultural tracts using detailed soil maps, aerial photography, and local plat maps. A parcel is segmented into the various soil types that it could contain and then each soil type is measured in order to determine the acreage for it. The formula is based on the productivity of each parcel's soil resources; therefore, more productive land has a higher value. A soil productivity factor is used to adjust soil types up or down. The range for productivity factors begins at .5 for the poorest soils in the state to 1.28 for the best soils. These factors are based on corn yield estimates.

Farm Land Q & A

- How are farms assessed? (Cont.)
- Once the soil types are identified and measured on a parcel, the true tax value for each soil type would be calculated by taking the acreage for that particular soil type multiplied by the adjusted rate (base rate multiplied by the productivity factor) multiplied by any applicable influence factors to arrive at the true tax value. This step would be repeated until all soil types for the parcel have been assessed. The soil type information is on the property record card for each farm and also available for the whole county at the Soil and Water Conservation office. For further reference please review the “Classification and Valuation of Agricultural Land” memo.

Farm Land Q & A

Assessment Date	Acreage Rate
January 1, 2019	$1,560
January 1, 2020	$1,280
January 1, 2021	$1,290
January 1, 2022	$1,500
January 1, 2023	$1,900

- The rate for January 1, 2024 has not been determined as of the date this material was published. The method of calculating the assessed value using the ag base rate will remain the same, with substituting the current years rate in place of the old rate.

- Except for the March 1, 2015, rate, the change in rates are based on changes in cash rent, yields, production costs, market prices and interest rates as we remove one year's data and replaced it with the current data. For 2016 and subsequent - land used for agricultural purposes shall be adjusted consistent with the guideline methodology developed for the 2012 general reassessment agricultural land value except, in determining the annual base rate, the Department of Local Government Finance ("Department") shall adjust the methodology to use the lowest five years of a six (6) year rolling average. Senate Enrolled Act 308 then requires a comparison of the preliminary Table 2-18 base rate to the prior year's final base rate in order to determine the statutory capitalization rate to be used to calculate the final base rate for this assessment date.

2015 Ag. Land Base Rate

- SEA 436-2015 introduces IC 6-1.1-4-13.2 for assessing agricultural land for March 1, 2015, assessment date

IC 6-1.1-4-13.2

Calculation of statewide agricultural land base rate value per acre for the 2015 assessment date

- Sec. 13.2. Notwithstanding the provisions of this chapter and any real property assessment guidelines of the department of local government finance, for the property tax assessment of agricultural land for the 2015 assessment date, the statewide agricultural land base rate value per acre used to determine the value of agricultural land is two thousand fifty dollars ($2,050).
- As added by P.L.249-2015, SEC.7. Amended by P.L.180-2016, SEC.4.

2016 and Subsequent Ag. Land Rate Calc.

SEA 308 – The New Calculation of the Ag Land Base Rate for January 1, 2016
IC 6-1.1-4-4.5 (e) In making the annual determination of the base rate to satisfy the requirement for an annual adjustment under subsection (c) for the January 1, 2016, assessment date and each assessment date thereafter, the department of local government finance shall determine the base rate using the methodology reflected in Table 2-18 of Book 1, Chapter 2 of the department of local government finance's Real Property Assessment Guidelines (as in effect on January 1, 2005), except that the department shall adjust the methodology as follows:

- Use a six (6) year rolling average adjusted under subdivision (3) instead of a four (4) year rolling average.
- Use the data from the six (6) most recent years preceding the year in which the assessment date occurs for which data is available, before one (1) of those six (6) years is eliminated under subdivision (3) when determining the rolling average.
- Eliminate in the calculation of the rolling average the year among the six (6) years for which the highest market value in use of agricultural land is determined.
- After determining a preliminary base rate that would apply for the assessment date without applying the adjustment under this subdivision, the department of local government finance shall adjust the preliminary base rate as follows:

2016 and Subsequent Ag. Land Rate Calculation (Cont.)

A. If the preliminary base rate for the assessment date would be at least ten percent (10%) greater than the final base rate determined for the preceding assessment date, a capitalization rate of eight percent (8%) shall be used to determine the final base rate.

B. If the preliminary base rate for the assessment date would be at least ten percent (10%) less than the final base rate determined for the preceding assessment date, a capitalization rate of six percent (6%) shall be used to determine the final base rate.

C. If neither clause (A) nor clause (B) applies, a capitalization rate of seven percent (7%) shall be used to determine the final base rate.

D. In the case of a market value in use for a year that is used in the calculation of the six (6) year rolling average under subdivision (1) for purposes of determining the base rate for the assessment date:

(i.) that market value in use shall be recalculated by using the capitalization rate determined under clauses (A) through (c)for the calculation of the base rate for the assessment date; and

(ii.) the market value in use recalculated under item (i) shall be used in the calculation of the six (6) year rolling average under subdivision (1).

Chapter 2

- Residential acreage parcels of more than one acre and not used for agricultural purposes are valued using the residential homesite base rate and the excess acreage base rate established by the township assessor, if any, otherwise the county assessor.

Chapter 2

- A land area of one acre per residential dwelling unit is assigned to agricultural parcels and residential parcels priced on an acreage basis.

Chapter 2

- Calculating Farmland values
- In order to compute the value of farmland, you need to record the information for each land area, by Soil ID and use Type 2 through Type 7.
- Then you calculate the land value for each land area.

Chapter 2

- Total the values of all the different areas listed to determine the land value.
- The next step is to record information about Type 8 and/or Type 9 land.
- To calculate the value of the farmland, you divide the Total Farmland Value by the Total Measured Acres.
- This gives you an average value that you apply to the parcel acreage

Chapter 2

- You then need to value the classified land, a homesite (if there is one on the property) and the excess acres, if any.

- These numbers are then carried to the front of the card.

Chapter 2

- Agricultural Land Types:
  - Type 2 – Classified land
  - Type 4 – Tillable land
  - Type 5 – Non-tillable land
  - Type 6 – Woodland
  - Type 7 – Other farmland
  - Type 8 – Agricultural support land
  - Type 9 - Homesite

Agricultural Land

- For this example, there is a 40 acre tract to be valued. 18.22 acres have a soil productivity factor of 0.89. 4.05 acres have a productivity factor of 0.89. 4.86 acres have a productivity factor of 0.77 and the remaining 12.87 acres have a productivity factor of 1.11.You are to arrive at the Land Value rounded to the nearest $10. All of the acres are tillable (Land Type 4). The base rate of farmland for this example is $1,900.

Agricultural Land

- On the next 2 slides we will go through the Land Data and Computations section of the property record card. First start with filling in the given information in each column. Next it is important to remember to start with taking the Productivity Factor (given) times the Base Rate (given) to get the Adjusted Rate. Then take the Adjusted Rate times the Measured Acres to get the Extended Value. Apply any Influence Factor (if applicable) and arrive at the Land Value rounded to the nearest $10.

Agricultural PRC

- LAND DATA AND COMPUTATIONS
- Below is an explanation of how the values for farmland are calculated in the Land portion of the Property Record Card. Start with filling in the given information from the problem.

Land Type	Soil I.D.	Measured Acres	Productivity Factor	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Land Value
Given in problem	Given	Given in problem	Given in problem	Given in problem	Productivity Factor X Base Rate	Adjusted Rate X Measured Acres	Given based on Land Type (only when applicable)	Extended Value less Influence Factor (if applicable)

LAND DATA AND COMPUTATIONS

Land Type	Soil I.D.	Measured Acres	Productivity Factor	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Land Value
4	BKB2	18.22	0.89	$1,900	$1,691	$30,810	1	$30,810
4	DEA	4.05	0.89	$1,900	$1,691	$6,849	1	$6,849
4	GNB2	4.86	0.77	$1,900	$1,463	$7,110	1	$7,110
4	PM	12.87	1.11	$1,900	$2,109	$27,143	1	$27,143
Supplemental Card							Supplemental Card	
Measured Acreage		40.00					LAND VALUE	**$71,910**

Parcel Acreage		40.00
81 Legal Drain NV	[-]	
82 Public Road NV	[-]	
83 UT Towers NV	[-]	
9 Homesite(s)	[-]	
92 Ag. Excess Acres	[-]	
TOTAL ACRES FARMLAND		40.00
Farmland Value		$71,910
Measured Acreage		40.00
Average Farmland Value/Acre		$1,798
VALUE OF FARMLAND		$71,910
Classified Land Total		
Total Farmland / Classified Land Value		$71,910
Homesite(s)	[+]	
92 Ag. Excess Acres	[+]	

LAND TYPE

F-Front Lot	3-Undeveloped Land	8-Ag Support Land
R-Rear Lot	4-Tillable Land	81-Legal Ditch
1-Comm/Ind Land	5-Non-Tillable Land	82-Public Road
2-Classefied Land	6-Wood Land	83-Utitlity Trans.
21-Classefied Forest	7-Other Farmland	Towers
22-Wildlife Habitat	71-Faem Buildings	9-Homesite
23-Reparian Land	72-Water	91-Res. Excess
24-Windbreak	73-Wetlands	Acres
25-Filter Strip		92-Ag. Excess Acres

Chapter 2

- Oil and gas interests are subject to assessment and taxation as real property annually by the Township Assessor, if any, otherwise the County Assessor.
- The oil or gas interest is assessed to the person who owns or operates this interest.
- The total assessed value of an oil or gas interest is calculated as follows:
- The average daily production x 365 x the posted price on the assessment date

Chapter 2

- For example, if you have an oil interest where the average daily production is 20 barrels per day, the assessed value would be:
  - 20 x 365 x $28.35 (where the $28.35 is the price on the assessment date) = $206,955 or $207,000.
  - The $207,000 assessment would then be apportioned to the owners by the percentage of interest that they have.

Chapter 2

- The Department updates the values for oil and gas and includes them in the pricing memo that is issued each year on January 1.
- Any equipment (such as the pump) is an appurtenance to the land and is assessed annually as real property to the person who owns or operates the interest.
- Cost of appurtenances per well are updated each year on January 1. A memo will be issued on or about January 1 of each year and can be found on our website. (Note: this has change from March 1 to January 1 beginning in 2016 to coincide with SEA 420).

Chapter 2

- In dealing with land, you need to understand how to read a legal description.
- Land is measured in sections (640 acres); quarter sections (160 acres); and smaller divisions (quarter quarter sections, etc.)

Chapter 2

- In order to read a legal description, you start at the far right of the description and read left, dividing by the denominator of the fraction for each division.
- For example, a legal description of NW¼ is 640 acres divided by 4 or 160 acres.

Chapter 2

- A legal description of NE¼ SE¼ would contain 40 acres (640 divided by 4 = 160; 160 divided by 4 = 40)

- A legal description of E½ NW¼ would contain 80 acres (640 divided by 4 = 160; 160 divided by 2 = 80)

Chapter 2

- Just remember to start on the far right side, read to the left and divide by the denominator of the fraction.

- How many acres would the following contain:
  - NE¼ E ½ SW¼ SW¼

Chapter 2

NE¼ E ½ SW¼ SW¼

- Work the math – Start on the far right dividing by the denominator going left:
  - 640 acres divided by 4 = 160 acres
  - 160 acres divided by 4 = 40 acres
  - 40 acres divided by 2 = 20 acres
  - 20 acres divided by 4 = 5 acres
- The parcel contains 5 acres.

Chapter 2

- Turn to Page 81 in Chapter 2 for a guide on how to locate the various quarter sections and smaller divisions.
- It is important to note from this page that there are 43,560 sq. feet in 1 Acre
- 1 Acre = 43,560 sq. ft.

Cost Approach Problems and Answers

- Please go to the Cost Approach Problem / Answer packet with audio and work Class Problems #9 - #11, Practice Problem #2 & #4 and #4(A).

Chapter 3
Residential Dwelling Units

Chapter 3

- In order to understand the process of valuing residential units, you need to understand the following concepts:
  - Measuring and calculating floor areas
  - Determining the story description
  - Categorizing a dwelling unit's garage or carport
  - Labeling the sketch of a dwelling unit

Chapter 3

- When gathering data to assess a residential dwelling you must:
  - Gather general information with the occupant's assistance, if possible
  - Gather information about the interior
  - Take the necessary measurements
  - Assess the general characteristics
  - Review the data before you leave

Chapter 3

- General information:
  - Record the address
  - Check exterior components (foundation, walls and roof)
  - Determine the age of the dwelling
  - Determine number of rooms per floor

Chapter 3

- Information about interior:
  - How many stories and how finished
  - Quality of construction
  - General condition of dwelling
  - Basement/attic – any improvements and degree of finish
  - Crawl space – determine size

Chapter 3

- Measuring:
  - Measure dwelling and sketch it on the property record card as closely as possible to the proportions.
  - Note any exterior features (deck, porch, etc.) and sketch and label.
  - Garage – what kind, if any.
  - Make sure measurements of opposite sides are equal.

Chapter 3

- Assessing the General Characteristics:
  - Establish idea of proper grade.
  - Determine the condition.
  - View dwelling from distance to get overall view.
  - Depreciation.

Chapter 3

- Story descriptions and Garage types are found in Chapter 3.
- When you record the physical characteristics of the dwelling on the property record card, use abbreviations and symbols.

Chapter 3

- Table 3-5 has Occupancy Options
- Table 3-6 has Story Height Options
- Table 3-7 has Attic Options
- Table 3-8 has Basement Options
- Table 3-9 has Crawl Space Options

Chapter 3

- The following is not in your book:
  - Exterior Wall Types:
  - (1) Frame or Equal:
    - Type 1 – Frame (wood siding) or Aluminum
    - Type 2 – Stucco (either on wood frame or masonry)
    - Type 3 – Tile
    - Type 4 – Concrete block
    - Type 5 – Metal

Chapter 3

- (2) Brick or Equal:
  - Type 6 – Concrete
  - Type 7 – Brick
  - Type 8 – Stone
  - These correspond with the construction codes contained on the property record card. They are located on the back of the card in the top left-hand corner. We will use these later when we place values on properties. They determine which column we use to get the value from Schedule A of Appendix C.

Chapter 3

- Table 3-10 contains the Mixed Frame and Masonry Wall Construction Codes
  - If a story has a mixture of similar exterior wall type materials such as frame (codes 1 through 5) or masonry (codes 6 through 8) on the sides or ends, you will use the codes from Table 3-10. Code 9 would be used for mixed frame and masonry exterior wall construction and requires a two-digit code. The second digit identifies the number of increments of masonry.
  - This relates to the + column of the pricing schedule for residential dwellings in Appendix C, Schedule A.
  - It applies to each story of a multi-story structure.
  - If the construction is a Code 9, you would need to determine how many increments of brick are in the construction.
  - Example: If a one-story dwelling has brick on both ends but none on the front or back, then there would be 2 increments of brick a.k.a. Code 92.

Chapter 3

- Table 3-11 contains the Basement Recreation Room Codes
  - Use this if there is a basement recreation room
  - Ties back to the pricing schedule (Appendix C, Schedule C)

Chapter 3

- If the dwelling has an attic:
  - If it is unfinished, use the “Unfin Attic” column and the square feet of the attic to determine the value to use.
  - If it is finished, then you need to pick up both the value for unfinished and the value in the “Attic Fin” column and add them together to determine the correct value to use.

Chapter 3

- If the dwelling has a basement:
  - If it is unfinished, use the “Unfin Bsmt” column and the square feet of the basement to determine the value to use.
  - If it is finished, then you need to pick up both the value for unfinished and the value in the “Bsmt Fin” column and add them together to determine the correct value to use.

Chapter 3

- A basement containing finish consistent with the remainder of the dwelling is considered as a finished basement. This is normally defined as basement living quarter.

- An area having finish inconsistent with the remainder of the dwelling is considered as a basement recreation room.

Chapter 3

- If the dwelling has a crawl space, use the square footage of the space and the “Crawl” column to determine the value to use.

Chapter 3

- Interior Features:
  - Schedules C (Appendix C), D (Appendix C) and E.1 (Appendix C)
  - Schedule C contains:
    - Deductions for unfinished interior, no central heating and no electricity.
    - Additions for central air conditioning, basement recreation rooms and lofts.

Chapter 3

- If the dwelling has an unfinished interior, use Schedule C to determine the appropriate deduction.
  - This deduction includes an adjustment for heating, so you do not need to make any additional adjustment.

Chapter 3

- If there is no central heating system, use Schedule C to determine the appropriate deduction.
- If there is no electrical service, use Schedule C to determine the appropriate deduction.

Chapter 3

- If there is a central air conditioning system, use Schedule C to determine the appropriate addition.

- If there is a basement recreation room, use Schedule C to determine the appropriate addition, based on the type.

Chapter 3

- If the dwelling has a loft, use Schedule C to determine the appropriate addition.

- If the dwelling does not have plumbing, has water service only, or has fewer than five plumbing fixtures, use Schedule D to determine the appropriate deduction.

Chapter 3

- Schedule D (Appendix C) contains:
  - Additions or deductions for plumbing features and fixtures
- If the dwelling contains specialty plumbing fixtures (sauna bath, steam bath, whirlpool, or a bathtub with jet or steam conversion) use Schedule D to determine the appropriate addition.

Chapter 3

- Schedule E.1 (Appendix C) contains:
  - Fireplaces – either masonry or prefab steel
- If there are fireplaces, use Schedule E.1 to determine the appropriate addition, based on the type of fireplace and the number of openings.

Chapter 3

- Exterior Features:
  - Priced from Schedule E.2 (Appendix C)
  - Exterior Features include:
    - Patios, canopies, stoops, porches, bay windows, decks, balconies, etc.
  - Based on square footage.

Chapter 3

- Exterior Features:
  - If the dwelling has an attached, basement or integral garage or an attached carport, use Schedule E.2 (Appendix C) – Garages and Carports to determine the appropriate addition or deduction.

Chapter 3

- Detached garages and carports are considered residential yard structures and are valued in the “Summary of Improvements” section of the property record card. (Appendix C)

Chapter 3

- Assign the appropriate grade and grade factor percentage to the dwelling unit (Table A-2 in Appendix A, or Schedule F Appendix C)

- Assign the appropriate location multiplier to the dwelling (Table C-1, Appendix C)

Chapter 3

- Table 3-12 (Chapter 3) explains the Condition Ratings
- If you have solar heating and cooling systems or geothermal heating and cooling systems, consult Chapter 3 for an explanation on how to collect the data and how they are valued.

Chapter 3

- Schedule G.1 in Appendix C lists cost information for many residential yard improvements.
- Items such as utility sheds, tennis courts, and other yard items.
- Schedule G.2 in Appendix C lists cost information for agricultural yard improvements.
- Note: we will not be pricing agricultural yard improvements in this class.

Chapter 4
Mobile and Manufactured Homes

Chapter 4

- The mobile home assessment date for the pay-2016 tax cycle was January 15.
- SEA 420 changed the mobile home assessment date to January 1 effective starting with the pay-2017 tax cycle.

Chapter 4

- Annually Assessed Mobile Home:
- A mobile home that has a certificate of title issued by the bureau of motor vehicles under IC 9-17-6; and is not on a permanent foundation.

- 50 IAC 3.3-2-2Authority: IC 6-1.1-7-2; IC 6-1.1-31-1Affected: IC 6-1.1-7; IC 9-17-6 (Department of Local Government Finance; 50 IAC 3.3-2-2; filed Aug 15, 2007, 10:12 a.m.: 20070912-IR-050060560FRA; filed Jan 12, 2012, 10:45 a.m.: 20120208-IR-050110567FRA)

Chapter 4

- Certificate of Title Requirement:
- A person who owns a manufactured home that is:(1) personal property not held for resale; or(2) not attached to real estate by a permanent foundation; shall obtain a certificate of title for the manufactured home.

- As added by P.L.2-1991, SEC.5. Amended by P.L.106-2007, SEC.1.

Chapter 4

- Mobile Home
- (1)a “dwelling” as defined in IC 6-1.1-7-1(b)
- (2)a “manufactured home” as defined in IC 9-13-2-96
- “Mobile home" means a dwelling which:(1) is factory assembled;(2) is transportable;(3) is intended for year around occupancy;(4) exceeds thirty-five (35) feet in length; and(5) is designed either for transportation on its own chassis or placement on a temporary foundation.

- (Formerly: Acts 1975, P.L.47, SEC.1.)Mobile Home Defined IC 6-1.1-7-1(b)8

Chapter 4

- "Manufactured home" means, except as provided in subsection (b), a structure that:(1) is assembled in a factory; (2) bears a seal certifying that it was built in compliance with the federal manufactured housing construction and safety standards law (42 U.S.C. 5401 et seq.);(3) is designed to be transported from the factory to another site in one (1) or more units;(4) is suitable for use as a dwelling in any season; and(5) is more than thirty-five (35) feet long.
- (b) "Manufactured home", for purposes of IC 9-17-6, means a structure having the meaning set forth in the federal manufactured Housing Construction and Safety Standards Law of 1974 (42 U.S.C. 5401 et seq.).
- As added by P.L.2-1991, SEC.1. Amended by P.L.106-2003, SEC.1.

Chapter 4

- Permanent Foundation
- Any structural system capable of transposing loads from a structure to the earth at a depth below the established frost line.
- Real Property Mobile Home: A mobile home that has an affidavit of transfer to real estate recorded by the county recorder under IC 9-17-6-15.5; or has a certificate of title issued by the bureau of motor vehicles under IC 9-17-6 and is attached to a permanent foundation.

Chapter 4

- Application of Transfer to Real Estate:

1. Manufactured home is attached to real estate by a permanent foundation.
2. Affidavit of transfer to real estate and the retired certificate of title, if available, is filed with the county recorder's office.
3. Manufactured home deemed an improvement upon the real estate upon which it is located.

Chapter 4

- (b) A mobile home shall be assessed as real property under the Department of Local Government Finance Real Property Assessment Rules in effect on January 1, (starting with the 2016 assessment date, March 1 prior) using residential cost Schedule A found in the Department of Local Government Finance's Real Property Assessment Guideline, if the mobile home meets the definition given in 50 IAC 3.3-2-4.

Chapter 5
Residential and Agricultural Yard Structures

Chapter 5

- Examples of both residential and agricultural yard structures can be found in Chapter 5.
- Pricing is done in the “Summary of Non-Residential Improvements” section of the property record card.
- If there is no attached Garage, the detached Garage if there is one, would be priced in “Summary of Residential Improvements” section of the property record card.

Chapter 5

- Table 5-1 contains the Condition Ratings for Yard Improvements
- Yard structures do receive a location multiplier.
- Cost schedules provide either whole dollar or square foot unit values.

Chapter 5

- Rates, unless otherwise specified, apply to detached, free-standing structures.
- Make sure to read the schedules thoroughly, especially any notes that appear at the end of the schedules.

Appendix A
Residential and Agricultural

Appendix A

- For each of the types of improvements (dwelling units and residential and agricultural yard improvements), a model has been defined to summarize the elements of construction quality that are typical of the majority of that type improvement.
- Assigned a “C” quality grade for residences - these models can be thought of as construction specifications built with average quality materials and workmanship.

Appendix A

- The replacement cost of an improvement is calculated by taking the base price, adjusting for various construction elements that add or deduct value, and then multiplying this adjusted cost by a percentage based on the improvement's grade. This percentage is known as the Quality Grade Factor.

Appendix A

- An intermediate quality grade is used when construction characteristics deviate from the base quality grade specifications.
- An intermediate grade can be assigned to all types of agricultural and residential improvements. To assign these, the assessing official must weigh the components that deviate from the base quality grade to determine if an intermediate grade is appropriate.
- Intermediate grade is +2, +1, -1 (e.g., B+1)

Appendix A

- Table A-2 is the Quality Grade Factors for Dwelling Units.
- Table A-3 is the Quality Grade Specifications for Dwelling Units.

Appendix B
Residential and Agricultural Depreciation

Appendix B

- Depreciation is defined as the loss in value that an improvement on a parcel of real property suffers, from a variety of causes.

- Physical Deterioration refers to the wear and tear that an improvement suffers from its regular use.

Appendix B

- Functional obsolescence loss is caused by some type of inutility within the structure and materials or design that diminishes the ability of the structure to perform the function for which it was constructed and/or might be used.

Appendix B

- External obsolescence typically is impairment in the utility or salability of the structure due to negative influences that occur outside the property.

Appendix B

- The determination of depreciation must consider:
  - The chronological age of the structure.
  - The effective age of the structure.
  - The quality of the materials, workmanship and design used in the construction of the structure.
  - The condition rating of the structure.
  - The neighborhood factor.

Appendix B

- For the valuation of real property in Indiana, the condition rating will reflect the effective age of the structure.

- Table B-1 contains the Residential Condition Ratings (other than yard structures)

Appendix B

- Table B-2 (page 10) contains the Residential Depreciation Chart – Quality Grade “AAA” “AA” “A” and “B”
- Table B-3 (page 11)contains the Residential Depreciation Chart – Quality Grade “C”
- Table B-4 (page 12)contains the Residential Depreciation Chart – Quality Grade “D” “E”

Appendix B

- When looking at the Depreciation tables it is important to verify you are looking at the correct Quality Grade chart for the improvement being valued.
- * Highlighting the Quality Grade at the top of the chart is a good reminder.
- Turn to pg. 10 of Appendix B. For example, if the improvement to be valued was built in 2000 in Average condition with a Quality Grade of B+1 our Depreciation would be 19%.
- On the Residential Depreciation Chart go down the “Actual Age” column to the age of the improvement, then go over the “Condition Rating” for the improvement condition. Where the two columns meet is the amount of depreciation that will be applied.
- Again, BE SURE the Residential Depreciation Chart is the correct Quality Grade for the improvement.

Appendix B

- Example from prior slide, if the improvement to be valued was built in 2000 in Average condition with a Quality Grade of B+1 our Depreciation would be 19%.

Table B-2.—Residential Depreciation Chart- Quality Grade "AAA" "AA" "A" "B"

RESIDENTIAL DEPRECIATION CHART - QUALITY GRADE "AAA" "AA" "A" "B"						
ACTUAL AGE	CONDITION RATING					
	Very Poor	Poor	Fair	Average	Good	Excellent
1	95	3	2	1	1	1
2	95	4	2	2	1	1
3	95	5	3	2	2	2
4	95	6	3	3	2	2
5	95	7	4	3	3	3
6	95	8	5	4	3	3
7	95	9	6	5	4	4
8	95	10	7	6	5	4
9	95	11	8	7	6	5
10	95	12	9	8	7	5
11	95	13	10	9	7	6
12	95	14	11	10	8	6
13	95	15	12	11	9	7
14	95	16	13	12	9	7
15	95	17	14	13	10	8
16	95	18	15	14	11	8
17	95	20	16	15	12	9
18	95	21	17	16	12	9
19	95	22	18	16	13	10
20	95	25	20	17	14	11
21-25	95	26	22	19	15	12
26-30	95	28	24	22	17	13
31-35	95	30	26	24	19	14
36-40	95	34	28	26	20	15
41-45	95	38	30	28	22	16
46-50	95	40	35	30	24	17
51-60	95	45	40	35	25	18
61-70	95	48	43	38	28	19
Over 70	95	50	45	40	30	20

Appendix B

- For Residential/Agricultural Yard Structures:
  - You must first determine the correct depreciation table to use, based on life expectancy of the structure.
  - Table B-5 (Determining the Depreciation Table for Yard Structures) contains the information you need.

Appendix B

- Table B-6 the Condition Ratings for Yard Structures
  - Sound value applies to agricultural improvements only
- Table B-7 – 20 Year Life Expectancy
- Table B-8 – 30 Year Life Expectancy
- Table B-9 – 40 Year Life Expectancy
- Table B-10 is the depreciation table for Above Ground Swimming Pools
- Table B-11 is the depreciation table for In-Ground Swimming Pools and Pool Enclosures

Appendix C
Cost Schedules

Appendix C

- Now, using the information we have discussed, and the cost schedules in Appendix C, we are going to spend the rest of the time working problems related to the valuation of residential property and yard structures. We are also going to figure the square footage of areas, so you are familiar with how to do that. One other item I need to mention before we proceed is the percentage of completion schedule.

Appendix C

- The percentage of completion schedule is in Appendix C in Schedule A.1. This schedule is used if the structure is not complete on January 1. You would need to view the structure on January 1 and determine to what step the structure is complete. For example: say you believe the structure to be complete to the point of getting ready to start on the exterior. You would add up the percentages prior to that step and arrive at a total percent of 56%. You would apply this percentage to the remainder value on the property record card in the summary of residential improvements section. The remainder value is the value left after applying depreciation against the replacement cost new that we have arrived at from our pricing schedules.

Percentage of Completion

- Appendix C, page 5

PERCENTAGE OF COMPLETION

The following is a guideline for estimating the percent completion for a typical, average-quality, single-family residence.

Excavation, forms, water/sewage hook up, and concrete	14%
Rough framing	21%
Windows, exterior door, and floor cover	5%
Rough-in plumbing, insulation, and electrical service	16%
Exterior	6%
Interior drywall and ceiling finish	8%
Built-in cabinets, interior doors, trim, etc.	13%
Plumbing fixtures	5%
Floor covers and built-in appliances	6%
Light fixtures, painting, and decorating	6%
TOTAL	100%

Walking Through the PRC

- The Property Record Card contains three different sections: Cost Ladder, Summary of Residential Improvements, and Summary of Non-Residential Improvements.
- The Cost Ladder is used to calculate the Replacement Cost New (RCN) of the dwelling (including exterior features).
- The Summary of Residential Improvements is used to calculate the Remainder Value of the dwelling (value after depreciation) then the Improvement Value (final value after obsolescence, complete %, and neighborhood factor applied).
- The Summary of Non-Residential Improvements is used for any yard items that are not connected to the dwelling or are not a part of the Homestead Deduction (for tax caps purposes).

Cost Ladder

- The Cost Ladder is broken up into three pieces: The Base Price section, the Adjustments section, and the Multipliers section.
- First you find the base prices for each floor, then you adjust for items (such as air conditioning, extra plumbing fixtures, etc.) that are not included in the base price, then multiply by your Quality Grade and Location Multiplier.
- The Cost Ladder must be done in this order; a good way to remember the three sections is using the acronym B.A.M.
- Once the Cost Ladder is finished, you then have your Replacement Cost New (RCN).

B.A.M. – Base Prices

- Base prices are what it would cost to construct the dwelling in a specific circumstance. The base prices account for a C grade dwelling with a full bathroom, water heater, and kitchen sink. The cost schedule also factors in central heat.
- This section is also used to account for any basement or attic finishing.
- The goal is to add all the base prices together to find the total base and subtotal for the next section.
- These costs can be found in Appendix C, Pages 2 – 4.
- All these costs are in hundreds of dollars.

B.A.M. - Adjustments

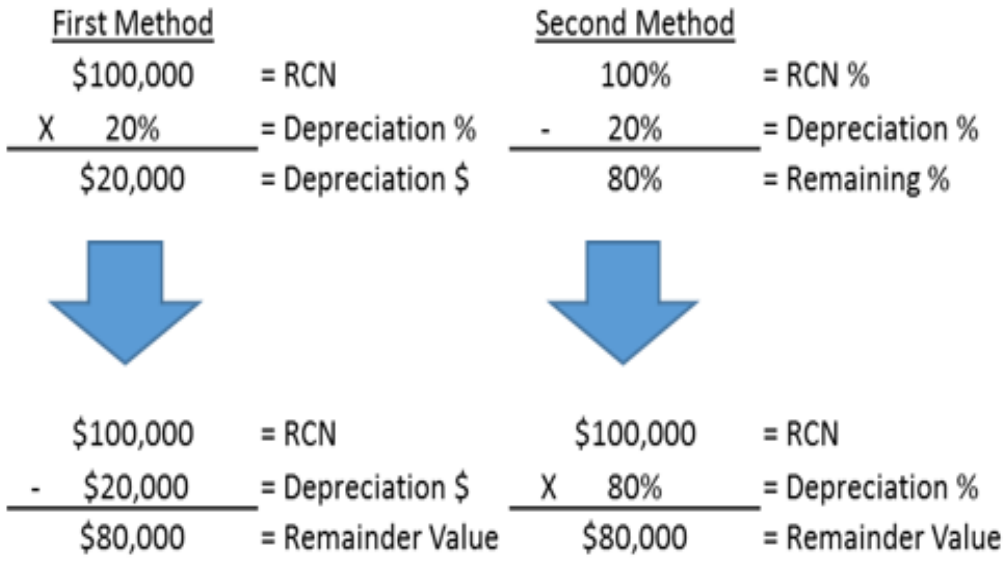
- After the base prices are calculated and totaled, the next step in BAM is the Adjustment section.
- Adjustments are made to include real property items that are not included in the base price.
- Items such as central air conditioning, fireplaces, and others.
- Not all adjustments are positive; sometimes a deduction needs to made for something unfinished or something absent from the dwelling that is included in the base price
- These adjustments are made to the subtotal from the Base Price section.
- These costs can be found in Appendix C, Pages 6 – 9.

B.A.M. - Multipliers

- After adding/subtracting the adjustments, the final step in BAM is the Multipliers.
- The subtotal is adjusted by first multiplying the Quality Grade Factor and then multiplying by the Location Modifier (LCM).
- The Quality Grade Factor is based on the quality of craftsmanship within the dwelling. The factor is represented as a percentage based on a letter grade system (Appendix C - Schedule F). The Quality Grade factor can be found in Schedule F on page 9.
- Once the Quality Grade Factor is applied then the LCM is applied.
- The LCM represents the different costs (labor, materials, and equipment) around the State for the construction of the dwelling (e.g. you would not expect the building costs in Lake County to be the same costs as Wabash County). This can be found on page 23 in Appendix C.
- After applying the factors to the subtotal after adjustments, the end result is the Replacement Cost New (RCN) which concludes the Cost Ladder.

Summary of Residential Improvements

- Once the RCN is calculated, that value is transferred over to the Replacement Cost column for the dwelling.
- The depreciation is then subtracted from the RCN to find the Remainder Value. This is done by multiplying the depreciation percentage times the RCN; this equals the depreciation dollar amount which is subtracted from the RCN. Another method is simply multiplying the remaining value in the dwelling times the RCN (e.g. a dwelling that is 20% depreciated has the RCN multiplied by 80% because there is still 80% of RCN value left in the dwelling [Remainder Value]).
- Finally, the Remainder Value is multiplied by any obsolescence percentage, incomplete percentage, and/or Neighborhood Factors; this calculates the Improvement Value. Note: Obsolescence and incomplete percentage multipliers are calculated the same way as depreciation.



Summary of Non-Residential Improvements

- As stated earlier, the Summary of Non-Residential Improvements are yard items that are not attached to the dwelling or are not included in the Homestead Deduction (exterior features and attached garages are included in the Cost Ladder calculations).
- Yard items such as utility sheds, barns, and detached garages (however if there is no attached garage, a detached garage can be included on the Summary of Residential Improvements).
- RCN is usually calculated using an adjusted base rate times the square footage. Note: the base rate column on the PRC is the base price found in the cost schedules multiplied by the Quality Grade Factor.
- Improvement Value is calculated similarly to the dwelling (RCN minus depreciation = Remainder Value then adjust for obsolescence, partially complete, and/or Neighborhood factors)
- Costs can be found in Appendix C, pages 10-21.

Let's do an example

- The next slides will show how to walk through a PRC step-by-step.
- You are given the following information about a property:

- A property in Jasper County has a one-story frame dwelling of 1,500 square feet. The dwelling has a masonry fireplace with one opening, central air conditioning throughout, and three full bathrooms. It has a basement with the same square footage as the first story. The dwelling also has an attached frame garage of 600 sq. ft., a wood deck that is 350 sq. ft., and an 80 sq. ft. masonry stoop. The dwelling was built in 2005, is a Grade B-1, and in average condition. Finally, the dwelling also has a frame utility shed of 80 sq. ft. which was built in 2012, in average condition, and a Grade C. What is the total improvement value?

IMPROVEMENT DATA AMD COMPUTATIONS

HOUSE

Occupancy	Story Height	Attic	Bsmt Crawl
1 Single Family	[ ] -	0 None	0 None 0
2 Duplex	2 Bi-level	1 Unfinished	1 1/4 1
3 Triplex	3 Tri-level	2 1/2 Finished	2 1/2 2
4 4-6 Family		3 3/4 Finished	3 3/4 3
5 M. Home 0		4 Finished	4 Full 4

Construction	Base Area	Floor	Finished Living Area	Value
1 Frame or Aluminum				
2 Stucco				
3 Tile				
4 Concrete Block				
5 Metal				
6 Concrete				
7 Brick --		Attic		
8 Stone --				
9 Frame w/Masonry --		Crawl	-----	

Asphalt Shingles	
Slate or Tile	
Metal	
Floors B 1	
Earth	
Slab	
Sub & Joist	
Wood	
Parquet	
Tile	
Carpet	
Unfinished	
Interior Finish B 1	
Plaster or Dry Wall	
Paneling	
Fiberboard	
Earth	
Unfinished	
No Electrical	
Accommodations	
Total Number of Rooms	
Bedrooms	
Family Room	
Formal Dining Room	
Loft Area	
Rec. Room Type	
Rec. Room Area	
Fire Place Stacks	
Masonry Metal Openings	

TOTAL BASE	$0
Row-type Adjustment	100%
SUB-TOTAL	$0
Unfinished interior [-]	
Extra Living Units [+]	
Rec. Room [+]	
Loft [+]	
Fireplace [+]	
No Heating [+]	
Air Conditioning [+]	
No Electric [+]	
Plumbing 5 - 5 = 0 X 800	
No Plumbing [+]	
Specialty Plumbing [+]	
SUB-TOTAL ONE UNIT	
SUB-TOTAL UNITS	
Garages	
Integral [-]	
Attached Garage [+]	
Attached Carport [+]	
Basement [+]	
Exterior Features	
SUB-TOTAL	$0
Grade and Design Factor	
ADJUSTED SUB-TOTAL	$0
Location Multiplier	
Replacement Cost	0

Heat & Air Conditioning		Plumbing	TF
Central Warm Air		Full Bath	
Hot Water or Steam		Half Baths	
Heat Pump		Kitchen Sink	
NO HEAT Gravity,Wall,Space		Water Heater	
Central Air Cond.		Extra Fixture	
Extra Living Unit	Conversion #	TOTAL	0
	Designed #	No Plumbing	

IMPROVEMENT FEATURES

Major Items	Agricultural
C Concrete Floor	Barns
D Dirt floor	T/S/L/P/E/I/D/Q
E Electric Lights	Open Side
G Grade	Confinement
H Heating	T/P/E/C/I
I Insulation	Slatted Floors
L Loft	Pits
P Plumbing	Corn Crib
Q Living Quarters	T
S Stalls	Frame/Wire
T Type of Const.	Free standing
	Drive-thru
Residential	No Roof
BOAT HOUSE T/G/D/Q	Floor
Open Side	GRANARIES
CAR SHED T/G/D	L
Open/Enclosed	Storage Bins
Back-To-Back	Pole Type
Stall Walls	GRAIN BINS
DETACH GARAGE T/G/D/L/Q	Diameter & Height
GREENHOUSE G	or Bushel Capacity
Free Standing	QUONSET BUILDING
Attached at End	E/I/H
Lean-to	Floor:Asph/Conc
STABLES T/G/D/L	SLURRY TANKS
SWIMMING POOL T	In/above ground
Underwater Lighting	Round/Rectangle
Tile: Ceramic/Plastic	Plank / No Cover
Filter	SILO
Heater	Concrete:
Non-Rect.Shape	Conc.Stave/Reinf'd
Concrete Apron	Masonry:
Enclosure Type	Tile/Conc.. Blk/Brick
TENNIS COURT Clay/Sod/Asphalt	Steel:
UTILITY SHED T/G	Unlined/Glass Lined
	No Roof
	TRENCH AND BUNKER
	SILO
	Depth
	Width

SUMMARY OF RESIDENTIAL IMPROVEMENTS

ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01													$0	11%	$0		1.00	$0
02																		
03																		
04																		
05																		
06																		
07																		

Supplemental Card Residential Improvement Total

Total Residential Improvement Value $0

SUMMARY OF NON-RESIDENTIAL IMPROVEMENTS

ID	Use	Story Hgt	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01																		$0
02																		
03																		
04																		
05																		
06																		
07																		

Data Collector / Date

Appraiser / Date

Supplemental Card Non-Residential Improvement Total

Total Non-Residential Improvement Value $0

Base Prices

- Turn to Schedule A in Appendix C (Page 2). This is the Dwelling Base Prices (in hundreds of dollars). Add “00” to the end of the number(s) shown, 245 = 24,500.
- Note the columns in this schedule. There are different columns for the First Floor, Half Upper Story, (+/- 1), Full Upper Story (2nd floor), Unfin Attic, Attic Fin, Unfin Bsmt, Crawl and Bsmt Fin.
- As a reminder, the column for 1 – 5 is for Frame / Mixed Frame construction. The “+” column is to add per increment(s) of brick (mixed frame). The 6 – 8 column is for masonry (brick, stone etc.)

Appendix C **Residential and Agricultural Cost Schedules**

SCHEDULE A

Dwelling Base Prices (in hundreds of dollars) **100 to 5000**

	First Floor			Half Upper Story			(+/- 1)		Full Upper Story			Unfin	Attic	Unfin		Bsmt
Area	1 - 5	+	6 - 8	1 - 5	+	6 - 8	1 - 5	6 - 8	1 - 5	+	6 - 8	Attic	Fin	Bsmt	Crawl	Fin
100	264	5	292	99	0	99	20	38	139	6	175	33	19	132	26	66
125	278	5	308	105	0	105	21	39	147	6	184	34	22	135	27	73
150	293	6	324	112	0	112	22	41	155	6	193	35	24	138	28	79
175	307	6	340	118	0	118	22	42	163	7	202	36	27	141	30	86

Base Prices

** Note under Construction the numbers 1 – 9 coincide with the Base Price columns from Schedule A. 1-5 is frame or equal and 6-8 are masonry*

Construction		Base Area	Floor	Finished Living Area	Value
1 Frame or Aluminum	1	1,500	1	1,500	$101,900
2 Stucco					
3 Tile					
4 Concrete Block					
5 Metal					
6 Concrete					
7 Brick	--		Attic		
8 Stone	--	1,500	Bsmt.	0	$34,200
9 Frame w/Masonry	--		Crawl	-----	
Roofing		TOTAL BASE			$136,100
Asphalt Shingles		Row-type Adjustment			100%
Slate or Tile					
				SUB-TOTAL	$136,100
Metal					
Floors	B 1		Unfinished interior [-]		
Earth					

- 1,500 sq. ft. for both the one story and the basement.
- Use the square footage and Appendix C – Schedule A to find the values for each of the floors.
- Add both together to find the total base and subtotal (Note: we will always assume the Row-type adjustment is 100% in this class, so no adjustment needs to be made).

Adjustments

	SUB-TOTAL	$136,100
	Unfinished interior [-]	
	Extra Living Units [+]	
	Rec. Room [+]	
	Loft [+]	
M/1	Fireplace [+]	$4,500
	No Heating **[+]**	
Full	Air Conditioning [+]	$3,600
	No Electric [+]	
Plumbing 11 - 5 = 6 X 800		$4,800
No Plumbing [+]		
Specialty Plumbing [+]		
SUB-TOTAL, ONE UNIT		
SUB-TOTAL UNITS		
Garages		
Integral [-]		
Attached Garage [+]		$18,600
Attached Carport [+]		
Basement [+]		
Exterior Features		$7,500
	SUB-TOTAL	$175,100

- The dwelling has a masonry fireplace with one opening. This is found in Appendix C – Schedule E.1.
- The dwelling also has central air conditioning. This is found in Appendix C – Schedule C under the Add Central Air Conditioning columns.
- The description also listed that there are three full bathrooms so there will be extra fixtures that will need adjustments. Remember, each full bathroom has three fixtures and the Base Price already includes one full bath.
- 600 sq. ft. Attached Frame Garage. This is found in Appendix C – Schedule E.2.
- There are two exterior features (80 sq. ft. Stoop and 350 sq. ft. Wood Deck). The values for exterior features are found in Appendix C – Schedule E.2

Multipliers

SUB-TOTAL	$175,100
Grade and Design Factor	115%
ADJUSTED SUB-TOTAL	$201,370
Location Multiplier	95%
Replacement Cost	$191,300

- The next step is multiplying the Sub-Total by the Quality Grade Factor.
- The description indicated that this is a B-1 dwelling. Use Appendix C – Schedule F to find the percentage to be multiplied with the subtotal.
- After adjusting for the grade, the LCM must be applied to the adjusted subtotal (multiply the Adjusted Sub-Total by the LCM). Use Appendix C – Page 23 to find the LCM percentage for the county given in the problem.
- The Adjusted Sub-Total and RCN are both rounded to the nearest $10.

Finding the Remainder Value and Improvement Value

- The RCN from the Cost Ladder is transferred over to the Replacement Cost column for the Summary of Residential Improvements.
- Depreciation is then calculated and subtracted from the RCN which equals the Remainder Value. The depreciation is calculated by multiplying the depreciation percentage times the RCN to get the depreciation dollar amount; this is then subtracted from the RCN to get the Remainder Value. The depreciation for the dwelling can be found in Appendix B – Page 10 “B” Grade chart.
- The Remainder Value is then multiplied by the Neighborhood Factor. Note: there was no obsolescence or percent complete adjustments that needed to be made.
- The Remainder Value is rounded to the nearest $10, and the Improvement Value is rounded to the nearest $100.

SUMMARY OF RESIDENTIAL IMPROVEMENTS

ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01	**Dwelling**	**1.0**	**Frame**	**B-1**		**19**	**Avg**						**$191,300**	**16%**	**$160,690**		**1.00**	**$160,700**

One Last Thing…

- The description indicated that the property also has a 80 sq. ft. utility shed.
- To find the base rate, multiply the price per square foot in the cost schedule (Appendix C – Schedule G.1 Page 12) by the Quality Grade Factor (Appendix C – Schedule F).
- Then multiply by the LCM to get the adjusted base rate; this is then multiplied by the square footage which gives you the RCN.
- To find the improvement value, follow the same steps as you would with the dwelling (depreciation, Neighborhood Factor etc.)
- However, yard improvements have a different depreciation schedule.
- This is determined by the life expectancy of the improvement.
- Find the life expectancy of the improvement (Appendix B, pages 13-14) and use that particular life expectancy's depreciation schedule. These can be found in Appendix B, pages 17-18.

SUMMARY OF RESIDENTIAL IMPROVEMENTS

ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01	**Dwelling**	**1.0**	**Frame**	**B-1**		**19**	**Avg**						**$191,300**	**16%**	**$160,690**		**1.00**	**$160,700**
02	Utility Shed	1.0	Frame	C		12	Avg	$26.02		**0.95**	**$24.72**	**80**	**$1,980**	**35%**	**$1,290**		**1.00**	**$1,300**

Finishing Up….

- Add both the improvement value for the dwelling and the improvement value for the utility shed to get the final answer of $162,000.

IMPROVEMENT DATA AMD COMPUTATIONS

Occupancy		Story Height	Attic	Bsmt Crawl
1 Single Family		[ ] -	0 None	0 None 0
2 Duplex		2 Bi-level	1 Unfinished	1 1/4 1
3 Triplex			2 1/2 Finished	2 1/2 2
4 4-6 Family		3 Tri-level	3 3/4 Finished	3 3/4 3
5 M. Home	0 Row-type		4 Finished	4 Full 4

Construction		Base Area	Floor	Finished Living Area	Value
1 Frame or Aluminum	1	1,500	1.0	1,500	$101,900
2 Stucco					
3 Tile					
4 Concrete Block					
5 Metal					
6 Concrete					
7 Brick	--		Attic		
8 Stone	--	1,500	Bsmt.	0	$34,200
9 Frame w/Masonry	--		Crawl	-----	

Roofing				TOTAL BASE				$136,100
Asphalt Shingles				Row-type Adjustment				100%
Slate or Tile				SUB-TOTAL				$136,100
Metal				Unfinished interior [-]				
Floors	B	1	2	Extra Living Units [+]				
Earth				Rec. Room [+]				
Slab				Loft [+]				
Sub & Joist				M/1 Fireplace [+]				$4,500
Wood				No Heating [+]				
Parquet				Full Air Conditioning [+]				$3,600
Tile				No Electric [+]				
Carpet				Plumbing TF 11-5 = 9 X $800				$4,800
Unfinished				No Plumbing [+]				
Interior Finish	B	1	2	Specialty Plumbing [+]				
Plaster or Dry Wall				SUB-TOTAL, ONE UNIT				
Paneling				SUB-TOTAL ____ UNITS				
Fiberboard				Garages				
Earth				Integral [-]				
				Attached Garage [+]				$18,600
Unfinished				Attached Carport [+]				
No Electrical				Basement [+]				
Accommodations				Exterior Features				$7,500
Total Number of Rooms				SUB-TOTAL				$175,100
Bedrooms				Grade and Design Factor				115%
Family Room				ADJUSTED SUB-TOTAL				$201,370
Formal Dining Room				Location Multiplier				95%
				Replacement Cost				$191,300

Heat & Air Conditioning		Plumbing	#	TF		
Central Warm Air		Full Bath	3	9		
Hot Water or Steam		Half Baths				
Heat Pump		Kitchen Sink	1	1		
NO HEAT		Water Heater	1	1		
Gravity,Wall,Space		Extra Fixture				
Central Air Cond.		TOTAL		11		

Loft Area					
Rec. Room	Type				
	Area				
Fire Place	Stacks				
Masonry	Openings				
Metal					

Extra Living Unit: Conversion # / Designed #

No Plumbing

IMPROVEMENT FEATURES

Major Items	Agricultural
C Concrete Floor	Barns
D Dirt floor	T/S/L/P/E/I/D/Q
E Electric Lights	Open Side
G Grade	Confinement
H Heating	T/P/E/C/I
I Insulation	Slatted Floors
L Loft	Pits
P Plumbing	Corn Crib
Q Living Quarters	T
S Stalls	Frame/Wire
T Type of Const.	Free standing
	Drive-thru
Residential	No Roof
BOAT HOUSE	Floor
T/G/D/Q	GRANARIES
Open Side	L
CAR SHED	Storage Bins
T/G/D	Pole Type
Open/Enclosed	GRAIN BINS
Back-To-Back	Diameter & Height
Stall Walls	or Bushel Capacity
DETACH GARAGE	QUONSET BUILDING
T/G/D/L/Q	E/I/H
GREENHOUSE	Floor:Asph/Conc
G	SLURRY TANKS
Free Standing	In/above ground
Attached at End	Round/Rectangle
Lean-to	Plank / No Cover
STABLES	SILO
T/G/D/L	Concrete:
SWIMMING POOL	Conc.Stave/Reinf'd
T	Masonry:
Underwater Lighting	Tile/Conc.. Blk/Brick
Tile: Ceramic/Plastic	Steel:
Filter	Unlined/Glass Lined
Heater	No Roof
Non-Rect.Shape	TRENCH AND BUNKER
Concrete Apron	SILO
Enclosure Type	Depth
TENNIS COURT	Width
Clay/Sod/Asphalt	
UTILITY SHED	
T/G	

SUMMARY OF RESIDENTIAL IMPROVEMENTS

ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01	Dwelling	1.0	Frame	B-1		19	Avg						$191,300	16%	$160,690		1.00	$160,700
02	Utility Shed	1.0	Frame	C		12	Avg	$26.02		0.95	$24.72	80	$1,980	35%	$1,290		1.00	$1,300
03																		
04																		
05																		
06																		
07																		

Supplemental Card Residential Improvement Total

Total Residential Improvement Value $162,000

SUMMARY OF NON-RESIDENTIAL IMPROVEMENTS

ID	Use	Story Hgt.	Const. Type	Grade	Year Const.	Eff Age	Cond.	Base Rate	Features	L / M	Adj. Rate	Size or Area	Replacement Cost	Total Depr.	Remainder Value	% Comp	Nhbd Factor	Improvement Value
01																		
02																		
03																		
04																		
05																		
06																		
07																		

Data Collector / Date

Appraiser / Date

Supplemental Card Non-Residential Improvement Total

Total Non-Residential Improvement Value $0

Cost Approach Problems and Answers

- Please go to the Cost Approach Problem / Answer packet with audio and work the remainder of the practice problems for the Cost Approach (You should work Practice Problem #6 {both parts} to finish Cost Approach Problem/Answer #2).

- These problems will be important to understand how to do. It is suggested to mark them as reference and be familiar with where the information is located and how to make the calculations.

Level I Cost Approach

- This concludes the cost approach tutorial and is a reminder that should you have questions you can email these questions to the Department.

- Please send emails to Level1@dlgf.in.gov.