Section 1
Land Valuation Process
LAND VALUATION PROCESS

Overview

Accurate land values are crucial to an effective assessment system. They contribute to the accuracy of appraisals of improved parcels and ensure that landowners pay only their fair share of taxes. Accurate land values promote well-informed land use decisions by both the public and private sectors.

Physically, land may be defined as the surface of the earth together with everything beneath and above. The shape of a parcel is like a three dimensional pyramid, with its apex at the center of the earth, extending upward through the surface into space. Legally, land is the right to enjoy, use, and dispose of this physical space, subject to the limitations imposed by government. The assessor first identifies, lists, and values all land and improvements thereto. This task requires the use of cadastral maps showing boundaries and other features. Second, an accurate inventory of land data, including: location, ownership, classification and use, size, shape, and physical characteristics must be maintained. The assessor analyzes the local market and estimates the assessment value.
COMPUTER ASSISTED LAND PRICING (CALP)

Objectives of CALP

The purpose of this section is to provide a clear and precise understanding of the capabilities and utility of Computer Assisted Land Pricing (CALP). This concept of pricing land reflects a continuing effort to advance and improve the unique computerized systems we presently use. This section should serve as a reference for field and data personnel in the proper application of CALP. It will also familiarize and assist field and data personnel with the land pricing phase of revaluation programs, both manual and computerized.

The following is a list of objectives in employing CALP:

1. To provide update capability of land prices, both during a revaluation program and in subsequent value updating.
2. To provide flexibility in the scheduling of the land pricing process in relation to the project calendar.
3. To provide greater consistency in land pricing within the confines of individual projects.
4. To increase standardization of land pricing.
5. To reduce the need for influence factor application on a parcel-by-parcel basis (e.g., excess frontage).
6. To eliminate the manual transfer of unit land values from land pricing maps to Property Record Cards.
7. To eliminate the encoding of unit land values.

Land Valuation

In making appraisals for Ad Valorem tax purposes, it is generally necessary (essential if you are using the cost approach) to establish separate values for land and for the improvements on the land. In actuality, the two are not separated and the final estimate of the property as a single unit must be given prime consideration. However, in arriving at that final estimate of value, aside from contractual and legal requirements, there are certain advantages in making a separate estimate of value for the land.

- An estimate of land value is required in the application of the Cost Approach.
- An estimate of land value is required to be deducted from the total property selling price in order to derive indications of depreciation through market-data analysis. The equation is as follows:

  \[
  \text{Depreciation} = (\text{RCN} + \text{Land Value}) - \text{(Selling Price)}
  \]

Land is not a depreciable item, and a separate estimate of land value may be required for bookkeeping and accounting purposes.
Since land may or may not be used to its highest potential, the value of land may be completely independent of the existing improvements on the land. In a situation of economic misimprovements, the value of the land may be a good indicator of the value of the entire parcel.

**Comparable Sales Method**

A frequently used method in estimating the value of land is the comparable sales method, in which land values are derived from analyzing the selling prices of similar sites. This method is, the application of the market data approach to value and all consideration pertaining thereto are equally applicable here.

The appraiser must select comparable and valid market transactions, and must weigh and give due consideration to all the factors significant to value, adjusting each to the subject property. The comparable sites must be used in the same way as the subject property and subjected to the same zoning regulations and restrictions. It is also preferable, whenever possible, to select comparables from the same or a similar neighborhood. The major adjustments will be to account for variations in time, location, and physical characteristics including size, shape, topography, landscaping, access, as well as other factors which may significantly influence the selling price, such as the productivity of farm land.

Although it is preferable to use sales of unimproved lots for comparables, it is not always possible to do so. Older neighborhoods are not likely to yield a sufficient number of representative sales of unimproved lots to permit a valid analysis. In such cases, in order to arrive at an estimate of land values using the comparable sales approach, it is necessary to consider improved property sales and to estimate the portion of the selling price applicable to the structures. The procedure would be to estimate the replacement cost of the buildings as of the date of the sale, estimate the accrued depreciation, and deduct that amount from the replacement cost. This will result in the estimated selling price of the buildings which can be deducted from the total selling price of the property to derive the portion of the selling price which can be allocated to the land. The equation is as follows:

\[
(Selling\ Price\ of\ Property) - Estimated\ Depreciated\ Value\ of\ Building = Indication\ of\ Land\ Value
\]

In order to apply the comparable sales method, it is first necessary to establish a common unit of comparison. The units generally used in the valuation of land are *price per front foot, price per square foot, and price per acre*. The selection of any one particular unit depends upon the type of property being appraised: frontage being commonly used for platted, uniform type lots; square footage for residential lots in square foot zones and for commercial properties; and acreage for larger individual tracts, as well as for irregularly shaped parcels lacking uniformity. The utility of a site will vary with the footage, width, depth, and overall area. Similarly, the unit land values should be adjusted to account for differences in size and shape between the comparable sales and the subject property. Since such an adjustment may be necessary for each lot, it is beneficial that the appraiser adopt and/or develop standardized procedures for adjusting the lot size and the unit values to account for the variations.

Some of the techniques commonly employed are as follows:
Standard lot sizing techniques for the adjustment of the frontage, width, and depth of irregularly shaped lots to make the units of measurement more comparable with uniform rectangular lots.

Standard Depth Tables provide for the adjustment of front foot unit values to account for variations in depth from a predetermined norm.

During the process of adjusting the comparable sales to account for variations between them and the subject property, the appraiser must exercise great care to include all significant factors and to properly consider the impact of each of the factors upon the total value. If done properly, the adjusted selling prices of the comparable properties will establish a range of value in which the value of the subject property will fall. Further analysis of the factors should enable the appraiser to narrow the range down to the value level which is most applicable to the subject property.

**The Land Residual Technique**

In the absence of sufficient market data, income-producing land may be valued by determining the portion of the net income attributable to the land, and capitalizing the net income into an indication of value. The procedure is as follows:

1. Determine the highest and best use of the land, which may be either its present use or hypothetical use.
2. Estimate the net income which the property can be expected to yield.
3. Estimate the replacement cost new of the improvements.
4. If the case involves the present use, estimate the proper allowance for depreciation, and deduct that amount from the replacement cost new of the improvements to arrive at an estimate of their depreciated value.
5. Develop appropriate capitalization rates.
6. Calculate the income requirements of the improvements, and deduct the amount from the total net income to derive that portion of the income which can be said to be attributable to the land.
7. Capitalize the residual income attributable to the land into an indication of value.
**Ratio Method**

A technique useful for establishing broad indications of land values is a "typical" allocation or ratio method. In this technique, the ratio of the land value to the total value of improved properties is observed in situations where there is good market and/or cost evidence to support both the land values and total values. This market abstracted ratio is then applied to similar properties where the total values are known, but the allocation of values between land and improvements are not known. The ratio is usually expressed as a percentage which represents the portion of the total improved value that is land value, or as a formula:

\[
\text{Land Value} = \% \text{ of Property Value Attributable to Land} \times \text{Total Property Value}
\]

This technique can be used on most types of improved properties, with important exceptions being farms and recreational facilities, provided that the necessary market and/or cost information is available. In actual practice, available market information limits this technique primarily to residential properties, and to a much lesser extent, commercial and industrial properties such as apartments, offices, shopping centers, and warehouses.

The ratio technique cannot give exact indications of land value. It is nevertheless useful, especially when used in conjunction with other techniques of estimating land values because it provides an indication of the reasonableness of the final estimate of land value.

The ratio should be extracted from available market information and applied to closely similar properties. It should be noted that any factor that affects values may also affect the ratio of values. Zoning is particularly important because it may require more or fewer improvements be made to the land, or may require a larger or smaller minimum size. This tends to have a bearing on the land values, and so it may also influence the ratio of values considerably from community to community.
The following is an example of a residential land valuation situation.

*Market information derived from an active subdivision*

<table>
<thead>
<tr>
<th>Typical Lot Sale Price (most lots equivalent)</th>
<th>$30,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Lot Sales (range)</td>
<td>$130,000 to $150,000</td>
</tr>
</tbody>
</table>

Indicated Ratio = $30,000/150,000 to $30,000/130,000

Or

**20% to 23%**

*Similar subdivision, but 100% developed*

<table>
<thead>
<tr>
<th>Typical Lot Sale Price (most lots equivalent)</th>
<th>unavailable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Lot Sales (range)</td>
<td>$170,000 to $210,000</td>
</tr>
</tbody>
</table>

Broadest Indicated Range of Lots

20% x $170,000 to 23% x $210,000

$34,000 to $48,300

Narrowest Indicate Range of Lot Values

23% x $170,000 to 20% x $210,000

$39,100 to $42,000

If both lots and improvements vary considerably, the broadest range is most important. If most lots vary little and are judged equivalent, but the improvements vary somewhat, the narrowest range is appropriate. Most subdivisions exhibit a combination of the two ranges. Showing a typical narrow total value range but a wider actual range of land values.

**Cost of Development Method**

This method finds its widest application in the appraisal of large tracts of undeveloped land suitable for residential, commercial, or industrial development. It is a technique which requires a great deal of data, time, and skill. Therefore, it is generally used only in those cases where an insufficient number of comparable sales are available for analysis.

This method involves making an estimate of the value of the site when fully developed for its highest and most likely use. Then deducting an estimate of the total cost of developing the site to derive an indication of its present value. The procedure for employing the method is as follows:

1. Determine the highest and most likely use of the site, including the optimum size of the lots if the use involves subdividing.
2. Estimate the most likely selling price of the developed site(s) by the comparable sales method.
3. In cases involving subdividing, determine the optimum number of sites which can be developed.
4. Calculate the aggregate selling price the developer can expect to receive.
5. Estimate the developing cost to include the cost of improvements, taxes, insurance, engineering fees, interest, advertising, sales, profit and other related expenditures,
and deduct that amount from the anticipated gross sales, to arrive at an indication of the present value of the undeveloped tract.

**CALP System Concept**

The foregoing material is intended to illustrate the basic appraisal principles and methods commonly recognized and considered applicable to the valuation of land.

IAS CALP was conceived and developed to incorporate these traditional land valuation methods in a relational database system to allow:

- Flexibility
- Uniformity
- Update Maintenance Capability
- Relational Based Land Rates by Land Types
- System Driven Adjustments for:
  - Under/Over Sized Parcels
  - Street Improvements and Utilities Available
  - Zoning
  - Location Type

All major property classes can be accommodated by this concept including:

- Residential
  - Single Family
  - Multi-family
  - Condominiums
- Agricultural
  - Market Value
  - Preferential Use
- Commercial
  - Retail
  - Apartments
  - Offices
- Industrial
- Exempt/Institutional

Land categories or types, such as primary site, undeveloped, etc., are user determined and not limited. Standard land type categories are provided as part of the system, but users are permitted to revise and/or expand allowable land types as needed.
The CALP land tables are normally driven by some form of geographic delineation, such as neighborhood and general property class, residential, commercial, etc.

Further refinements are possible by:

- Zoning
- Street improvements and available utilities
- Land type category
- Base land type size with adjustment for over- and under-size parcels
- Location type

All major unit value types may be utilized including:

- Front foot
- Square foot
- Acres
- Gross or lump sum
- Unit (as per apartment unit or lot)
- Common element (condominiums)

The recommended application normally suggests analysis and development of base land tables for the most common property types and median value levels.

A sample analysis indicates the following:

- Median Single Family price: $100,000
- Typical Land/Building ratio is 20%: (Land $20,000, Building $80,000)

Based on this observation, base tables can be constructed which calculate a value of $20,000 for the selected base size or sizes and relationships assigned for various land types, street improvements, utilities available, and similar aspects.

Multiple base sizes should be developed to accommodate variety in zoning minimums or neighborhood norms. Base tables developed by the preceding analysis are subject to further refinement and calibration to market-indicated value levels by application of a neighborhood CALP index feature. For example:

- Base table yields $20,000 for Base Lot
- Subject neighborhood is in a higher value range, say, $200,000 total, with a $40,000 indicated land value.
- The Base table is calibrated to the specific neighborhood by application of a CALP Index of 200%.

Commercial neighborhoods tend to demonstrate a high volatility in land rates, often varying drastically on a block-by-block basis. CALP accommodates this situation by allowing an overall
land table percentage adjustment to a parcel level. The "spot location" feature permits a parcel adjustment to specific parcels within a given neighborhood.

Specific parcel or land types within a parcel that deviate from the base table assumptions can be further refined by application of Influence Factors or specific base rate adjustments. Typical cases could include adjustment for:

- Size/Shape
- Topography
- Frequent Flooding
- Restrictions to Use
- Other user determined conditions.

Suggested guidelines for Influence Factor application are provided as part of this manual.

**Summary**

The many capabilities of CALP can impose some appearance of complexity to the user. It is important to recognize that the decision to use or not use some of the powerful features of CALP is entirely in the hands of specific users based on their opinion of local practice, market trends, and data sources available.

CALP does not impose undue structured standards or system constraints common to most fixed, table-driven systems. Instead, CALP permits the user to develop a land pricing system tailored to the needs and resources of the local jurisdiction.

Simply stated, CALP permits the user to:

- Select types, categories, units, definitions, and other criteria.
- Express these selected criteria in a relationship-based manner as opposed to a fixed rate table.
- Calibrate these land rates to neighborhood and/or parcel value levels.
- Adjust any category or land type for specific parcel variation from norms.
Getting to Know the CALP Screens

The CALP Module has a total of nine base screens.

LP51 - CALP Neighborhood Data Screen
LP52 - CALP Land Pricing Model Rates Screen
LP53 - CALP Zone Model Assignment Screen
LP54 - CALP Location Model Assignment Screen
LP55 - CALP Street/Road Model Assignment Screen
LP56 - CALP Utility Model Assignment Screen
LP57 - CALP Land Code Relationships Screen
LP58 - CALP Depth Factors Maintenance Screen
LP59 - CALP Acres Adjustment Tables Screen
**CALP Neighborhood Data Screen (LP51)**

The CALP Neighborhood Data screen, LP51, contains an assortment of fields for encoding cost and market valuation factors based on neighborhood. These factors are used for several valuation models. For CALP, this screen is used for assigning land models and land factors at an individual neighborhood level.

**To Query a CALP Neighborhood Data Record:**

1. Go to LP51, the CALP Neighborhood Data screen.
2. Click the [Enter Query] icon and enter your query criteria. You can query on any field or combination of fields on the screen.
3. Click the [Execute Query] icon to display the records that meet the query criteria.

**CALP Land Pricing Model Rates (LP52)**

The CALP Land Pricing Model Rates screen, LP52, is where you view the components of the individual land model records.

**To Query the CALP Land Pricing Model Rates Record:**

1. Go to LP52, the CALP Land Pricing Model Rates screen.
2. Click the [Enter Query] icon and enter your query criteria. You may query on any field or combination of fields on the screen.
3. Click the [Execute Query] icon to display the records matching your query criteria.

**CALP Zone Model Assignment (LP53)**

The CALP Zone Model Assignment screen, LP53, is used to enter allowable combinations of jurisdiction and zoning codes. Primary application of this screen is to enable correlation of specific zoning types to land model types by zoning model. The zoning models are used on screens LP61 through LP65 and LP71 through LP75.

**To Query the CALP Zone Model Assignment Record:**

1. Go to LP53, the CALP Zone Model Assignment screen.
2. Click the [Enter Query] icon and enter your query criteria. You may query on any field or combination of fields on the screen.
3. Click the [Execute Query] icon to display the CALP records.
CALP Location Model Assignment (LP54)

The CALP Location Model Assignment screen, LP54, is where you enter commercial/industrial neighborhood model criteria. Typical application would be to create/assign model types by general business location criteria such as major strip, CBD, industrial park, etc. The location models created on this screen can be used for creating land models on screens LP71 through LP75. If desired, location models or location types on record, can be disregarded by enterinig model O for the specific location type.

To Query a CALP Location Model Assignment Record:

1. Go to LP54, the CALP Location Model Assignment screen.
2. Click the [Enter Query] icon and enter your query criteria. You may query on any field or combination of fields on the screen.
3. Click the [Execute Query] icon to display the CALP records.

CALP Street/Road Model Assignment (LP55)

The CALP Street/Road Model Assignment screen, LP55, allows for land rate adjustments to residential neighborhoods by street type such as paved, unpaved, semi-improved, or similar. The models created on this screen can be used for creating land models on screens LP61 through LP65 and LP81 through LP85.

To Query a CALP Street/Road Model Assignment Record:

1. Go to LP55, the CALP Street/Road Model Assignment screen.
2. Click the [Enter Query] icon and enter your query criteria. You may query on any field or combination of fields on the screen.
3. Click the [Execute Query] icon to display the CALP records.
CALP Utility Model Assignment (LP56)

The CALP Utility Model Assignment screen, LP56, is where you enter land rate adjustments to residential neighborhoods for the availability of utilities, such as public water, public sewer, gas, well/septic, etc. This screen also contains a field for entering a priority code. The priority code determines which code is selected for modeling when multiple utility codes are present on a parcel. (The model for the code with the lowest value in priority will be used.) All utility codes to be ignored are assigned model O. The models created on this screen can be used for operating land models on screens LP61 through LP65 and LP81 through LP85.

To Query a CALP Utility Model Assignment Record:

1. Go to LP56, the CALP Utility Model Assignment Screen.
2. Click the [Enter Query] icon and enter your query criteria. You may query on any field or combination of fields on the screen.
3. Click the [Execute Query] icon to display the CALP records.

CALP Land Code Relationships (LP57)

The CALP Land Code Relationships Screen, LP57, permits entry of allowable land types and land codes for both residential and commercial properties. The models created on this screen are used for creating land models on screens LP61 through LP65, LP71 through LP75, and LP81 through LP85.

To Query the CALP Land Code Relationship Record:

1. Go to LP57, the CALP Land Code Relationship Screen.
2. Click the [Enter Query] icon and enter your query criteria. You may query on any field or combination of fields on the screen.
3. Click the [Execute Query] icon to display the CALP records.

CALP Depth Factors Maintenance (LP58)

The CALP Depth Factors Maintenance screen, LP58, contains the depth factor tables for front foot land pricing. Depth tables for 75, 100, 120 and 150 feet are pre-loaded on the system and can be adjusted here if you have update security. The depth table determines the set of factors to be used. These tables are assigned to the individual neighborhoods on screen LP51, CALP Neighborhood Data.

To Query the CALP Depth Factors Maintenance Record:

1. Go to LP58, the CALP Depth Factors Maintenance screen.
2. Click the [Enter Query] icon and enter your query criteria. You may query on any field or combination of fields on the screen.
3. Click the [Execute Query] icon to display the CALP records.
CALP ACRES ADJUSTMENT TABLES (LP59)

The CALP Acres Adjustment Tables screen, LP59, is for parcels that are significantly larger or smaller than the base size of the model and may require an acre size adjustment. The adjustment factors are stored by table and acre size within the table. The table number is referenced on LP57, CALP Land Code Relationship.

To Query a CALP Acres Adjustment Table Record:

1. Go to LP59, the CALP Acres Adjustment Tables screen.
2. Click the [Enter Query] icon and enter your query criteria. You may query on any or all fields on the screen.
3. Click the [Execute Query] icon to display the CALP records.
NEIGHBORHOOD DELINEATION AND ANALYSIS

Purpose

Neighborhood Delineation and Analysis is a study of external forces or influences which could be considered to have an effect on property value. Neighborhood Delineation and Analysis also involves conclusions on the typical housing, economic, social, and demographic characteristics of the geographic area considered as a homogeneous neighborhood. A “neighborhood”, for analysis purposes, is defined as the largest geographic grouping of properties where the significant economic forces of those properties are generally uniform. The selected ratings should be a reasonable selection for at least 50 to 75 percent of the dwellings located in the delineated neighborhood. Difficulty in assigning a general neighborhood rating indicates that the delineated area is not a reasonable statistical measuring area and should be reconfigured. A neighborhood containing a minority of structures with relatively modest deviation from typical conditions can be used.

This chapter contains two sample Neighborhood Data Forms, one for Residential/Agricultural and one for Commercial/Industrial. These Neighborhood Data Forms serve three main functions:

1. Provide an opinion of the typical structure, economic factors and conditions within an area considered to be a neighborhood, for the reviewer to use. The data forms provide a benchmark for comparing each property within the neighborhood to each other.
2. Provide a generally similar geographic area to use as a statistical base for sales comparison, both during the initial revaluation and years later to measure change and update values accordingly.
3. Provide a basis to allow development of computer assisted land pricing (CALP) tables.

Significant characteristics for consideration are:

1. Physical Boundaries
   a. Natural — rivers, mountains, woods, streams, etc.
   b. Man-made — roads, highways, railroads, streets, corporation lines, etc.
2. Housing Characteristics — type, quality, age, and condition.
3. Occupancy — as percentage of homes owner-occupied or tenant-occupied, percentage of vacant dwellings, etc.
4. Predominant land use and anticipated changes.
5. Typical land size and land valuation.
Instructions for Neighborhood Delineation Field Analysis

Step 1 Obtain large scale or index maps for the county, which ideally show all streets, roads, and significant physical features such as rivers, lakes, and railroads. Census tract maps and base maps developed from aerial photography showing photogrammetric features are ideal for this purpose.

Step 2 Establish preliminary neighborhood boundaries on your base maps using known physical and governmental features as boundaries. The general rule would be to consider all physical separation points, such as rivers, arterial streets, corporation lines, lakes, commercial-industrial areas, or highways as definite neighborhood boundaries.

Step 3 Assemble and analyze any supplementary material for the county which is available and useful.

Examples:

- Zoning maps and zoning restrictions
- Planning department maps (such as master development plans)
- Census tracts (block statistics)
- School District maps
- Redevelopment planning maps and studies
- Current and planned utility maps (sewers, public water)
- City, state, or county engineering maps or studies, such as soil maps, or topographic maps
- Real estate sales data, such as multi-list sales, revaluation program, sales verified from data collection, Assessors' office records of transfer
- Community and Chamber of Commerce area studies and literature, such as population trends and building permits
- Industrial plan listings and employment and base summaries

Step 4 Now begin the field inspection process by conducting a thorough street-by-street exterior inspection of the county. Based on the physical observations, data collected and analysis to date, establish individual neighborhood boundaries, recognizing the specific delineation points where the residential property exhibits significant physical and economic change from adjacent areas.

Step 5 After establishing the boundaries of each neighborhood:

1. Fill out the appropriate Neighborhood Data Form and assign it a temporary number.
2. Post the established neighborhood boundaries and temporary numbers to a master map.

Remember, consistency of choice is our primary objective.
Step 6  After completing Step 5, briefly review the data assembled and make refinements as required. It is highly desirable at this point to solicit the observations and comments of informed departments and groups such as the Chamber of Commerce, Planning Departments, Assessors' Office, and others.

Step 7  Establish final boundaries and permanent neighborhood numbers and post to both the Project Master Map and Individual Field Maps used for field appraisal.

Step 8  Determine, by manual and/or computerized analysis, the comparability of all neighborhoods to each other. The theory here is that even though various neighborhoods may be physically separated, if the predominant value analysis characteristics such as value range, housing characteristics, or neighborhood type, are similar, then it is desirable to group similar neighborhoods and thereby create a larger sales database for comparable property value analysis.

Step 9  Summarize and collate the final Neighborhood Data Forms and related material, and distribute copies to the Senior Appraiser and Project Supervisor.

Summary

Obviously, these instructions can only be a general guide and will require tempering and/or modification to suit local conditions. During the neighborhood analysis process, our primary purpose is to use the neighborhood established to develop a statistical measuring base for pooling and analyzing sales data and subsequently use this data to determine market value for individual properties via the comparable market data approach.
NEIGHBORHOOD DATA FORM - RESIDENTIAL/AGRICULTURAL

Follow these instructions to complete the Neighborhood Data Form for Residential/Agricultural

**Top Section**

**County:** Enter the name of the county in which the neighborhood is located. (This will not be encoded.)

**County ID:** Enter a two-digit numeric code denoting the county identification number, if applicable.

**Area Name:** Space for up to 30 characters is provided to enter a descriptive name by which the neighborhood is commonly known.

  Examples: West End, Central Business District, Bunker Hill

**Neighborhood ID Code:** Up to eight characters are available for assignment of a neighborhood ID. It is suggested that you use only as many characters as necessary for the size of the jurisdiction allowing one or two trailing characters to denote a sub-neighborhood. It is recommended that during the field delineation process, temporary NBHD numbers be assigned and entered in the Observation and Comment area. At the conclusion and final reconciliation of the original process, permanent numbers should be assigned and entered on each form posted and on the delineated individual field maps.

**Identification and Reference**

**Taxing District:** Space is provided to enter the taxing district name where the neighborhood is located. For county-level projects, this will normally be either the township or city name.

**Taxing District Number:** Space is provided to enter (if applicable) a numeric entry to describe the area.

  Example: Ward 03

**Tax Map Numbers:** Enter listing of all tax maps that have parcels in the neighborhood.

**Boundaries:** North, East, South, and West: Space for up to 27 characters on each line is provided to enter the boundaries of the neighborhood. Boundaries may be streets, roads, lakes, rivers, city and town lines, railroads, significant properties, or, in short, natural or manmade boundaries.

  Examples: Oak Street, St. Rte. 109, Blue Lake, Rapid River, Town Line, B & O Railroad.

**Boundary Codes:** Space is provided for up to three characters to enter the reason or reasons why that boundary was selected as a delineation point for the neighborhood. Delineation codes 1 through 5 are provided on the form.
Example: Field analysis has revealed that the north boundary should be Blue Lake because it is a physical barrier to extension, development, or influence from outside forces to this neighborhood. Enter "1." If Blue Lake was considered both a physical barrier and a land use change point, both code "1" and "4" could be entered. A maximum of three codes may be entered for each boundary.

**Characteristics**

The Characteristics section generally refers to the residential development status of the neighborhood.

**Type:** One choice is required for each item. Circle the appropriate code number for the item. The choices are:

1. Urban — Neighborhood is a built-up area normally located within the city limits of a medium to large size city. Always incorporated.
2. Suburban — Normally a built-up area located outside the city limits, but within normal driving distance to the city for work or shopping. Could be incorporated or unincorporated.
3. Subdivision — Normally a subdivided and platted area of modern dwellings having highly homogeneous housing characteristics (for example, similar type, age group, style, quality, or value range,), located beyond normal daily commuting distance to the urban center for work or shopping. Normally unincorporated.
4. Rural — Generally considered to be an area of relatively sparsely populated, open space normally devoted to agricultural and/or recreational land use. Always unincorporated.
5. Rural Hamlet — Normally a small village or town located within a rural area and relatively remote from the urbanized areas of the community. Normally an unincorporated district.

**Predominant Land Use:** One choice is required. Circle the code which most accurately describes the current predominant land use. The choices are:

1. Residential
2. Agricultural
3. Commercial
4. Industrial
5. Other (for example, recreational, governmental, educational.)

**Rate of Change in Life Cycle:** A basic axiom of neighborhood analysis presumes that neighborhoods are subject to inevitable change, and change in the life cycle of a residential neighborhood is normal and to be expected. Circle the code which most accurately describes the speed or pace of the change taking place in the subject neighborhood. The choices are:

1. Slow — Change almost imperceptible.
2. Steady — Evidence of significant change taking place, but at a moderate rate. (e.g. Gradual development of a rural area to more intense residential development).
3. Rapid — Pronounced and dramatic change taking place within a short time span (one year). (e.g. Old, blighted residential area experiencing a rapid urban redevelopment.)

**Neighborhood Life Cycle:** As mentioned above, neighborhood analysis presumes that all neighborhoods have a life cycle. Circle the code which most accurately describes the current stage of neighborhood life cycle. The choices are:

1. Inception and Growth — Usually rapid and roughly equivalent to the human cycle of birth and rapid early development.
2. Relative Equilibrium — Roughly equivalent to the rather slow and almost imperceptible change cycle of the mature and fully developed human adult.
3. Decline — The point of marked decay and disintegration normally associated with almost blighted neighborhoods and roughly equivalent to the decline associated with old age.

**Demand/Supply:** Circle the code which most accurately describes the availability of properties for sale within the subject neighborhood. The choices are:

1. Shortage — More buyers available than there are properties for sale.
2. In Balance — Availability approximately equal to buyer demand.
3. Over Supply — More properties available for sale than buyers, and representing a temporary or relatively permanent stagnant market condition.

**Density:** Circle the code which most accurately describes the degree of present population and improvement density. The choices are:

1. Low — As in rural, recreational, open space land use.
2. Medium — As in areas of single family development in the range of 50% to 75% peak development.
3. High — As in highly urbanized, virtually 100% developed neighborhoods.

**Rate of Turnover:** Refers to the number of properties currently bought and sold within the subject neighborhood. Circle one of the following. The choices are:

1. Low — Usually less than 5% annually of the total residential properties in the neighborhood.
2. Medium — Approximately 5% annually of the residential properties in the neighborhood.
3. High — Significantly more than 5% annually of the residential properties in the neighborhood.

**Marketing Time:** Circle a range.

1. 1-3 Mos.
2. 4-6 Mos.
3. Over 6 Mos.
Predominant Improvement Type

**Type:** Indicates the typical of majority residential use in the neighborhood. Circle the most appropriate code.

1. 1 & 2 Family
2. Multiple Family
3. Other

**Quality**

1. A
2. B
3. C
4. D
5. E
6. X

**Typical Age (Years):** Indicates the average age expressed in years of the majority of residences in the neighborhood. Circle the most appropriate code.

1. 0-3
2. 4-8
3. 9-18
4. 19-28
5. 29-38
6. 39-49
7. 50+

**CDU:** In the context of the Neighborhood Delineation Form, ratings for "condition," "CDU," "quality," "grade," etc. refer to the typical or normal structure or dwelling type that is common to the neighborhood. CDU (Condition-Desirability-Utility) refers to the effect of depreciation or loss of value due to all causes to the structure value. This loss of value can take the form of three primary causes:

*Physical Depreciation* — Loss of value due to the effects of age, the elements, and wear on the structure. Evidence of physical depreciation is represented by wear and tear, decay, rot, cracks, encrustation, and structural defects. Physical depreciation may be further divided into curable and incurable depreciation. Curable depreciation is those areas considered economically feasible to cure and hence are customarily repaired or replaced by a prudent property owner. Incurable depreciation takes the form of defects which are not considered economically feasible to repair or replace except at a cost in excess of their contribution to the value of the structure.

*Functional Depreciation or Functional Obsolescence* — Loss of value due to design faults inherent in the structure. Functional obsolescence is brought about by such factors as
overcapacity, inadequacy, lack of modern design and mechanical features (heating, plumbing, etc.), and similar factors. Consideration of functional obsolescence focuses on the ability of the structure to perform the function for which it is intended, in terms of current market desires and standards. Elements of functional utility in residential property include architecture, design and layout, internal traffic pattern, sizes and types of rooms, and performance standards. In a similar fashion, functional obsolescence may be both curable and incurable in nature depending on the economic feasibility of correcting the design fault.

**Economic Depreciation or Economic Obsolescence** — Loss of value to the structure due to factors external to the property, such as economic forces or environmental conditions which affect supply and demand relationships in the marketplace. Examples include: mortgage rates, traffic patterns, nuisances, frequent flooding, inadequacy of schools, shopping, and similar factors. Economic obsolescence is generally considered incurable.

CDU ratings are an attempt to consider a composite of physical, functional, and economic depreciation affecting the structure. In practical use, primary consideration is limited to physical and functional conditions found in the structure or the common structure type in the delineated neighborhood. Economic depreciation is normally considered a common force or forces affecting all similar property types in the area or neighborhood. The economic depreciation is reflected in general adjustments. These adjustments can take the form of alternate depreciation tables reflecting lesser or greater loss of value to the common structure types within the defined neighborhood due to external economic forces common to the area.

Direct consideration for economic forces is inherent within the application of the Market Analysis or Multiple Regression Analysis approach by treating each neighborhood or group of neighborhoods as a comparative statistical measuring area. The net market effect of location on the property value is measured by sales analysis and applied to the affected subject properties.
Following are typical CDU ratings found on most Data Collection Cards:

1. EX (Excellent): In "as new" or "perfect condition." No visible evidence of physical deterioration. Modern design or rehabilitated older property with no significant design faults present.
2. VG (Very Good): A very minor degree of physical deterioration is present, but entirely curable with modest and normal maintenance. Modern design or rehabilitated older property with no significant design faults present.
3. GD (Good): Minor degree of physical deterioration is present, which is curable by normal maintenance. Modern design or rehabilitated older property with at most minor design faults present.
4. AVG (Average): Normal wear and tear commensurate with the age of the structure is present. Some modest evidence of deferred normal maintenance. May have minor functional design faults or lack of new or modern heating or plumbing but economically feasible to correct.
5. FAIR (Fair): Some degree of physical deterioration is present requiring repair beyond the level of normal maintenance. Likely to have some functional design faults that are economically feasible to cure.
6. PR (Poor): Significant physical deterioration with some possible evidence of structural faults. May be considered marginally imprudent or economically infeasible to correct or repair to original condition. Suffers from significant design faults that may be considered incurable.
7. VP (Very Poor): Major physical deterioration in addition to significant structural faults. Deterioration is considered incurable or not economically feasible to cure. Structure may currently be occupied, but is approaching the end of its economic life.
8. UN (Unsound): Structure has reached the end of its useful life for its designed purpose. It is not habitable and may pose a health or safety risk.

**Predominant Occupancy:** Circle owner if most of the properties in the neighborhood are owner-occupied. Otherwise, circle tenant.

1. Owner: Circle owner if most of the properties in the neighborhood are owner-occupied.
2. Tenant: Circle tenant if most properties in the neighborhood are rented.

**Vacancy:** Enter (from 0% to 100%) the estimated number of currently unoccupied homes in the neighborhood.

**Change in Use:** Circle the most accurate choice describing the current likelihood of a change in significant land use in the neighborhood. The choices are:

1. Not likely
2. Likely
3. Taking Place
Probable New Use: Circle the most accurate choice describing the likely anticipated future land use in the neighborhood. The choices are:

1. None
2. Residential
3. Agricultural
4. Commercial
5. Industrial
6. Other

Typical Land Category: Circle the most appropriate choice.

1. FF - Front Feet
2. SQ - Square Feet
3. AC - Acreage
4. Unit - Number of units used for apartments or condos

Land Base Size: For typical land category size, enter the common land base size.

ESTIMATED MARKET VALUE FOR RESIDENTIAL IMPROVED PROPERTY

This section represents an estimate by the field analyst of the current market value of the typical residential property within the neighborhood. Generally, it can be said that an area can be considered highly homogeneous if at least 75% of the residential property in the neighborhood falls within the minimum-maximum value range and the value range does not exceed a 25%± range from the median value.

Example:

- Minimum: $125,000
- Maximum: $155,000
- Median: $132,000

Minimum: Enter, right justified, the estimated minimum residential market value for the typical residential property in the neighborhood, after adjusting utilized valid market sales used in the analysis with a time index. Round the value to the nearest $100.

Maximum: Enter, right justified, the estimated maximum residential market value for the typical residential property in the neighborhood, after adjusting utilized valid market sales used in the analysis with a time index. Round the value to the nearest $100.

Median: Enter, right justified, in $100 multiples, the estimated median residential market value for the typical residential property in the neighborhood, after adjusting utilized valid market sales used in the analysis with a time index. The median is defined as a measure of central tendency equal to that point in a distribution above which 50% of the values fall and below which 50% of the values fall.
OTHER ECONOMIC MARKET INFLUENCES

**Adequacy of Shopping:** Circle the best choice.

1. Very Good
2. Good
3. Average
4. Fair
5. Poor

**Adequacy of Utilities:** Circle the best choice.

1. Very Good
2. Good
3. Average
4. Fair
5. Poor

**Protection from Adverse Influence:** Circle the best choice.

1. Very Good
2. Good
3. Average
4. Fair
5. Poor

**Adequacy of Police and Fire Protection:** Circle the best choice.

1. Very Good
2. Good
3. Average
4. Fair
5. Poor

**Aesthetic Appeal of Structures:** Circle the best choice.

1. Very Good
2. Good
3. Average
4. Fair
5. Poor
Availability of Public Transportation: Circle the best choice.

1. Very Good
2. Good
3. Average
4. Fair
5. Poor

Level of Nuisances: Indicate type of nuisance if one is present.

1. None
2. Low
3. Medium
4. High

Type: Space is provided to list the type of nuisance present.

Observations and Comments: Use this space to record any additional observations and comments about the neighborhood.

THE NEIGHBORHOOD DATA FORM COMMERCIAL/INDUSTRIAL

Follow these instructions to complete The Neighborhood Data Form for Commercial/Industrial. Please refer back to the instructions for filling out the Neighborhood Data Form for Residential/Agricultural when filling out the following sections of the Neighborhood Data Form for Commercial/Industrial.

- Top Section
- Identification & Reference
- Characteristics

Typical Land Category: Circle the most appropriate choice.

1. FF — Front foot
2. SQ — Square Feet
3. AC — Acreage
4. Unit — Number of units (used for apartments or condos)
The following data characteristics are specific to the Neighborhood Data Form for Commercial/Industrial:

**LOCATION IDENTIFIERS**

1. Central Business District - To indicate the core area in the center of a city with a concentration of major retail, financial, governmental, professional, and service activities. In many instances, these boundaries have already been established or defined by city planners or other agencies.
2. Perimeter CBD - To indicate the outer boundaries of the central business district or core area in which the concentration of major mercantile activity is significantly less pronounced.
3. Business Cluster - To indicate a cluster or number of commercial properties grouped together due to some attracting force (such as a major intersection of interstate highway or major shopping mall).
4. Major Strip - To indicate the type of commercial development in which major thoroughfares are bordered by an almost continuous row or strip of retail stores and allied service establishments.
5. Secondary Strip - To indicate row-type or strip-type commercial development bordering major strips.
6. Neighborhood or Spot - To indicate individual or scattered commercial establishments located in basically residential areas.
7. Commercial/Industrial Park - To indicate a controlled park-like development designed to accommodate specific light industrial and mercantile properties and containing the required utilities, street, and other amenities.
8. Industrial Site - To indicate land or land and improvements (not located in an established park) adaptable for industrial use. Normally, this is a combination of land, improvements, and machinery intended for the assembling, processing and manufacturing of products from raw materials or fabricated parts or for the production of natural resources.
9. Apartment/Condominium Complex - To indicate the property is an apartment or condominium complex site.

**Improvement Type Characteristics & Estimated % Of Mix (Nearest 10%)**

This section generally refers to the structural characteristics of the typical properties located in the neighborhood and the estimated percent of mix.

**Improvement Type:** Percent of occurrence actual buildings are one retail, office, warehouse, and apartment.

   1. Retail
   2. Office
   3. Warehouse
   4. Apartment
**Typical Grade:** Estimate the typical quality grade by improvement type within the neighborhood.

1. A (or very good)
2. B (or good)
3. C (or average, standard)
4. D (or fair, somewhat substandard)
5. E (or minimal, well below standard)
6. X (or excellent)

**Typical Economic Rent Range:** Estimate the typical rent by improvement type within the neighborhood.

**Typical Age:** (years) Circle the appropriate age range.

1. New to 3 years old
2. 4 to 8 years old
3. 9 to 18 years old
4. 19 to 28 years old
5. 29 to 38 years old
6. 39 to 49 years old
7. Over 50 years old

**Typical Physical Condition:** (relative to age)

1. Poor
2. Fair
3. Average
4. Good
5. Very Good
6. Excellent
7. Unsound

**Typical Functional/Economic Utility:**

1. Poor
2. Fair
3. Average
4. Good
5. Very Good
6. Excellent
7. Unsound
Please refer back to the instructions for filling out the Neighborhood Data Form for Residential/Agricultural when filling out the following sections of the Neighborhood Data Form for Commercial/Industrial:

- Predominant Occupancy
- Vacancy
- Change In Use

THE INTERPLAY OF CAMA AND CALP SCREENS

Parcel Tab - CAMA General Property Data

The PARCEL TAB permits entry of general property data for a specific parcel. The majority of information is for general identification and classification purposes. However, it should be noted that CALP land models will access this data to determine specific land models and rates applicable to the subject parcel.

Land Tab - Land Data and Computations

The LAND TAB permits entry of land classifications, categories, types, land sizes, and influence factors for a specific parcel. Applications of IAS CALP models are dependent on this specific parcel data.

How the Computer Sees the CALP Model

1. Each rate is defined by a set of dimensions referred to as models.
2. The land type and land code are additional dimensions pointing to rates.
3. The whole structure can occur multiple times for different years.
4. In building the tables, a zero is used if a dimension is not used.
5. Data items on the parcel are used to look at a model table and point to a dimension.
6. The dimensions are combined to do a lookup of the rates.
7. If a match is not found for a given dimension, the lookup will default to zero.
8. The dimensions for lookup are as follows:
   a. Table Version comes from the jurisdiction and tax year of the data and the Land Version field for that jurisdiction and tax year.
   b. Land type comes from the parcel.
   c. Neighborhood comes from CA12, which points to a model (dimension) for each land type on LP51.
   d. Zone comes from jurisdiction and zoning on CA12, which points to a model from LP53.
   e. Street comes from street code on CA12, which points to a model from LP55.
   f. Location comes from location on CA12, which points to a model from LP54.
   g. Utility comes from utility codes on CA12. The code defined with the lowest priority code on LP56 gets its model from that screen.
   h. Land code comes from the parcel.
The residential zoning models (LP6x) assume the base model 0 for location. Neighborhood model is defined as 1. The neighborhood model number should not be used for any other model.

The commercial models (LP7x) assume the base model 0 for street and utility.

The residential neighborhood models (LP8x) assume model 0 for zoning and location.