

Maryland Property Assessment Work Group - 2014

Assessment Overview

Physical Inspection Subcommittee

&

Property Pick-up Subcommittee

(additions/deletions)

OBJECTIVES – Why are we here?

- **Why are we here?** -- To examine issues related to the property assessment process for both real and personal property and the tax credit programs
- **Questions have been raised regarding real and personal property assessment** being current, whether tax credits/ exemptions are accurate, and whether new property /renovations/demolitions are being timely picked up on the tax roll.
- **Is the tax roll maintained** so that the correct municipal, county and state property taxes are levied.
- **There are 4 basic work group charges**

OBJECTIVES – The Charge

1. In the physical inspection process is the re-assessment of property being completed such that all property relevant characteristics are considered. Is a physical inspection of each property necessary to property assess real property? Can third party vendors be used in this process? And are property assessments accurate?

(Physical Inspection Sub-committee)

2. Are property tax credits and exemption accurate and recorded properly on the tax roll in a timely fashion. To what extent are there discrepancies in tax credits and exemption. Should third party vendors audit tax credits and exemptions ?(Tax Credits /Exemptions Sub Subcommittee)

OBJECTIVES – The Charge

3. Is SDAT timely and adequately maintaining changes in property status that may occur throughout the year and to incorporate new properties on the tax roll.

(New Property Pick Up Sub committee)

4. Is personal property assessment accurate and timely. Should a third party vendors be used to audit personal property?

(Personnel Property /Vendor Sub committee)

OBJECTIVES - Considerations

To accomplish this, the work group must understand the full extent of assessment operations, legal requirements, practices and procedures, staffing, assessment budgets, workloads and a myriad of other information.

- **Each subcommittee will have to address**
 - Does there appear to be a problem with an issue?
 - If there is a problem, what are the alternative courses of action to solve the problem?
 - Are these courses or action - needs or wants? What happens if a course is not undertaken?
 - How should the solutions or recommendations be implemented (timing, where, etc.)?
 - What is the cost/benefit?
 - How is the recommendation going to be funded if it is needed?

The Organization of this Presentation

This presentation has three key points:

1. An **Overview of the Entire Assessment Process** –AWG members must understand legal requirements, the goal of the assessor, methods and procedures, work requirements of assessment offices, assessment office staffing, budgets, and workload levels, in order make informed contributions to the AWG and each of its sub-committees
2. An **Overview of the physical review process** including the who, what, when, where and why of the physical review process.
3. An **Overview of the New Property /renovation /demolition process** including information on building permits, the pick up assessment calendar, etc.

Presentation Organization

The presentation is organized to simplify the information.



The Organization of this Presentation

High level Explanation Slides - These slides explain at a high level, the concept/ process/ procedure. These slides will be color coded to identify the Real Property/Personal Property/ Tax Credit sub-committee to which the concept most pertains. These High level slides will references other slides (at the back of the presentation) which have more detailed information. These will promote detailed understanding or more information about the topic than the high level slide.

Detail Slides in the rear of document have more detailed information about the topic to promote detailed understanding. The information in these slides is supported by other data at the subcommittees disposal and this detail maybe expanded in the future as needed by each subcommittee

Presentation Organization

- **Todays presentation** will focus on objectives and a high level overview in the interest of time.
- **There is lot of information for anyone** especially if one is not acquainted with the concepts, requirements, methods or techniques
- **Information in the detail section** is for your reference at a future date or in your sub committee.
- **We will review topics in the detail section** to acquaint you with what is there.
- **Sub committees** will work each key topic in detail in later meetings

Key Concepts

- Goal of Assessment
- Assessment Process and Types of Property
- Appraisal Process – single property vs. mass appraisal
- Approaches to value
- Mass Appraisal Process
 - Maryland market calibrated cost approach (residential - C&I property)
 - Maryland Commercial and Industrial approaches and models
 - Field inspections – importance and steps
 - Ratio Studies
 - Trending and Indexing

Key Concepts

- Assessment Appeals
- Assessment Calendar
- Assessment Offices
 - Organization – staffing, CORE processes, work loads, budgets,
- New Property/renovations/demolition Pick up
- Physical Review Alternatives
- Technology- Hardware and Software
- SDAT Website
- Sketching and Field Review

The Organization of this Presentation

High Level Slides will give members an understanding of the topic. A subcommittee will be dealing with these topics.

The following objects will identify if the material is Overview, Real Property, Personal Property, New Property Pickup, Tax Credit and exemption material. The oval object indicates the detail pages



Overview



**Real Property Assessment/
Physical Inspections Sub Committee**



**Personal Property Assessment
and Subcommittee**



New Property Pick-up



Tax Credit/Exemption



OBJECTIVES

- Know the **goal** of assessment and requirements
- Understand **assessment process**- real and personal property – to discover, list, and value
- Understand **types of property**- real, personal, and intangible
- Understand the **appraisal process**- single property and mass appraisal - Standards (IAAO and the Appraisal Foundation)
- Know steps in **mass appraisal process**- methods and techniques
- Understand the **approaches to value** - cost, sales comparison, income approaches
- Know the Maryland **market calibrated cost approach**(cost and sales comparison) (residential and C&I Property)
- Understand Maryland **commercial and industrial models**– Cost, Sales Comparison, and Income (C & I Property)

OBJECTIVES

- Understand **field review**
- Know how **valuation models** are developed and applied
 - Market analysis / Sale to Assessment Ratio Analysis
 - Model Specification
 - Model Calibration
 - Market/Geographic Stratification
 - Tables - Cost New, Depreciation, Land
 - Simple model formula $MV = LV + IV$
 - Expanded model formula $MV = (QL \times PL) + (QI \times PI) + OC$
 - Property record card
 - Sales Analysis/MVI's
 - Performance Analysis – final ratio study and edits

OBJECTIVES

- Understand Assessment Appeals
- Understand assessment history - SDAT staffing –
 - History and current status
 - Maryland and industry
 - Local Assessment Office organization
- Understand Assessment Calendar
- Understand CORE processes and days to field review
- Know new property/demolitions pick-up process (building permits and physical inspection)
- Understand property types and parcel counts
- Know Assessment office budgets

OBJECTIVES

- Understand physical review alternatives
 - IAAO mass appraisal standard
 - Staff only
 - Staff and technology
 - Assessment and review cycles

- Technology – hardware/software
 - GIS – Geographic Information System
 - Imagery – street view, ortho, oblique
 - Change detection – sketch overlay
 - SDAT sketch data
 - Linking technology alternatives with AAVS

Goal of the Assessor

OV

RPA/PI

- To appraise property at full cash value (market value) - level of value (measures of central tendency)
- To appraise like types of property alike for ad valorem purposes – uniformity (dispersion, PRD - regressive and progressive)
- Maryland Constitution – Article 15 – Declaration of Rights
“...General Assembly shall, by uniform rules, provide for the separate assessment, classification and sub-classification of land, improvements on land and personal property, as it may deem proper; and all taxes thereafter provided to be levied by the State for the support of the general State Government, and by the Counties and by the City of Baltimore for their respective purposes, shall be uniform within each class or sub-class of land, improvements on land and personal property which the respective taxing powers may have directed to be subjected to the tax levy;...”

Goal of the Assessor

OV

RPA/PI

- When we speak of **uniformity of assessment and assessment equalization** later we are talking about the requirements of law to assess like types of property alike
- In Maryland – The assessment models provide the method of assessing **like types of property alike**
- The Market Calibrated Cost Approach and Income Approach provide this uniform treatment

Types of Property

OV

Property subject to property tax in Maryland

- **Real Property** – tangible property – land and improvements to land RPA/PI
- **Personnel Property** – business tangible property that is not real property– fixtures & equipment, business assets, computers, etc. is assessed and taxed. PPA
- **Residential personal property** – is not subject to assessment or property tax TC/EX
- **Property not subject to property tax** – exempt property, intangible property and property not deemed to be in the state

The Assessment Process - Discovery

OV

■ Assessment Process includes:

RPA/PI

PPA

➤ Discovery, Listing, and Valuing

- **Discovery** – That all land is accounted for on the tax roll. This is done through the use of maps, aerial photos or by field inspection.
- **Discovery** - Insures an account is on the tax roll and on a tax map.
- **Discovery** – It is impossible to verify without tax maps. Maps are the basic tool a property tax system.
- **Discovery** of buildings and other improvements attached to the land requires the field inspection or use of aerial photography. Refinements most often require onsite inspection

The Assessment Process - Listing

- **Listing** – After discovery, the property is identified with a number identifier that differentiates it from other properties. It is a unique account number for each account
- **Listing** – includes identification of property location including a map reference, and a market area and neighborhood identifier
- **Listing** – includes description of property – It includes both quantitative data and qualitative data about land & improvements. In other words it is a full description of the physical characteristics of the land and improvement. It includes grade of construction, condition of property, relevant property characteristics, etc.
- **Listing** – includes detailed classification of the property
 - Tax status – taxable, non-taxable/exempt, possessory interest, etc.
 - Primary use – residential, commercial, industrial, agricultural, etc.
 - Property type - row house, detached home, motel, apartment, etc.

Classification of Property

OV

- Part of Classification of property is whether the property is taxable or exempt
- Exempt Property – Is the subject of another full AWG work group presentation. The Tax Credit and Exemption Subcommittee will meet after this full AWG presentation

TC/Ex

- **Exempt property includes:**
 - Government – Federal, State, County, and Municipal Real Property
 - Religious
 - Charitable and Benevolent
 - Educational
- Certain property tax exemptions can be mandatory, others categorical (applications), while others are local optional (applications) – Statutory exemptions are mandatory, Categorical Exemptions are administrative.
- Exempt Property must be “owned by and used exclusively for the exempt purposes of the organization”

The Assessment Process - Value

- **Value** – each property at full cash value as of a given date (date of finality in Maryland Law – January 1) insuring that like properties are assessed alike (level, uniformity/equalization)
- **Value** – ad valorem values are arrived at through the appraisal process that include mass appraisal methods & techniques
- **Value** – the assessor uses the appropriate approaches to value for each particular property type (cost, sales comparison, income approach)
- **Value** – the concern of the assessor is achieving market value and uniformity of assessment

The Assessment Process - Value

- **Value** – in ad valorem mass appraisal the assessor is concerned with the uniform valuation of properties in similar classes.
- While two similar properties may sell for slightly different prices (depending upon individual buyers and sellers), the assessor is attempting to value these properties in a similar manner. The assessor uses a variety of techniques including standard valuation models, assessment studies and sales/ assessment ratio studies to verify level and uniformity.
- **Value** – values constantly change – ideal assessment systems reflect value changes through frequent revaluations

The Assessment Process - Value

- **Value** – Is a opinion of the worth of something. It is an opinion which is not a fact and is different from a price or cost.
 - **Price is a fact** – list price, asking price, reduced price, sale price. Price is not value.
 - **Cost is a fact or an estimate of a fact** - it cost me \$30,000 or would cost \$125 per square foot to build. Cost is not value.
- **Value** - The Assessor is valuing property through models that with reasonable accuracy, represent the relationship between property value and supply and demand factors, to produce a creditable opinion of value.
(We will reference assessing to exact sale price and issues with uniformity in mass appraisal vs. single property appraisal later)

The Assessment Process

OV

Personal Property

PPA

- **Assessment process** – Discover, List, and Value
- **Personal Property Assessment** will be the subject of another full Assessment Work Group Meeting and Subcommittee
- **MD Corporations, LLC's, LP's, and Proprietorship's** are required to register annually to be legal and valid business (Form 1 - registration & report personal property)
- **Personal property reporting** is by property and original cost in year of acquisitions – (IRS dep. schedule/balance sheets/leasing company asset lists, etc.)
- **Business personal property in Maryland** is subject to property tax – residential personal property is not subject to tax and most all manufacturing equipment and inventory is exempt
- **Value** – Generally, original cost from year of acquisition less depreciation per year to 25% of cost.

The Assessment Process

Personal Property

OV

PPA

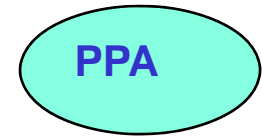
Details

Pages 145-149

- **Personal Property Assessment Calendar**
 - Personal Property is Assessed Annually
 - Form 1's due May 1st for the following July 1 tax levy
 - Individual Corporate, LLC, or Sole Proprietor assessments begin to be certified July 1 to each jurisdiction
 - Certification of Assessments occurs monthly and jurisdictions bill after certification
- Filing forms on SDAT Website

The Assessment Process

Personal Property



As of 6.30.2014:

- **495,170 – Active Entities – Corps, LLC’s, etc.**
- **84,240 – Sole Proprietorships**

As of 6.30.2014:

For 2013

- **134,221 – certified Legal Entities = Co. Base \$11,293,375,370**
- **12,845 - certified Sole Proprietorships = Co. Base \$ 360,586,180**

For 2012

- **136,170 – certified Legal Entities = Co. Base \$ 11,293,375,370**
- **13,805 - certified Sole Proprietorships = Co. Base \$ 381,747,820**

For 2011

- **137,521 – certified Legal Entities = Co. Base \$ 12,212,842,520**
- **14,054 - certified Sole Proprietorships = Co. Base \$ 373,639,300**

The Assessment Process

Utility, Pipelines, and Railroad's

OV

PPA

- **Assessment process** – Discover, List, and Value
- MD is **a unitary state** for valuation of regulated utilities
- **Entity files** regulatory reports annually – (FERC 1, etc.)
- The **filings** include income and cost information
- The entire operating unit of the entity is **valued annually** (inside and outside the state) for assessment
- The operating unit value within MD is **allocated** to MD
- The MD portion of the operating unit value is then **distributed** to each taxing jurisdiction
- **Non-operating property** is assessed as real or personal property, as applicable

County Assessable Base FY 2014

OV

Historic – Base Charts on SDAT Website

The Estimated Taxable Assessable Base at the County Level

For the tax year beginning July 1, 2014

Base Estimate Date: March 31, 2014

(figures expressed in thousands)

Jurisdiction	Real Property Full Year	Real Property New Construction	Railroad Operating Real Property	Total Assessable Base Subject to the Real Property County Tax Rate	Loss Due to Homestead Tax Credit	County Homestead Tax Credit Percentage	Net Assessable Base Subject to the Real Property County Tax Rate	Railroad Operating Personal Property	Utility Operating Personal Property	Utility Operating Personal Property	Business Personal Property	Total Assessable Base Subject to the Personal Property / Utility County Tax Rates	Total Taxable County Assessable Base
Allegany	3,532,782	750	15,272	3,548,804	7,574	7%	3,541,230	17,581	6,183	124,054	190,871	338,689	3,887,493
Anne Arundel	75,699,461	150,000	791	75,850,252	8,738,628	2%	67,111,624	1,231	37,612	839,834	1,600,763	2,479,440	78,329,692
Baltimore City	34,301,772	38,750	209,049	34,549,571	2,045,572	4%	32,503,999	31,471	131,287	819,880	1,008,280	1,990,918	36,540,489
Baltimore	75,258,080	140,000	14,162	75,412,242	1,637,112	4%	73,775,130	9,996	106,477	1,127,398	1,647,538	2,891,409	78,303,651
Calvert	11,306,334	20,000	0	11,326,334	1,411	10%	11,324,923	0	88,021	753,899	109,282	951,202	12,277,536
Caroline	2,501,157	1,000	0	2,502,157	18,691	5%	2,483,466	0	4,789	53,386	54,147	112,322	2,614,479
Carroll	17,893,720	30,000	5,581	17,929,301	21,146	5%	17,908,155	6,788	12,744	237,176	250,342	507,050	18,436,351
Cecil	9,268,763	10,000	6,100	9,284,863	11,653	8%	9,273,210	5,111	14,755	150,102	243,423	413,391	9,698,254
Charles	15,372,399	58,750	1,250	15,432,399	7,420	7%	15,424,979	2,703	17,598	308,547	597,570	926,418	16,358,817
Dorchester	2,813,112	1,000	0	2,814,112	30,720	5%	2,783,392	0	2,181	93,643	14,488	110,312	2,924,424
Frederick	25,835,966	60,000	10,693	25,906,659	44,370	5%	25,862,289	0	23,798	272,379	0	296,177	26,202,836
Garrett	4,259,420	4,025	962	4,264,407	36,128	5%	4,228,279	8,266	34,797	66,733	89,399	199,195	4,463,602
Harford	25,717,764	50,000	2,290	25,770,054	9,129	5%	25,760,925	2,405	32,427	462,762	572,701	1,070,295	26,840,349
Howard	43,710,691	125,000	15,849	43,851,540	638,716	5%	43,212,824	6,769	25,811	539,468	898,985	1,471,033	45,322,573
Kent	2,909,028	2,000	0	2,911,028	80,551	5%	2,830,477	0	1,837	34,945	0	36,782	2,947,810
Montgomery	165,210,222	425,000	10,837	165,646,059	90,920	10%	165,555,139	6,343	98,816	1,371,915	2,316,083	3,793,157	169,439,216
Prince George	74,020,302	225,000	7,425	74,252,727	2,081,945	2%	72,170,782	8,955	56,624	1,344,560	1,387,711	2,797,850	77,050,577
Queen Anne's	7,573,738	12,500	0	7,586,238	105,441	5%	7,480,797	0	3,971	59,192	0	63,163	7,649,401
St. Mary's	11,813,580	37,500	0	11,851,080	198,092	5%	11,652,988	0	4,349	98,425	166,325	269,099	12,120,179
Somerset	1,354,569	1,500	6,063	1,362,132	1,209	10%	1,360,923	4,995	1,039	31,413	32,212	69,659	1,431,791
Talbot	8,459,087	3,635	0	8,462,722	1,457,131	0%	7,005,591	0	3,165	52,346	0	55,511	8,518,233
Washington	11,811,251	12,500	31,970	11,855,721	19,416	5%	11,836,305	15,988	17,436	131,827	379,362	544,613	12,400,334
Wicomico	5,676,490	3,000	6,988	5,686,478	2,615	5%	5,683,863	4,774	11,339	123,085	236,242	375,440	6,061,918
Worcester	14,539,962	4,000	643	14,544,605	177,572	3%	14,367,033	236	4,491	110,614	205,867	321,208	14,865,813
TOTAL	650,839,650	1,415,910	345,925	652,601,485	17,463,162		635,138,323	133,612	741,547	9,207,583	12,001,589	22,084,331	674,685,816

Full year column includes new construction added for the full year (July 1). New construction is property added for partial year levy (Oct. 1, Jan 1, and Apr. 1).

Cecil County full year and business personal property columns include the value of the Rock Springs Non-Utility Generator.

Garrett County is not levying a tax against business personal property. The figures in that column are for personal property of a non-utility generator used to generate electricity which is a separate class of property.

County Assessable Base FY 2014

Jurisdiction	Real Property Full Year	Real Property New Construction	Railroad Operating Real Property	Total Assessable Base Subject to the Real Property County Tax Rate
Allegany	3,532,782	750	15,272	3,548,804
Anne Arundel	75,699,461	150,000	791	75,850,252
Baltimore City	34,301,772	38,750	209,049	34,549,571
Baltimore	75,258,080	140,000	14,162	75,412,242
Calvert	11,306,334	20,000	0	11,326,334
Caroline	2,501,157	1,000	0	2,502,157
Carroll	17,893,720	30,000	5,581	17,929,301
Cecil	9,268,763	10,000	6,100	9,284,863
Charles	15,372,399	58,750	1,250	15,432,399
Dorchester	2,813,112	1,000	0	2,814,112
Frederick	25,835,966	60,000	10,693	25,906,659
Garrett	4,259,420	4,025	962	4,264,407
Harford	25,717,764	50,000	2,290	25,770,054
Howard	43,710,691	125,000	15,849	43,851,540
Kent	2,909,028	2,000	0	2,911,028
Montgomery	165,210,222	425,000	10,837	165,646,059
Prince George	74,020,302	225,000	7,425	74,252,727
Queen Anne's	7,573,738	12,500	0	7,586,238
St. Mary's	11,813,580	37,500	0	11,851,080
Somerset	1,354,569	1,500	6,063	1,362,132
Talbot	8,459,087	3,635	0	8,462,722
Washington	11,811,251	12,500	31,970	11,855,721
Wicomico	5,676,490	3,000	6,988	5,686,478
Worcester	14,539,962	4,000	643	14,544,605
TOTAL	650,839,650	1,415,910	345,925	652,601,485

County Assessable Base FY 2014

(figures expressed in dollars)

Jurisdiction	Total Assessable Base Subject to the Real Property County Tax Rate	Loss Due to Homestead Tax Credit	County Homestead Tax Credit Percentage	Net Assessable Base Subject to the Real Property County Tax Rate
Allegany	3,548,804	7,574	7%	3,541,230
Anne Arundel	75,850,252	8,738,628	2%	67,111,624
Baltimore City	34,549,571	2,045,572	4%	32,503,999
Baltimore	75,412,242	1,637,112	4%	73,775,130
Calvert	11,326,334	1,411	10%	11,324,923
Caroline	2,502,157	18,691	5%	2,483,466
Carroll	17,929,301	21,146	5%	17,908,155
Cecil	9,284,863	11,653	8%	9,273,210
Charles	15,432,399	7,420	7%	15,424,979
Dorchester	2,814,112	30,720	5%	2,783,392
Frederick	25,906,659	44,370	5%	25,862,289
Garrett	4,264,407	36,128	5%	4,228,279
Harford	25,770,054	9,129	5%	25,760,925
Howard	43,851,540	638,716	5%	43,212,824
Kent	2,911,028	80,551	5%	2,830,477
Montgomery	165,646,059	90,920	10%	165,555,139
Prince George's	74,252,727	2,081,945	2%	72,170,782
Queen Anne's	7,586,238	105,441	5%	7,480,797
St. Mary's	11,851,080	198,092	5%	11,652,988
Somerset	1,362,132	1,209	10%	1,360,923
Talbot	8,462,722	1,457,131	0%	7,005,591
Washington	11,855,721	19,416	5%	11,836,305
Wicomico	5,686,478	2,615	5%	5,683,863
Worcester	14,544,605	177,572	3%	14,367,033
TOTAL	652,601,485	17,463,162		635,138,323

County Assessable Base FY 2014

Jurisdiction	Railroad Operating Personal Property	Utility Operating Real Property	Utility Operating Personal Property	Business Personal Property	Total Assessable Base Subject to the Personal Property & Utility County Tax Rates	Net Total Taxable County Assessable Base
Allegany	17,581	6,183	124,054	190,871	338,689	3,887,493
Anne Arundel	1,231	37,612	839,834	1,600,763	2,479,440	78,329,692
Baltimore City	31,471	131,287	819,880	1,008,280	1,990,918	36,540,489
Baltimore	9,936	106,477	1,127,398	1,647,538	2,891,409	78,303,651
Calvert	0	88,021	753,899	109,282	951,202	12,277,536
Caroline	0	4,789	53,386	54,147	112,322	2,614,479
Carroll	6,788	12,744	237,176	250,342	507,050	18,436,351
Cecil	5,111	14,755	150,102	243,423	413,391	9,698,254
Charles	2,703	17,598	308,547	597,570	926,418	16,358,817
Dorchester	0	2,181	93,643	14,488	110,312	2,924,424
Frederick	0	23,798	272,379	0	296,177	26,202,836
Garrett	8,266	34,797	66,733	89,399	199,195	4,463,602
Harford	2,405	32,427	462,762	572,701	1,070,295	26,840,349
Howard	6,769	25,811	539,468	898,985	1,471,033	45,322,573
Kent	0	1,837	34,945	0	36,782	2,947,810
Montgomery	6,343	98,816	1,371,915	2,316,083	3,793,157	169,439,216
Prince George	8,955	56,624	1,344,560	1,387,711	2,797,850	77,050,577
Queen Anne's	0	3,971	59,192	0	63,163	7,649,401
St. Mary's	0	4,349	98,425	166,325	269,099	12,120,179
Somerset	4,995	1,039	31,413	32,212	69,659	1,431,791
Talbot	0	3,165	52,346	0	55,511	8,518,233
Washington	15,988	17,436	131,827	379,362	544,613	12,400,334
Wicomico	4,774	11,339	123,085	236,242	375,440	6,061,918
Worcester	236	4,491	110,614	205,867	321,208	14,865,813
TOTAL	133,612	741,547	9,207,583	12,001,589	22,084,331	674,685,816

The Appraisal Process

OV

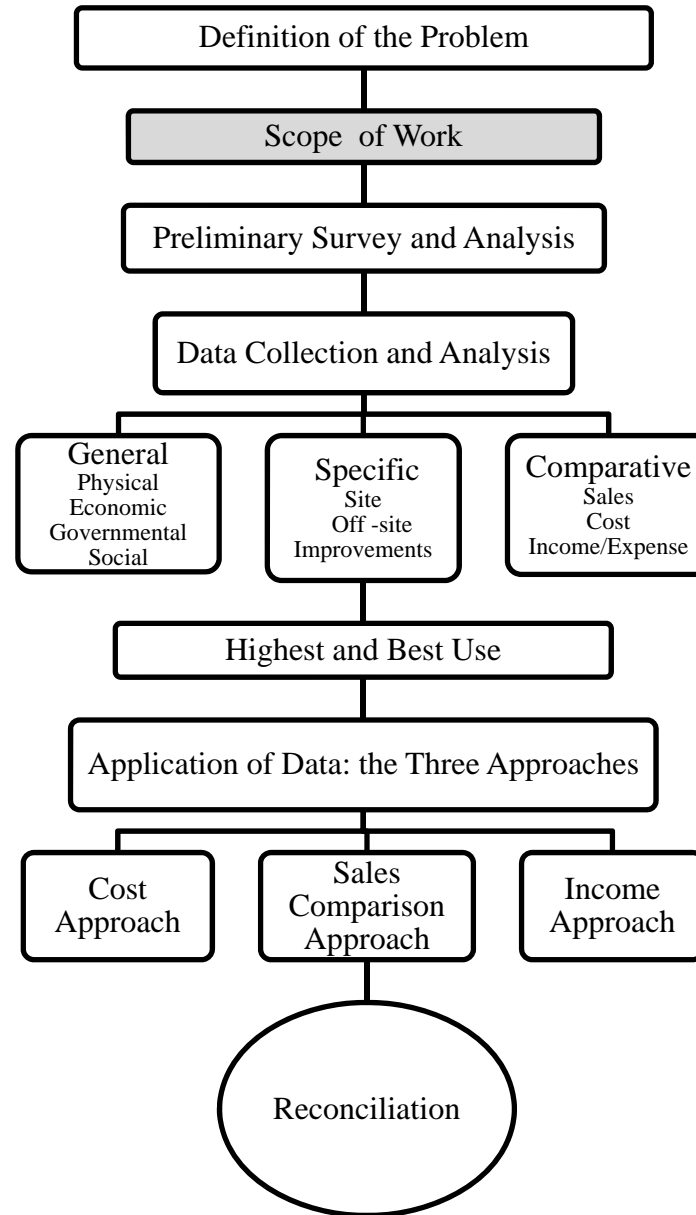
RPA/PI

- **Appraisers/assessors** follow the **Appraisal Process** when valuing property
- **The Appraisal Process** is a problem solving process
- **Fee appraisers** use single property appraisal methods
- **Ad Valorem appraisers (assessors)** use mass appraisal methods and techniques
- **The appraisal process** is a systematic set of procedures an appraiser follows it to provide answers to a client's questions about real property value
- **In appraisal, the appraiser may study a property** from three different viewpoints, which are referred to as the three approaches to value

Appraisal Process

Details

Pages 150



The Appraisal Process

- **Research begins after** the appraisal problem has been defined and the scope of work has been identified
- **Market analysis and research provides the data from which** the appraiser can develop quantitative information and other evidence of market trends
- **Ultimate goal of the Appraisal Process is a well supported value conclusion** that reflects all of the pertinent factors that influence the market value of the properties being appraised
- **Traditionally, specific appraisal techniques are applied** to derive indications of property value

The Appraisal Process

- **One or more of the approaches may be used** depending upon their applicability to the assignment, the nature of the property and the availability of data
- **The three approaches are interrelated**
- **Each approach requires the gathering and analysis of certain data** that pertains to the property being appraised.
- **Market Analysis** may require the assessor to gather and analyze market data locally within the jurisdiction, statewide, regionally, nationally or internationally depending upon the type of property.
- **General data and specific data** are analyzed in market analysis and may include market analysis publications regarding specific property types. This is especially true with income producing properties

Single Property vs. Mass Appraisal

Details

Pages 151-153

- **USPAP Standards 1 & 2**

(single property) and **Standard 6** (mass appraisal)

- **SINGLE PROPERTY APPRAISAL INVOLVES APPRAISAL OF A SINGLE PROPERTY**

- **MASS APPRAISAL INVOLVES APPRAISAL OF MANY PROPERTIES**

- **SIMILARITIES**

- BOTH USE THREE BASIC APPROACHES TO VALUE

- BOTH REQUIRE MARKET RESEARCH

- **DIFFERENCES**

- SCALE OF MASS APPRAISAL IS MUCH LARGER

- MASS APPRAISAL EMPHASIZES STANDARDIZATION

- MASS APPRAISAL EMPLOYS STATISTICAL TESTING AND QUALITY CONTROL

Single Property Appraisal vs. Mass Appraisal

- **Single Property Appraisers** – appraising residential properties for collateral loan purposes might be able on average 2 typical average residential properties per day including field inspections
- **Mass Appraisers (Maryland field assessors)** given current total parcels and field assessors each assessor must appraise **5,163 parcels annually** ($2,303,277 \text{ tot. par.} / 3 = 790,083 / 153 \text{ assessors} = 5,163$).
- **Assessor's appraise all real property** types (res. com. ind, etc.)
- If assessors were only doing appraisal and no other functions with 205 days per year available - they would have value **25 properties per day**. However after CORE Day responsibilities including new property pick up and appeals, the average appraisals per day increases to in **excess of 70 per day**.

Approaches to Value

Cost Approach - “ a set of procedures through which a value indication is derived for a fee simple interest of a property by estimating the current cost to construct a reproduction of (or replacement for) the existing structure ...deducting depreciation for the total cost, and adding the estimated land value...” *

* The Appraisal of Real Estate 13th Edition, Appraisal Institute

Approaches to Value

Sales Comparison Approach - “ a set of procedures through which a value indication is derived for a property being appraised to similar properties that have sold recently, applying appropriate units of comparison, and making adjustments to the sale prices of the comparables based on the elements of comparison. The sales comparison approach may be used to value, improved properties, vacant land, or land being appraised as though vacant ...” *

* The Appraisal of Real Estate 13th Edition, Appraisal Institute

Approaches to Value

Income Capitalization Approach - “ a set of procedures through which a value indication is derived for an income producing property by converting anticipated benefits (cash flow and reversion) into property value. The conversion can be accomplished in two ways.

- One year’s (stabilized) income expectancy can be capitalized at a market-derived capitalization rate or at a capitalization rate that reflects the specified income pattern, return on the investment, and the change in the value of the investment. (**Direct Capitalization**)
or ...
- The annual cash flows for the holding period and the reversion can be discounted at a specified yield rate (**Yield Capitalization**)
...” *

* The Appraisal of Real Estate 13th Edition, AI

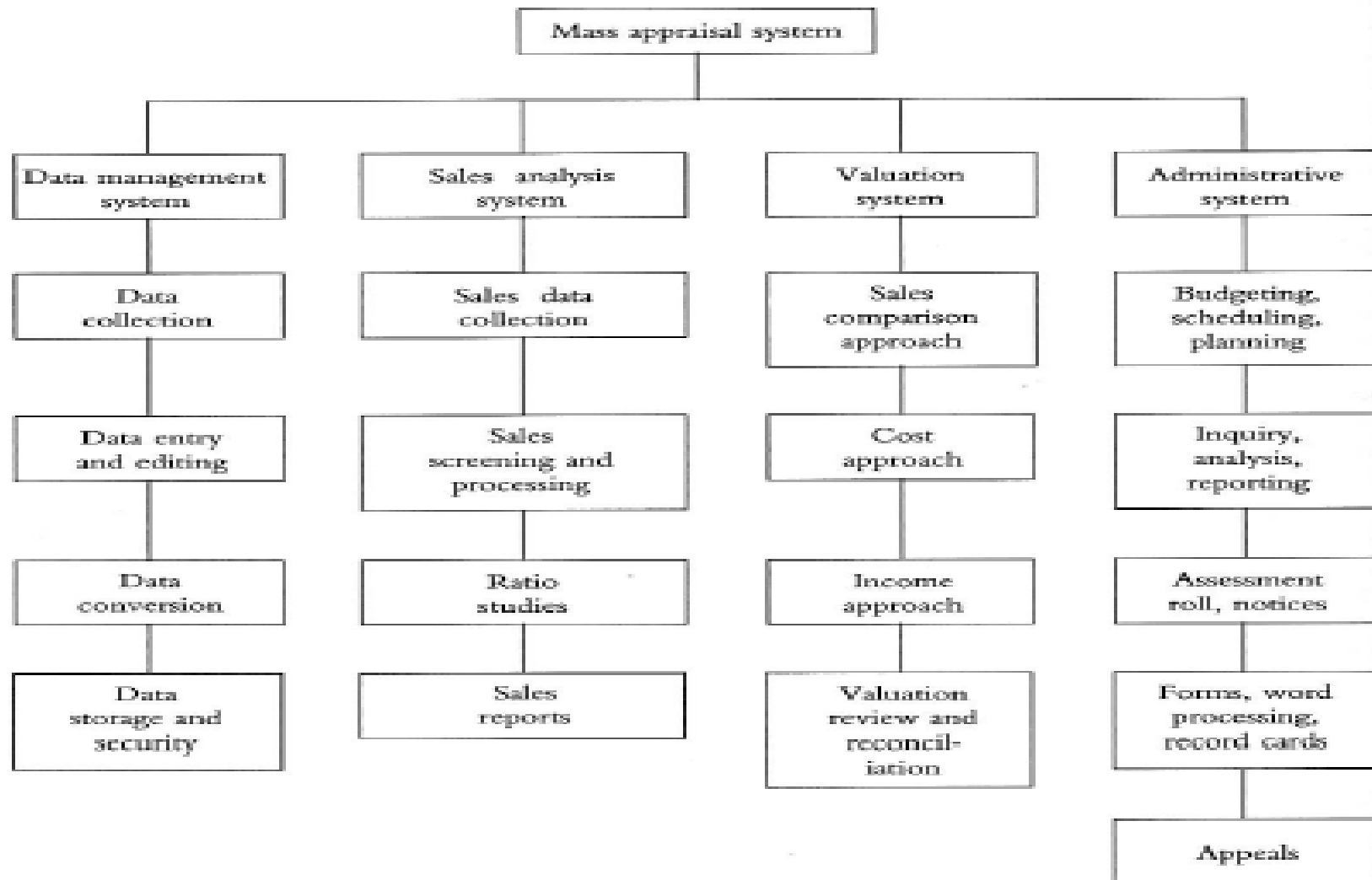
Mass Appraisal System

OV

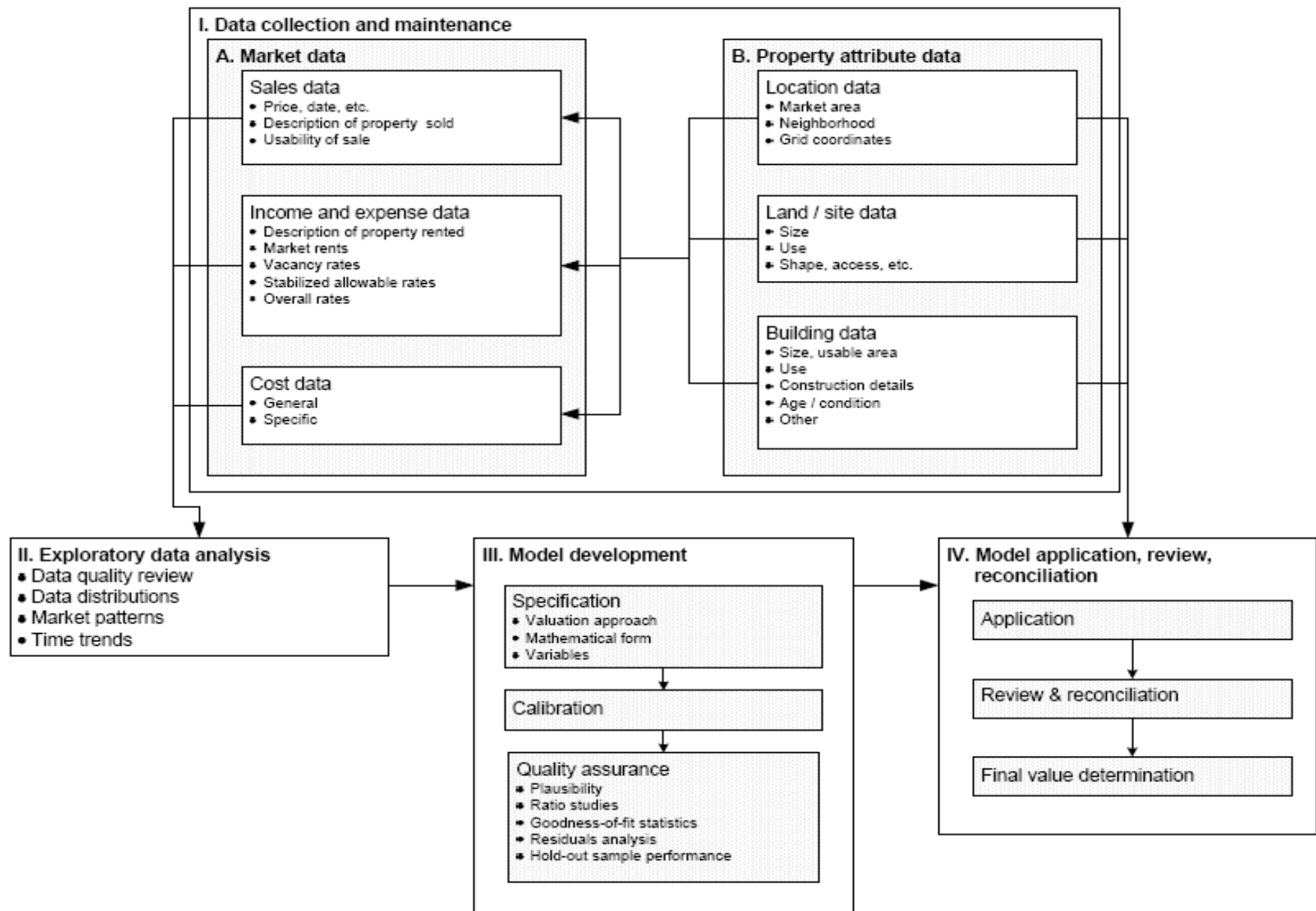
RPA/PI

PPA

Figure 1. Components of a Mass Appraisal System



Mass Appraisal System



Mass Appraisal

- **MASS APPRAISAL:** the process of valuing a universe of properties as of a given date using standard methodology, employing common data, and allowing for statistical testing. (USPAP Definitions)
- **MASS APPRAISAL MODEL:** a mathematical expression of how supply and demand factors interact in a market. (USPAP Definitions)

Mass Appraisal

Model Specification (USPAP/STD 6)

- Mass appraisers develop **mathematical models** that, with reasonable accuracy, represent the relationship between property value and supply and demand factors, as represented by quantitative and qualitative property characteristics.
- Models **may be specified by the cost, sales comparison, or income approaches** to value.
- Specification format may be **tabular**, mathematical, linear, nonlinear, or any other structure suitable for representing the observable property characteristics.
- **Appropriate approaches** to value must be used to value a class of properties.

Mass Appraisal

Details

Pages 154-155

Model Calibration (USPAP/STD 6)

- After a model is specified, model calibration occurs.
- Calibration refers to the process of analyzing sets of property and market data to determine the specific parameters of a model.
- Simply it is the development of rates or coefficients for use in the model. These include such things building rates, land rates, depreciation rates and adjustments and other items.

Market Calibrated Cost Model

OV

RPA/PI

Details

Pages 156-178

▪ Simple Cost Model

$$MV = RCN - D + LV$$

- MV = Market Value
- RCN = Replacement Cost New
- D = Depreciation
- LV = Land Value

- **Prior to model calibration, market analysis occurs and an a prior assessment to sale price ratio is performed on arms length property sales**

- Prior Assessment = $\frac{300,000}{360,000} = .833$

Current Sale 360,000

This tests the level of existing assessments to current market sales prices.

Market Calibrated Cost Model

STEPS IN THE COST APPROACH TO VALUE

1. Estimate the land (site) value as if vacant and available for development to its highest and best use.
2. Estimate the total cost new of the improvements.
3. Estimate the total amount of depreciation from all causes.
4. Subtract the total dollar amount of depreciation from the total cost new of the primary improvements.
5. Estimate the total cost new of any accessory improvements and site improvements.
6. Add site value to the depreciated cost of the primary improvements, accessory improvements, and site improvements, to arrive at a value indication by the cost approach.

Market Calibrated Cost Model

- **Through market analysis in the calibration process,** rates are developed for construction cost, depreciation and land
- **In market analysis,** property sales are analyzed.
- **Properties are grouped by geographic areas – Market Areas and Neighborhoods**
- **The developed rates are applied to each property to** value the land and building.
- **Within each Market Area and Neighborhood comparable sale properties are valued by the cost model.**
- **An New Assessment to Sale Price ratio is then calculated for each comparable sale that is valued by the cost model.**

Market Calibrated Cost Model

- The target would be 100 %
 - $$\frac{\text{New Assessment}}{\text{Current Sale}} = \frac{349,000}{360,000} = .967$$
- If acceptable ratio statistics are produced, the model is applied to all non sale properties to complete the valuation
- Sales analysis, ratio reports are produced and assessment and data edits are performed before assessment notices are mailed

Market Calibrated Cost Model

- It is through the application of this model, that the uniformity/equalization of assessment occurs (treating like properties alike) similar properties have similar starting point with a similar cost new. similar condition properties have similar depreciation, and similar land value
- In order to have accurate values property data must be correct.

Assessment Ratio Study

- Ratio studies may be performed for various reasons including appraisal accuracy and assessment equity studies, to judge the need for management of a reappraisal, to identify problems with appraisal procedures, to assist in market analysis, and to adjust appraised values.

Assessment Ratio Study

IAAO's Ratio Study Performance Standards

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

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

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

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

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

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

Source: Standard on Ratio Studies; International Association of Assessing Officers; Kansas City, Mo; January, 2010; pp.18, 19.

Trending or Indexing Assessments

OV

- Some have indicated that trending or indexing of prior assessments would be a method for re-assessing properties.
- While this could be done as an updating technique when detailed assessment to sale ratio analysis is conducted, one has to be extremely careful that like types of property are stratified by neighborhood and model type and analyzed in that manner. Index's developed across large geographic areas or many property types, can cause uniformity problems.
- To apply an index or trend factor in a geographic area where there is wide assessment dispersion will magnify or increase the dispersion.

Trending or Indexing Assessments

- The application indexes such as the Case Schiller Home price index is technically fraught with problems and could never be used for updating assessments.
- The information in this index is general data and not specific to each market area within each county.
- It may be indicative of generally what is happening across a broad market area – it is considering changes in sales prices and rents over time.
- It does not consider the level of prior assessment to current sales price. The base to be indexed is the prior assessment and the common level of value with various neighborhood may be different – to apply one common index for a general area to a different base increases dispersion and increases non-uniform assessment

Accurate Data/Accurate Values

OV

- **Properties should be regularly re-inspected** to ensure existing data is accurate and current – Maryland is to physically inspect once every three years as required by law.
- **IAAO standards** call for routine property inspections **at least every six years**. Many states are more frequent
- **Often Building permits, and technology** - aerial/oblique photography, street view images and the linking of this data with the assessors valuation system (CAMA or AAVS) **allows for a timely and efficient review of property record characteristics.**
- SDAT does not have aerial oblique photography, or street view images which should be linked to the valuation system.

Property Record Card – Inspection and Cost Model



Account # 2208065013_____

STATE OF MARYLAND DEPARTMENT OF ASSESSMENTS AND TAXATION
PROPERTY RECORD CARD - REASSESSMENT YEAR 2012

Page 1 of 1
PRINTED 12/09/2011

Owner JOHN Q. DOE Mail Addr 12345 ANYWHERE DR ANYPLACE, MD 21111-1111	Property Use Residential Occupancy Owner Occupied Valued By Value Method MD Value	Map/Gr/Par/Sec/Bl/Lt 220000 / 0023 / 0280 / / / 1A Field Sequence Number 01234-022-00-00 Neighborhood 3010077.22 BPRUC	Legal Description 4.13 ACRES PAR A 12345 ANYWHERE DR MARYLAND ACRES	VALUE SUMMARY FULL CASH VALUE <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: right;">Prior</td> <td style="text-align: right;">Current</td> </tr> <tr> <td>Total Land</td> <td style="text-align: right;">116,300</td> <td style="text-align: right;">96,300</td> </tr> <tr> <td>Total Improvements</td> <td style="text-align: right;">348,600</td> <td style="text-align: right;">253,300</td> </tr> <tr> <td>Total Value</td> <td style="text-align: right;">464,900</td> <td style="text-align: right;">349,600</td> </tr> <tr> <td>Preferential Land</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Curtilage</td> <td style="text-align: right;">464,900</td> <td style="text-align: right;">349,600</td> </tr> </table>		Prior	Current	Total Land	116,300	96,300	Total Improvements	348,600	253,300	Total Value	464,900	349,600	Preferential Land	0	0	Curtilage	464,900	349,600														
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PARCEL NOTES Cedar siding, 97 RA - Remove greenhouse NC. 2000RA add pool & deck. 2009 RA - Refinished bank barn - added back to assessment. 03RA 2WB addition, bath, demolish garage & construct new garage, porch \$88,000; send NC notice.				PROPERTY CHARACTERISTICS <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>CATEGORY</th> <th>CHARACTERISTIC</th> </tr> </thead> <tbody> <tr> <td>Sewer System</td> <td>Septic</td> </tr> </tbody> </table>				CATEGORY	CHARACTERISTIC	Sewer System	Septic																									
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Property Record Card

OV

1. **Administrative data:** Reassessment Year - Owner, Address, Property Use and Location, Field Sequence #, Neighborhood, Legal Description
2. **Dwelling Data:** Year built, Type, Quality

 Section Name: Section name, Area, Heated area, Total Heated Area
3. **Dwelling Characteristics:** Category, Type, % - Category, Units
4. **Depreciation and Adjustments:** Depreciation Type and Adjustment, Total Depreciation
5. **Price Index Type:** Neighborhood Adjustment, County Multiplier, Quality Adjustment, Structure Adjustment
6. **Description:** Land Value
8. **Improvement Sketch:** Shows each section of main improvement, Site Address is show at bottom of sketch box
9. **Value Summary – Full Cash Value:** Prior and Current Years, Improvement, Land, Total, Preferential Land, Curtelage
10. **Sale Data:** Date of Sale and Sale Price
11. **Building Notes:** - includes permit data
12. **Outbuilding Data:** Description, Year built, Units, Quality Price, %condition, Value, Notes
13. **Dwelling Value:** Total Dwelling Value, Value per # of Heated Area

Property Record Card – Inspection and Cost Model

OV

- Property record card is used for many purposes - all data, info for each account
- Assessor uses in field inspection or (with imagery) to verify relevant characteristics and to note changes and corrections
- Blank Card is used for new property inspections – pickups
- Sketch allows quick viewing to identify sections, measurements, size, etc.
- Property owner can request record card and sales analysis
- The data is the basis for information on tax roll and the SDAT Website for each property

Property Sales Analysis



- A property Sales Analysis is used to analyze the results of the model - property sales are listed with various data and assessment ratios (new value to sale price) and descriptive statistics about the data

Illustrative Sales Analysis

Sale #	Sale Date	Sale Price	Prior Assess	Prior Ratio	LAND					IMP										Total				
					Land Size	PriorLd Rate	PriorLd Value	New Ld Rate	New Ld Value	PriorIMP Value	IMP Quality	Size	RCN	RCN SqFt	YearBlt Eff Age	IMP Cond.	% Dep.	Value	IMP Value sqfoot	New L&I Value	New Value SqFt	Sale Per SqFt	Proposed Ratio	MVI
1	XXXXXXXX	365,000	300,000	0.82	4.13	20,000	82,600	23,317	96,300	217,400	4	3,489	468,974	134.42	1982	AVE	0.25	246,822	70.74	349,022	100.03	104.61	0.96	0
2																								
3																								
Total		X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X
Count																								
Mean																								
Median																								
COB																								
St.Dev																								
COV																								

x - descriptive statistics calculate

Commercial & Industrial Appraisal

OV

- **Cost Approach** – cost record document and cost the quality, physical characteristics and condition of the property

$$V = RCNLD + LV$$

where

V = value

$RCNLD$ = replacement cost new less depreciation

LV = land value

Commercial & Industrial Appraisal

- **Sales Comparison Approach** – if comparable sales are available, develop units of comparison from recent comparables – (Sale price per unit, per square foot, per space, etc.), make adjustments for differences to the subject, and value the subject.

$$V = SP \pm ADJ$$

where

SP = sale price

ADJ = adjustment to sale price.

Commercial & Industrial Appraisal

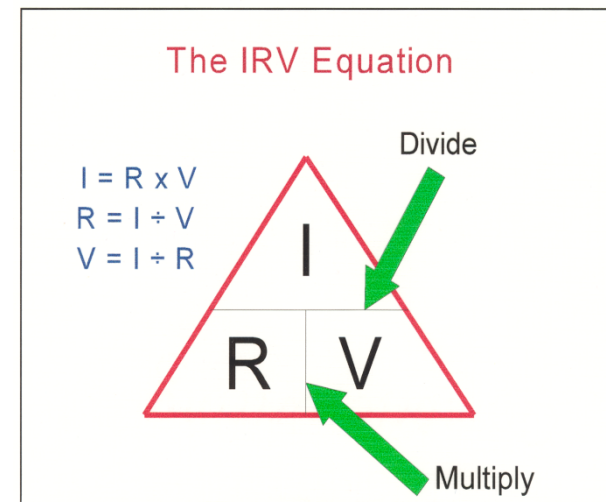
- **Income Approach** – an estimate of market rent (net operating income) is capitalized into and estimate of value by a capitalization rate in direct capitalization.

$$V = I \div R$$

where

I = Income

R = capitalization rate



- **Assessor most document** market rent, operating expense ratios, and capitalization rates for each appraisal cycle by type of income producing property.

Commercial & Industrial Appraisal

▪ Six Methods to Develop Capitalization Rates

1. Market Comparison – IRV (R = Income/Value)
2. Band of Investment – Mortgage Equity
3. Band of Investment – Land Building
4. Debt Coverage Ratio
5. Net Income Ratio
6. Yield Change

Assessor must document capitalization rates for each appraisal cycle by type of Income producing property.

Commercial & Industrial Net Operating Income

NOI Flowchart

GPI	(Gross Potential Income)
- V & C	(Vacancy and Collection Loss)
+ Other Income	
= EGI	(Effective Gross Income)
- Op. Ex.	(Operating Expenses)
	- Property Operating Expense
	- Reserves for Replacement
= NOI	(Net Operating Income)
- Debt Service	
= Before Tax (Income Tax) Cash Flow	

Commercial & Industrial Income and Expense Forms

Commercial Property Income Questionnaires

For further information, or to receive a particular questionnaire, contact your local Department of Assessments and Taxation office. **Completed questionnaires must be returned to the appropriate local assessment office.**

Apartment Building

Assisted Living Facility

Campground

Cemetery

Commercial/ Industrial

Garage and Parking Lot

Golf Course

Hotel/Motel

Marina

Mobile Home Park

Nursing Home

Section 42 Tax Credit Property

Subsidized Housing

Tenant List & Rent Schedule

Apartment Income and Expense Form

APARTMENT INCOME AND EXPENSE QUESTIONNAIRE
 FOR THE 36 MONTHS: FROM 2011 TO 2013

NAME AND LOCATION OF PROPERTY _____ OWNER AND ADDRESS OF RECORD _____

Check Services & Utilities in Rent: Heat () A/C () Gas () Electricity ()
 Carpets () Drapes () Washer/Dryer () Swimming Pool () Party Room ()
 Tennis () Parking () Switchboard () Security ()

RENT SCHEDULES:

	# UNITS	BATH/UNIT	2013 RENT/MO.	2012 RENT/MO.	2011 RENT/MO.
Efficiency	_____	_____	_____	_____	_____
1 Bedroom	_____	_____	_____	_____	_____
2 Bedroom	_____	_____	_____	_____	_____
2 Bedroom & Den	_____	_____	_____	_____	_____
3 Bedroom	_____	_____	_____	_____	_____
3 Bedroom & Den	_____	_____	_____	_____	_____
Other (List)	_____	_____	_____	_____	_____
PARKING # SPACES	_____	_____	_____	_____	_____

Retail/Commercial:

	# UNITS	LEASABLE	RENT/SF	RENT/SF	RENT/SF
Shops/Stores	_____	_____	_____	_____	_____
Offices	_____	_____	_____	_____	_____
Other (List)	_____	_____	_____	_____	_____

ANNUAL INCOME:

	2013	2012	2011
1. Total Gross Rents (100% Occupancy)	\$ _____	_____	_____
2. Owner, Janitor, Manager Apartments	\$ _____	_____	_____
3. Other Income (laundry, pool, etc.)	\$ _____	_____	_____
4. Loss due to vacancy or delinquent.	\$ _____	_____	_____
5. TOTAL ACTUAL INCOME (Total lines 1-4)	\$ _____	_____	_____

EXPENSES:

6. Payroll (except manager, repair)	\$ _____	_____	_____
7. Supplies (janitor, bulbs, etc.)	\$ _____	_____	_____
8. Electricity	\$ _____	_____	_____
9. Water/Sewage	\$ _____	_____	_____
10. Fuel (Type of fuel: _____)	\$ _____	_____	_____
11. Management Fees/Wages	\$ _____	_____	_____
12. Administrative Costs (List)	\$ _____	_____	_____
13. Maintenance & Repairs (List)	\$ _____	_____	_____
14. Miscellaneous Expenses (List)	\$ _____	_____	_____
15. Fire Insurance & Extend. Coverage	\$ _____	_____	_____
16. Reserves for Replacements (List)	\$ _____	_____	_____
17. TOTAL EXPENSES (Total lines 6-16)	\$ _____	_____	_____
18. Net Operating Income (Line 5 less line 17)	\$ _____	_____	_____
19. Real Estate Taxes	\$ _____	_____	_____
20. Mortgage Payment	\$ _____	_____	_____
21. Building Depreciation	\$ _____	_____	_____
22. Capital Expenditure	\$ _____	_____	_____

MORTGAGE/SALES INFORMATION:

1. Is there a current mortgage on this property? Yes _____ No _____

2. If Yes, please provide the following data:

Name of Mortgagee _____	Mortgage Amount _____	Interest Rate _____
Term of Mortgage _____	Date 1 st Payment _____	Monthly Payment _____

3. Please provide: Date Purchased _____ Consideration _____

I declare, under the penalties of perjury, that the contents of this form and all the accompanying schedules and statements have been examined by me and are true, correct, and complete to the best of my knowledge, information, and belief.

Signature _____	Title of Signer _____	Date _____
Print/Type Name of Signer _____	Phone Number _____	RP-6 (Rev.12/03 r5)

NOI – Income Cap. Work Sheet

<u>Apartment Building</u>								
	<u>Units</u>	<u>Number</u>	<u>Monthly</u>	<u>Annual</u>				
	1 bed 1 bath	205	1150	2,829,000				
	2 bed 2 bath	183	1450	3,184,200				
	3 bed 2 bath	81	1650	1,603,800				
		469		7,617,000				
<u>Income</u>		<u>Actual 2011</u>		<u>Actual 2012</u>		<u>Actual 2013</u>	<u>STABILIZED</u>	
	Gross Potential	\$6,755,783		\$7,260,237		\$7,560,401	\$7,617,000	
	Concessions	-\$10,600		-\$21,193		-\$33,044	-\$20,000	
	Total Gross Income	\$6,745,183		\$7,239,044		\$7,527,357	\$7,616,005	
	<u>Vacancy/ Bad Debt</u>	\$719,494		\$560,175		\$686,605	\$377,020	
		11%		8%		9%	5%	
	Other Income	\$396,612		\$412,008		\$329,224	\$330,000	
	<u>Effective Gross Income</u>	\$6,422,301		\$7,090,877		\$7,169,976	\$7,568,985	
<u>Expenses</u>							<u>Avg</u>	
	Miscellaneous Expenses	\$692,062	11%	\$702,506	10%	\$693,120	10%	\$765,731
	Utilities	\$251,489	4%	\$246,678	3%	\$252,063	4%	\$275,264
	Maintenance & Repairs	\$402,662	6%	\$285,114	4%	\$329,149	5%	\$375,453
	Payroll (except manager, repair)	\$651,240	10%	\$714,822	10%	\$675,775	9%	\$747,973
	Reserves for Replacement							\$227,070
	<u>Total Expenses</u>	\$1,997,453		\$1,949,120		\$1,950,107		\$2,422,075
		31%		27%		27%		32%
	<u>Net Operating Income</u>	\$4,424,848		\$5,141,757		\$5,219,869		\$5,146,910
	<u>Capitalization Rate</u>					Base Cap	7.000%	
						Effective Tax	1.062%	
						Overall Cap	8.062%	
	<u>Indicated Value as of 1/1/2014</u>							\$63,841,600
	<u>Current Assessment</u>							\$60,558,600

Assessment Calendar

- Assessment Notices Mailed Last Week of December – owner has 45 days to appeal if desired
- Planning Begins for the next revaluation cycle – current sales to prior assessment ratio
- Assessor Assignments Planned – geographic assignments

- Accept Assessment Appeals and Key into appeals tracking system
- Prepare AAVS for Next Geo Code Revaluation
- New Construction pick-up and Valued for Jan 1
- Assessor continue reassessment field reviews and edits

- New Construction pick-up and valued for Jan 1 (1/2 year) levy
- Editing of current years revaluation
- Percent change reports/ratio studies
- Final Corrections as needed

- Accept Assessment Appeals and Key into appeals tracking system
- Last Day for filing first level Assessment Appeal
- Assessors prepare for and begin 1st level appeal hearings
- Commercial Income and Expense Forms Mailed

- Edits of Current Year revaluation
- Complete Edit Checks and Ratio Reports
- Review permits in reassessment area before Nov 1 cutoff for reassessment notice

- Assessors continue appeal hearings
- Assessors continue reassessment reviews and edits

- Complete Edit Checks and Ratio Reports
- Review permits in reassessment area before Nov 1 cutoff for reassessment notice

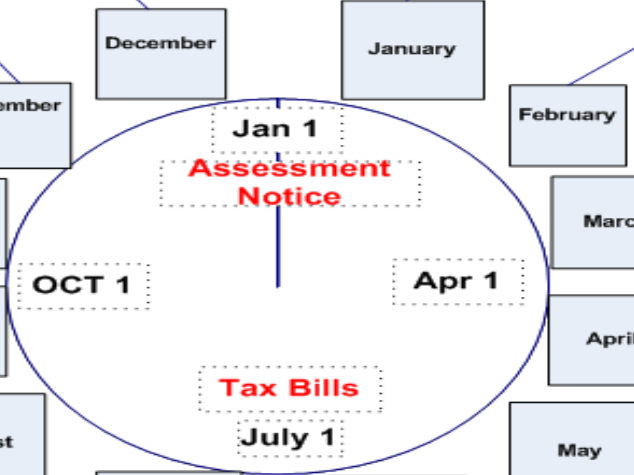
- Assessors continue appeal hearings
- Assessor continue reassessment field reviews and edits

- Supplemental Tax Tape to Collectors
- Sales verification for Reassessment and Sales Analysis
- Initial Assessment edits. Check Adjustments, Overrides, Models (MVIs), Land codes
- Land Rates and MVI analysis

- Collectors Send Tax Bills
- Assessor continue reassessment field reviews and edits
- New construction Pick-up and value for July 1 Full Year Levy – Supplemental billing

- New Construction Pick-up and value for July (full year) levy
- Finalize prior year 1st Level Assessor Appeals
- Assessor continue reassessment field reviews and edits

- Tax tape certification to County Collectors
- Work on Assessment Appeals – all levels
- Assessor continue reassessment field reviews and edits
- New construction Pick-up and value for July 1 Full Year Levy – Supplemental billing



- Normal Monthly Core Processes – Staff**
- Complete transfer process daily
 - Complete mapping prep for all splits and combinations
 - Customer Service – phone and tax roll counter
 - Process Exemption and Tax Credit Applications
 - Process change reports (abatements and increases)
 - Process address and occupancy changes

- Normal Monthly Core Processes - Assessor**
- Reassessment – Field Review, pick-up and office edits
 - New Construction Pick-up and Work-up (Full Year and 1/2 Half Year Levy)
 - 1st Level Appeals
 - Higher Level Appeals
 - Valuation Analysis and Edits
 - Revalue new subdivisions plats, splits and combinations

Assessment and Tax Calendar

January 1	Valuation date (Date of Finality) for real and business personal property
	Deadline for filing a real property petition for review appeal form
January	Business personal property returns mailed to all current businesses
	Homeowners' and Renters' tax credit applications mailed to all current recipients and prior year applicants
February 14	Constant yield tax rates established and mailed to local governments
Mid February	Deadline for appealing reassessment notices mailed the prior December (deadline date is on the notice and depends on the actual notice mailing date)
April 15	Deadline for filing business personal property returns or 60 day extension requests
May 1	Homeowners' tax credit applications received by this date will have credits reflected on property tax bills, if eligible.
June 15	Deadline for filing extended business personal property returns
June 30	Deadline for local governments to set property tax rates
July 1	Beginning of taxable year for property taxes Local governments typically mail tax bills in early July
September 1	Deadline to submit Homeowners' and Renters' tax credit applications
	Deadline to submit initial real property exemption applications for all filers other than blind persons and disabled veterans.
September 30	Deadline to pay property taxes without interest and penalty. Homeowners must pay the first installment of semiannual property taxes by this date.
Late December	Real property reassessment notices mailed to one-third of property owners in each county. Property owners have 45 days to file an appeal.
December 31	Deadline for homeowners to pay the second installment of semiannual property taxes without interest and penalty.

Assessment Offices

OV

General Organization & Staffing 24 Counties - Class A, B, & C Counties

- **CORE Processes** – more than appraisal
 - Appeals, new property pick up, sketching, subdivisions
- **Work Load – Actual vs. Desired (1/3 accounts)**
 - Actual parcel counts per assessor is 5,163
 - SDAT Desired Parcels per Field Assessor - 3,000 residential and 750 commercial per year
- **Budget*** (Total local assessment offices FY 15 \$ 32,715,903 - see page 81)
 - SDAT assessment budget averages \$12.00 - \$19.00 per parcel
 - IAAO staffing study shows \$22.00 to 24.00 per parcel

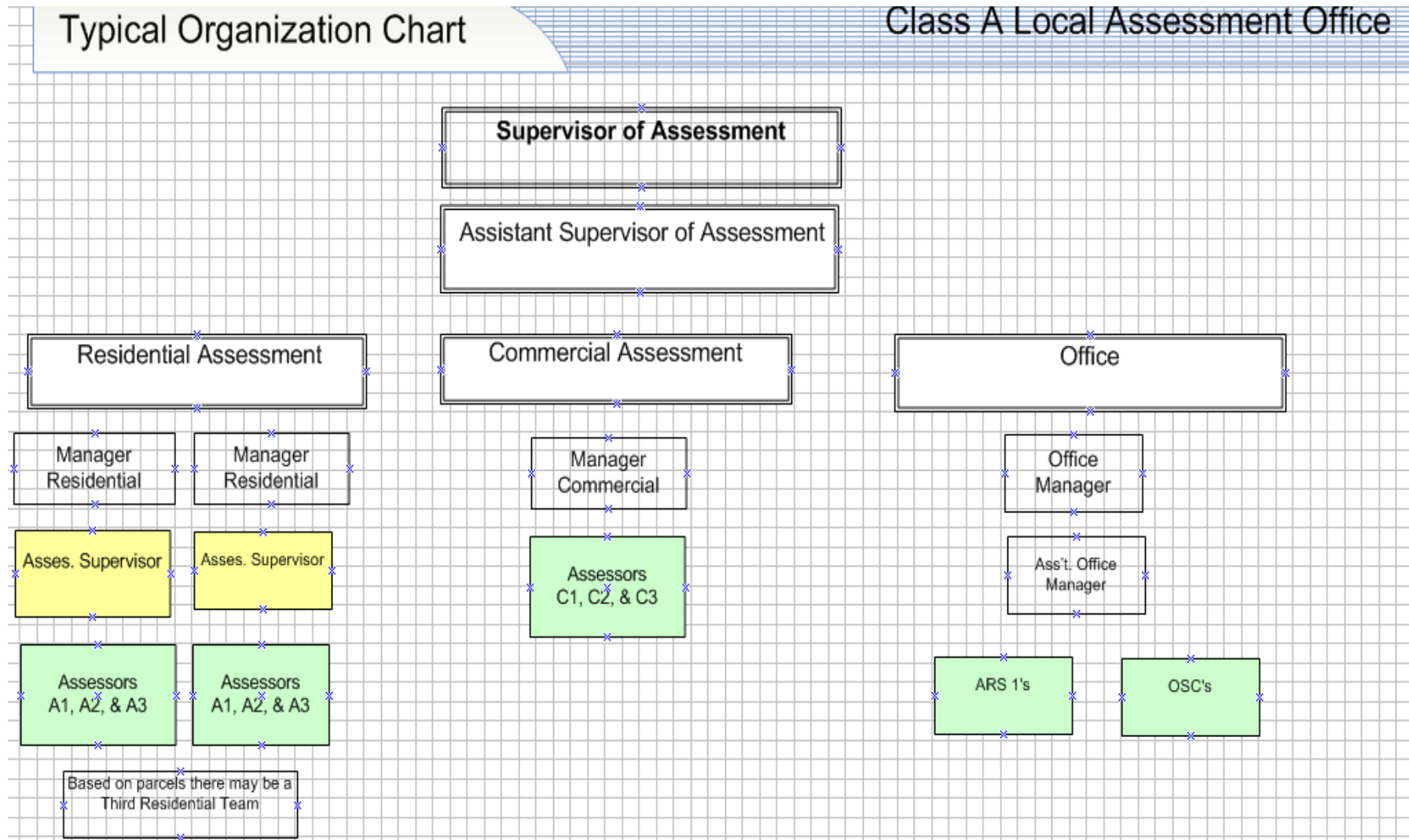
*Local Assessment Office Budgets

(FY 13 \$28,817,498; FY 14 \$29,855,618; FY15 \$ 32,715,903)

Assessment Office Organization

- 24 Local Assessment Offices – in each county seat
- Local Offices- 5 - Class A, 6 - Class B, 12 - Class C
 - Class A – 211,000 to 336,785 Parcels
 - Class B – 58,904 to 104,185 Parcels
 - Class C – 13,467 to 46,683 Parcels
- Local Offices have:
 - Supervisor of Assessments
 - Assistant Supervisor of Assessment
 - Staff of assessors and administrative staff

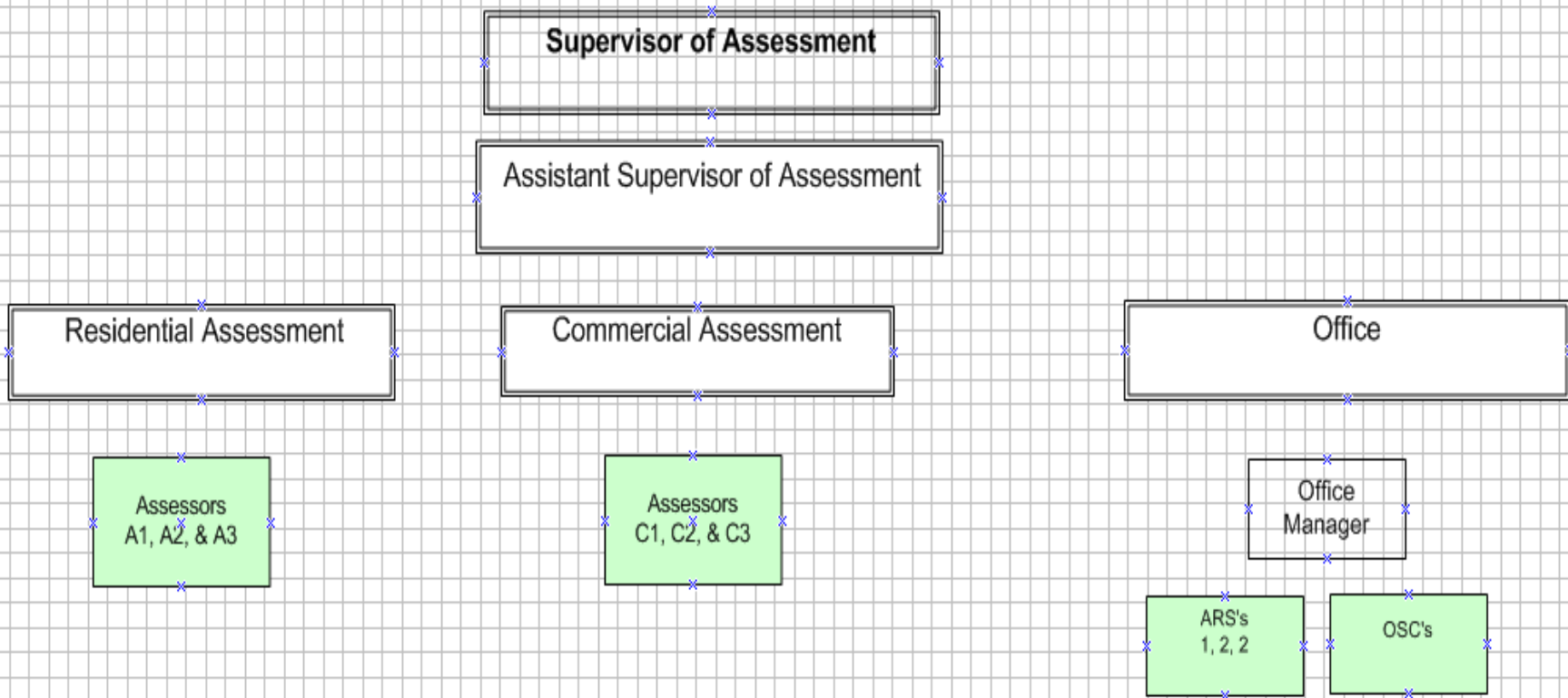
Typical Class A Organization



Typical Class B & C Organization

Typical Organization Chart

Class B and Class C Local Assessment Office



2014 - Total Parcels

Assessable Real Property Accounts Per Staffing - All Groups 7/1/2014

County Name	AGRI	GOLF	MARSH	RESIDENCE	CONDO	RES COMM	TOWN HOUSE	RES SUBTOTAL	COMM	INDUST	COMM CONDO	APT'S	COMM RES	COMM SUBTOTAL	TAXABLE	EXEMPT	TOTAL ACCTS
Allegany	1,516	5	-	33,613	60	334	-	35,528	2,585	374	49	39	3	3,050	38,578	2,749	41,327
Anne Arundel	1,473	6	51	173,731	21,390	20	-	196,671	5,369	989	1,735	226	1,135	9,454	206,125	5,183	211,308
Baltimore City	-	-	-	193,477	12,110	22	1	205,610	8,963	2,333	584	2,188	4	14,072	219,682	17,247	236,929
Baltimore	3,981	39	1	240,936	22,028	1	1	266,987	7,865	3,190	429	2,625	863	14,972	281,959	16,559	298,518
Calvert	1,315	1	2	36,828	1,128	1	1,410	40,685	709	161	114	17	162	1,163	41,848	892	42,740
Caroline	2,659	-	14	12,115	24	15	272	15,099	712	89	-	69	57	927	16,026	708	16,734
Carroll	4,634	12	-	54,793	1,981	2	1	61,423	2,313	261	299	182	392	3,447	64,870	1,978	66,848
Cecil	2,175	-	3	37,784	937	4	2,232	43,135	1,998	205	179	112	267	2,761	45,896	1,207	47,103
Charles	2,288	3	5	48,485	434	14	9,363	60,592	1,455	353	833	66	289	2,996	63,588	1,257	64,845
Dorchester	2,364	-	237	18,133	264	1	26	21,025	905	176	-	25	7	1,113	22,138	1,033	23,171
Frederick	5,180	26	-	62,464	4,808	23	14,629	87,130	2,646	537	663	256	561	4,663	91,793	2,827	94,620
Garrett	3,032	-	-	22,886	881	-	168	26,967	1,111	20	252	38	-	1,421	28,388	1,005	29,393
Harford	3,299	-	-	82,322	7,139	10	-	92,770	2,802	347	156	205	70	3,580	96,350	1,986	98,336
Howard	1,181	-	-	79,010	14,544	3	1,854	96,592	1,733	815	1,369	133	173	4,223	100,815	3,270	104,085
Kent	1,382	-	4	10,631	280	-	-	12,297	612	4	15	22	27	680	12,977	490	13,467
Montgomery	2,034	44	1	244,555	62,408	27	2	309,071	4,267	1,439	3,244	1,631	161	10,742	319,813	16,972	336,785
Prince Georges	1,950	80	7	199,700	26,681	1	33,653	262,072	5,061	3,312	3,011	1,042	554	12,980	275,052	17,115	292,167
Queen Anne	2,223	-	16	19,512	1,523	-	21	23,295	900	26	429	37	472	1,864	25,159	670	25,829
St. Marys	2,794	-	31	39,817	893	-	1,875	45,410	1,546	82	149	166	-	1,943	47,353	1,460	48,813
Somerset	2,116	-	133	12,218	519	-	-	14,986	943	-	17	39	7	1,006	15,992	1,117	17,109
Talbot	1,812	4	10	16,860	407	-	13	19,106	1,050	68	211	83	71	1,483	20,589	591	21,180
Washington	3,313	9	-	44,745	824	66	3,313	52,270	2,538	372	86	601	235	3,832	56,102	2,802	58,904
Wicomico	3,360	8	50	35,927	1,001	1	1,183	41,530	2,442	533	291	142	135	3,543	45,073	1,610	46,683
Worcester	2,860	7	36	30,775	28,099	3	-	61,780	2,011	185	858	126	36	3,216	64,996	1,387	66,383
Total	58,941	244	601	1,751,317	210,363	548	70,017	2,092,031	62,536	15,871	14,973	10,070	5,681	109,131	2,201,162	102,115	2,303,277

2014 – SDAT Staffing & Parcels

Assessable Real Property Accounts Per Staffing - All Groups 7/1/2014

County	County	RES	COMM	TAXABLE	EXEMPT	TOTAL	C & I	Total	RES. ASS'OR	Total Acc'ts	Total Field	Total Acc'ts	#3 Total Acc'ts	Total Res	#3 Per	**Tot Com	**#3 Com
Class	Name	SUBTOTAL	SUBTOTAL			ACC'TS	ASSESS	FTE	Equivalent	Per FTE	Assessor	Field Assessor	Field Assessor	Res Act's	Res Assess	Per C&I	.Per C&I
C	Allegany	35,528	3,050	38,578	2,749	41,327	1	8	2	5,166	3	13,776	4,592	17,764	5,921	3,050	1,017
A	Anne Arundel	196,671	9,454	206,125	5,183	211,308	2	34	15.5	6,215	17.5	12,075	4,025	12,688	4,229	4,727	1,576
A	Baltimore City	205,610	14,072	219,682	17,247	236,929	5	45	19.5	5,265	24.5	9,671	3,224	10,544	3,515	2,814	938
A	Baltimore	266,987	14,972	281,959	16,559	298,518	4	43	19	6,942	23	12,979	4,326	14,052	4,684	3,743	1,248
C	Calvert	40,685	1,163	41,848	892	42,740	0.5	10.5	3	4,070	3.5	12,211	4,070	13,562	4,521	2,326	775
C	Caroline	15,099	927	16,026	708	16,734	0.5	7.5	1	2,231	1.5	11,156	3,719	15,099	5,033	1,854	618
B	Carroll	61,423	3,447	64,870	1,978	66,848	1	12	4.5	5,571	5.5	12,154	4,051	13,650	4,550	3,447	1,149
C	Cecil	43,135	2,761	45,896	1,207	47,103	1	9	3	5,234	4	11,776	3,925	14,378	4,793	2,761	920
B	Charles	60,592	2,996	63,588	1,257	64,845	0.5	12.5	6	5,188	6.5	9,976	3,325	10,099	3,366	5,992	1,997
C	Dorchester	21,025	1,113	22,138	1,033	23,171	1	6	1	3,862	2	11,586	3,862	21,025	7,008	1,113	371
B	Frederick	87,130	4,663	91,793	2,827	94,620	2	14	4	6,759	6	15,770	5,257	21,783	7,261	2,332	777
C	Garrett	26,967	1,421	28,388	1,005	29,393	1	9	2	3,266	3	9,798	3,266	13,484	4,495	1,421	474
B	Harford	92,770	3,580	96,350	1,986	98,336	2	15	5	6,556	7	14,048	4,683	18,554	6,185	1,790	597
B	Howard	96,592	4,223	100,815	3,270	104,085	2	15	6	6,939	8	13,011	4,337	16,099	5,366	2,112	704
C	Kent	12,297	680	12,977	490	13,467	0.5	5.5	1	2,449	1.5	8,978	2,993	12,297	4,099	1,360	453
A	Montgomery	309,071	10,742	319,813	16,972	336,785	5	53	25.5	6,354	30.5	11,042	3,681	12,120	4,040	2,148	716
A	Prince Georges	262,072	12,980	275,052	17,115	292,167	6	42	13.5	6,956	19.5	14,983	4,994	19,413	6,471	2,163	721
C	Queen Anne	23,295	1,864	25,159	670	25,829	1	6	1	4,305	2	12,915	4,305	23,295	7,765	1,864	621
C	St. Marys	45,410	1,943	47,353	1,460	48,813	1	10	3	4,881	4	12,203	4,068	15,137	5,046	1,943	648
C	Somerset	14,986	1,006	15,992	1,117	17,109	0.5	6.5	2	2,632	2.5	6,844	2,281	7,493	2,498	2,012	671
C	Talbot	19,106	1,483	20,589	591	21,180	0.5	7.5	2	2,824	2.5	8,472	2,824	9,553	3,184	2,966	989
B	Washington	52,270	3,832	56,102	2,802	58,904	1	11	4.5	5,355	5.5	10,710	3,570	11,616	3,872	3,832	1,277
C	Wicomico	41,530	3,543	45,073	1,610	46,683	1	8	2	5,835	3	15,561	5,187	20,765	6,922	3,543	1,181
B	Worcester	61,780	3,216	64,996	1,387	66,383	2	14	3.5	4,742	5.5	12,070	4,023	17,651	5,884	1,608	536
	Total	2,092,031	109,131	2,201,162	102,115	2,303,277	42	404	149.5	5,701	191.5					2,598	866
															Res Assess		C&I Assess
															@ 3,000 per		@750 per
														Needed	232		49
														Existing Fiel	150		42
														Additional	82		6.5
														Total New	89		

Staffing*

- SDAT Total FTE staffing from 1976 to 1992 reduced by 18% while Total Accounts increased by 33.3 % * Local Assessment office staff
- SDAT Field Assessor staff from 1990 to 2014 reduced 70% while the number of accounts increased by 25.5% * Local Assessment office staff
- Current county FTE staffing is 401 with 131 personnel having more than 30 years service (32%)
- IAAO Staffing Survey conducted in 1986 and 2013
Staffing in Assessment Offices in the United States and Canada
Results of 2013 Survey – IAAO Research Committee and Lawrence C. Walters, PH.D. - 62 pages

Staffing – IAAO 2013 Survey

Table 16. Parcels per permanent employee by type of agency

Type of Agency	Number of Respondents	Parcels per Permanent Employee				1986 Mean	Percentage Change 1986–2013
		Mean	Median	Minimum	Maximum		
County	311	3,610	3,000	68	32,793	3,120	+15.7%
Municipality	217	2,488	2,302	31	8,133	2,220	+12.1%
Township	64	2,740	2,467	126	12,000	1,770	+54.8%
Public multiple	22	3,227	3,190	1,375	8,938	5,530	-42.6%
Private multiple	15	3,919	2,333	320	9,857	NA	
State/Province	14	2,873	2,867	984	5,000	NA	
Overall	643	3,123	2,692	31	32,793	2,420	+29.0%

- 2013 IAAO Staffing Study – Table 35- Frequency of Reappraisals

Reappraisal Frequency	Respondents		Mean Permanent Employees per 1,000 Parcels
	Number	Percent	
More than once a year	8	1.2%	N/A
Every year	147	22.7%	0.61
2-4 years	189	29.2%	0.63
5 years	105	16.2%	0.61
6-10 years	84	13.0%	0.96
> than 10 years	34	5.2%	0.29
As needed	64	9.9%	0.7
Rarely or never	17	2.6%	0.39
	648	100.0%	0.65

Staffing – IAAO 2013 Survey

- FTE Maryland vs. 2013 IAAO Study Table 35 SDAT needs 85 personnel

County Class	County	FTE	Total Parcels	Field Assessor	Mean FTE 1000 parcel	Per 1000	FTE Total Act	FTE 1/3 Total	SDAT 1/3 DELTA
C	Allegany	8	41,327	3	0.62	41.3	26	9	1
A	Anne Arundel	34	211,308	17.5	0.62	211.3	131	44	10
A	Baltimore City	45	236,929	24.5	0.62	236.9	147	49	4
A	Baltimore	43	298,518	23	0.62	298.5	185	62	19
C	Calvert	10	42,740	3	0.62	42.7	26	9	(1)
C	Caroline	7	16,734	1	0.62	16.7	10	3	(4)
B	Carroll	12	66,848	5.5	0.62	66.8	41	14	2
C	Cecil	9	47,103	4	0.62	47.1	29	10	1
B	Charles	12	64,845	6	0.62	64.8	40	13	1
C	Dorchester	6	23,171	2	0.62	23.2	14	5	(1)
B	Frederick	14	94,520	6	0.62	94.5	59	20	6
C	Garrett	9	29,393	3	0.62	29.4	18	6	(3)
B	Harford	15	98,336	7	0.62	98.3	61	20	5
B	Howard	15	104,085	8	0.62	104.1	65	22	7
C	Kent	5	13,467	1	0.62	13.5	8	3	(2)
A	Montgomery	53	336,785	30.5	0.62	336.8	209	70	17
A	Prince George's	42	292,167	19.5	0.62	292.2	181	60	18
C	Queen Anne's	6	25,829	2	0.62	25.8	16	5	(1)
C	St. Mary's	10	48,813	4	0.62	48.8	30	10	0
C	Somerset	6	17,109	2	0.62	17.1	11	4	(2)
C	Talbot	7	21,180	2	0.62	21.2	13	4	(3)
B	Washington	11	58,904	5.5	0.62	58.9	37	12	1
C	Wicomico	8	46,683	3	0.62	46.7	29	10	2
B	Worcester	14	66,383	5.5	0.62	66.4	41	14	(0)
Total		401	2,303,177	188.5	0.62	2303.2	1428	476	75

* 75 plus 17 because of small offices need staff to complete Succession Plans and Daily Functions

Assessment Budget

		Budget Analysis								
		FY 2015 Budget**								
County Class	County	General Funds	Special Funds	Total	FTE	Total Parcels	Field Assessor	2015 Budget per FTE	Per Parcel	Per Field
C	Allegany	374,632	374,633	749,265	8	41,327	3	93,658	18.13	249,755
A	Anne Arundel	1,170,355	1,170,356	2,340,711	34	211,308	17.5	68,844	11.08	133,755
A	Baltimore City	2,090,459	2,090,459	4,180,918	45	236,929	24.5	92,909	17.65	170,650
A	Baltimore	1,701,024	1,701,025	3,402,049	43	298,518	23	79,117	11.40	147,915
C	Calvert	320,212	320,212	640,424	10	42,740	3	64,042	14.98	213,475
C	Caroline	261,136	261,137	522,273	7	16,734	1	74,610	31.21	522,273
B	Carroll	522,252	522,252	1,044,504	12	66,848	5.5	87,042	15.63	189,910
C	Cecil	362,796	362,797	725,593	9	47,103	4	80,621	15.40	181,398
B	Charles	430,044	430,044	860,088	12	64,845	6	71,674	13.26	143,348
C	Dorchester	236,780	236,781	473,561	6	23,171	2	78,927	20.44	236,781
B	Frederick	615,102	615,103	1,230,205	14	94,520	6	87,872	13.02	205,034
C	Garrett	365,178	365,178	730,356	9	29,393	3	81,151	24.85	243,452
B	Harford	578,397	578,398	1,156,795	15	98,336	7	77,120	11.76	165,256
B	Howard	611,104	611,105	1,222,209	15	104,085	8	81,481	11.74	152,776
C	Kent	202,721	202,722	405,443	5	13,467	1	81,089	30.11	405,443
A	Montgomery	2,149,258	2,149,258	4,298,516	53	336,785	30.5	81,104	12.76	140,935
A	Prince George's	1,714,332	1,714,332	3,428,664	42	292,167	19.5	81,635	11.74	175,829
C	Queen Anne's	287,612	287,613	575,225	6	25,829	2	95,871	22.27	287,613
C	St. Mary's	472,961	472,961	945,922	10	48,813	4	94,592	19.38	236,481
C	Somerset	223,530	223,531	447,061	6	17,109	2	74,510	26.13	223,531
C	Talbot	293,725	293,725	587,450	7	21,180	2	83,921	27.74	293,725
B	Washington	474,542	474,543	949,085	11	58,904	5.5	86,280	16.11	172,561
C	Vicomico	351,075	351,076	702,151	8	46,683	3	87,769	15.04	234,050
B	Worcester	548,717	548,718	1,097,435	14	66,383	5.5	78,388	16.53	199,534
Total		16,357,944	16,357,959	32,715,903	401	2,303,177	188.5	1,964,229	428.35	5,325,478
							Mean	81,842.87	17.85	221,895
							Mean Total	81,585.79	14.20	173,559
*FY 2013 Actual Expenditures allocated 10% GF/90% SF										
** FY 2014 and FY 2015 allocated 50% GF/50% SF - Actuals are preliminary as of 7/										

Assessment Budget

- Maryland Class A Median Budget per parcel \$ 11.74
- Maryland Class B Median Budget per parcel \$ 13.26
- Maryland Class C Median Budget per parcel \$ 21.35

IAAO Staffing Study 2013 – Budget Per Parcel

	Mean	Median
--	------	--------

Maryland Assessor's

Maryland Assessor 3 Salary

Salary over 6 years \$40,547 to \$45,194

Average Salary \$43,500

Fringe Benefits (Dept./ Leg. Ser.) **27.35 %** 11,897

Total \$55,397

Assessor Fiscal Analysis		
Additional		
Assessors @	55,397	(\$43,500 plus 27.35% fringe)
10	553,970	
20	1,107,940	
30	1,661,910	
40	2,215,880	
50	2,769,850	
60	3,323,820	

*

Does not include training costs

Representative Data

- **Market Areas and Neighborhoods (geographic stratification) SDAT statewide:**

Market Areas	Neighborhoods	Parcels
1,250	15,722	2,275,062

- **Total Parcel Transfers (arms length/non-arms length**

2012	2013	2014 (7 months)
141,501	160,378	80,902

- **Estimated annual arms length residential sales (all groups statewide) – 50,000**
- **Annual Owner-Occupied residential sales – 35,000 to 40,000**
- **Annual Estimated arms length commercial/industrial sales - 900**

Property Sketches - Overview

- With 61 % of statewide sketches converted to digital format, there are 650,800 remaining to be converted (39%)
- Remaining conversion could take several courses
- For remaining 650,000
- Scan image of record cards -link images to AAVS – convert to digital over several years
- Project to convert all to digital by Revaluation Geo code – in-house or vendor (vendor would need image of sketch)

Property Sketches - Status

<u>APRIL 2014</u>	Residential Sketches Possible	Residential Sketches Complete	Residential Sketches % Complete
Allegany	26,522	26,472	100%
AA Co	168,274	63,910	38%
Baltimore	139,088	75,619	54%
Baltimore Co	230,056	103,936	45%
Calvert	32,130	31,944	99%
Caroline	11,734	11,678	100%
Carroll	55,283	34,402	62%
Cecil	34,075	33,539	98%
Charles	50,682	29,753	59%
Dorchester	13,630	13,590	100%
Frederick	75,826	75,035	99%
Garrett	16,292	16,234	100%
Harford	78,971	12,287	16%
Howard	82,312	34,539	42%
Kent	8,954	8,713	97%
Montg Co	236,974	50,521	21%
PG Co	214,145	208,293	97%
QA Co	19,574	18,877	96%
St. Mary's	36,375	34,956	96%
Somerset	8,918	8,852	99%
Talbot	17,197	16,873	98%
Wash Co	47,586	47,343	99%
Wicomico	32,430	32,343	100%
Worcester	27,280	23,797	87%
	1,664,308	1,013,506	61%

Property Sketches - Overview

- Needed to quickly and accurately verify if building sections and sizes are correct
- Historically, sketch was on paper record.
- CAMA in 1990 did not have sketch routine
- In mid late 1990's, Apex sketch software was added and a digital sketch conversion project began.
- Preceding Chart is the status of digital sketch conversion
- Sketches are a combination of digital (in AAVS) and manual paper sketches on old property record cards

Property Sketches - Considerations

- For an extremely large or complex new property, it might a day to pick up one
 - Montgomery County – in last 42 months has averaged over 230 per month new property permits > \$100,000. If we estimate that there are only 30 permits extremely large or complex completely new properties – it would equal to one assessor per month to do those 30 properties with other assessor's having to pick up the other 200 accounts.
 - Montgomery County - currently has 11 are new residential assessors filling vacancy's from retirements and hiring freezes

Staffing – Core Processes

- There are certain core processes that assessors must complete annually besides field inspection in the general reassessment
- Work production studies can be developed for any work segment of the years work – each staff member is only available for work a certain number of days a year.
- Total work days would typically be about 200 days per year after weekends, holidays, sick days, vacation days, training days are deducted from 365 days per year

CORE Processes – Assessor Staff

- Supervisors – each year plan for revaluation cycle, make assessor assignments, review exempt accounts, prepare AAVS for next revaluation, etc. – See 12 steps in a revaluation pages
- Assessors - Inspect and verify property sales information for each area being appraised and conduct market research
- Assessors Re-appraise each triennial group once every three years – conduct market analysis, field inspections, and valuation analysis (sales analysis, MVIs and edits).
- Revalue new subdivision plats, splits and combinations

CORE Processes – Assessor Staff

- Complete and review ratio reports, make final edit checks and percent change edit reports
- Pick-up New Buildings and Major Renovations (over \$100,000 in cost) at least twice a year (Full year and Half Year Levy and quarter year levy where applicable) – conduct field inspections and value
- Conduct 1st Level assessment appeals
- Conduct 2nd Level assessment appeals
- Conduct 3nd Level assessment appeals

CORE Processes – Admin. Staff

- Daily complete all real property transfers and enter on the tax roll in the AAVS system – sales data and owner information
- Complete mapping prep for all splits and combinations and Subdivision Plats
- Customer Service – phone and tax roll counter
- Process change reports (abatements and increases)
- Process address and occupancy changes

Work Production

- Staffing production reports allow management to estimate staff requirements
- CORE processes must be completed daily as required
- After CORE processes are complete, the assessors can focus on the step in the reappraisal process for the current assessment year
- Supervisors of Assessment can calculate the number of Rating Days for each assessor function

Calculator for Rating Days

Calculator for Number of Rating Days-

Task Name						
		Ass days per yr	Ass Needed			
Total Rating Days	205	205	1.00			
Team	Task	Number	Difficulty factor enter + or - %	Est Accts per day	Standard Accts per Day	Rating Days
Residential	FLD REV-Scheduled			8	8	205
Residential	FLD REV-unscheduled			16	16	0
Residential	IMP SUB-Reassessment			60	60	0
Residential	IMP ATT-Reassessment			100	100	0
Residential	IMP REG-Reassessment			40	40	0
Residential	VACANT-Reassessment			200	200	0
Residential	AG-Reassessment			25	25	0
Residential	WF-Reassessment (Add)			100	100	0
Residential	X HSES-(Add)			100	100	0
Residential	EDITS			100	100	0
Residential	SF Edits and Sketches (Combined)			30	30	0
Residential	SF SKETCH			45	45	0
Residential	Att Edits and Sketches (Combined)			45	45	0
Residential	ATT SKETCH			60	60	0
Residential	VALUATION			350	350	0
Residential	NC PU			12.5	12.5	0
Residential	NC WU inc sketch			12.5	12.5	0
Residential	NC PU ATT			20	20	0
Residential	NC WU ATT inc sketch			20	20	0
Residential	MTC WU			1	1	0
Residential	MTC HLD			4	4	0
Residential	PTAAB WU			5	5	0
Residential	PTAAB HLD			20	20	0
Residential	HEAR HLD			15	15	0
Residential	DECISION inc sketch			15	15	0

Calculator for Rating Days

33	Commercial	IMP ATT-Reassessment			100	100	0
34	Commercial	IMP REG-Reassessment			25	25	0
35	Commercial	VACANT-Reassessment			200	200	0
36	Commercial	X HSES-(Add)			100	100	0
37	Commercial	EDITS			25	25	0
38	Commercial	SF SKETCH			30	30	0
39	Commercial	VAULTION			40	40	0
40	Commercial	NC PU			4	4	0
41	Commercial	NC WU			4	4	0
42	Commercial	MTC WU			0.3	0.33	0
43	Commercial	MTC HLD			2	2	0
44	Commercial	PTAAB WU			3	3	0
45	Commercial	PTAAB HLD			10	10	0
46	Commercial	FLD REV			6.7	6.67	0
47	Commercial	HEAR HLD			10	10	0
48	Commercial	DECISION			6.7	6.67	0
49							0

Work Day Calculation

Week days (5x52wks)		260
Non production days		
Annual Leave (Avg)	13	
Personal Leave	6	
Sick used (Avg)	10	
Holidays & Furlough	15	
Confer, Training &Semin, Weather , LAW, Jury duty, othe	11	
Total non production days		55
Remaing work days		205
From leave reports res assessor 1,2 and3		

CORE Process & Field Review

Essentially after assessor CORE days are completed, the remaining days are for re-assessment field inspection

The field inspection during each re-assessment includes:

- observing the market areas and neighborhood in detail
- sales verification
- review all properties for characteristics changes, and
- the measurement and recording of changes in relevant characteristics

Re-Assessment Field Review

Work Production Estimate Analysis		
Assumptions: Suburban Jurisdiction		
200,000 parcels		
9 Assessors		
TOTAL WORK DAYS 9 ASSESSORS*	1,845	100%
Less CORE work days	1,024	56%
REMAINING days for REASS	821	44%
* 9 assessors x 205 work days = 1845 days		
Annual Major Tasks		Percent of
	Days	Total Work Days
Re- assessment field review & office edits	821	44%
New construction pick-up and valuaton	349	19%
1st level appeals	266	14%
2nd and 3rd level appeals	219	12%
Reassessment Valuation and edits	190	10%
	1,845	100%

Re-Assessment Field Review

Assume:

- 1/3 of 200,000 parcels valued annually or 66,666 parcels
- REMAINING Days for Reassessment are 821 days and 9 assessors, there are 91 assessor days for re assessment field review and edit.
- Average reassessment field review and pick up of changes is 45 accounts per day, 1 assessor's could review 4,100 parcels and 9 assessors would complete 36,900 of a total of 66,700. Thus, about 55% of properties could be reviewed.
- Rural Counties or counties with more complex properties would take longer to field and office review as the distance between properties or the complexity of the property increases.

Planning the Reappraisal - 12 Steps

1. Performance Analysis – ratio study – current sale to prior assessment.
2. Reappraisal Decision
3. Analysis of Available and Required Resources
4. Planning and Organization
5. System Acquisition or Development

Planning the Reappraisal - 12 Steps

6. Pilot Study
7. Data Collection
8. Valuation
9. Performance analysis (ratio study) and edits
10. Mail Assessment Notices
11. Value Defense
12. Final Ratio Study

Assessment Appeal

Pages 182-184

- The assessment appeal process is available to allow property owners the opportunity to dispute the value determined by the department, if they feel the value is wrong.
- Appeals may be filed on three occasions:
 1. When an assessment notice is received (reassessment)
 2. Out of cycle review – file a petition for review (in the two years when the property is not valued)
 3. Upon Purchase (When a property is transferred between Jan. 1 and July 1)

Assessment Appeals

- 1st Level – supervisor - informal
- 2nd Level – PTAAB – informal independent board
- 3rd Level – Md. Tax Court – more formal
- 4th Level – Circuit Court – county where property is located.
- 5th Level – Court of Special Appeals
- 6th Level – Court of Appeals

1st Level Appeals – Statewide Summary

Statewide First Level Assessment Appeals FY 2011 to 2014

		In Cycle	In Cycle			Out Cycle			Grand	Total	Total	In Cycle	Field	Filed	AppealPer	Appeal Per	Appeal	Appeal
	GEO	Notices	Res	C&I	Total	Res	C&I	Total	Total	Res	C&I	% Notice	Res Ass	C&I *	DAY Res	DAY C&I	DAY Res	DAYs C&I
2011	81	740,128	23,029	8,907	31,936	15,404	3,273	18,677	50,613	38,433	12,180	4.3%	124	39	15	10	21	31
2012	82	737,387	21,472	8,730	30,202	10,907	3,942	14,849	45,051	32,379	12,672	4.1%	124	39	15	10	17	32
2013	80	678,666	12,718	5,936	18,654	8,204	2,812	11,016	29,670	20,922	8,748	2.7%	124	39	15	10	11	22
2014	81		16,345	9,399	25,744	4,638	3,462	8,100	33,844	20,983	12,861		124	39	15	10	11	33

- Appeals vary by county by year and type (Res. & C&I)
- Appeals impact workload each year
- Statewide Res and C& I averages mask actual impact by county
- Note typical days to hearings from statewide to big 5 counties on the following pages

1st Level Appeals Summary – Anne Arundel and Baltimore City

Anne Arundel		First Level Assessment Appeals FY 2011 to 2014																	
		In Cycle	In Cycle			Out Cycle			Grand	Total	Total	In Cycle %	Field	Filed	Appeal	Appeal	Appeal	Appeal	
	GEO	Notices	Res	C&I	Total	Res	C&I	Total	Total	Res	C&I	of Notice	Res Ass	C&I *	DAYS Res	DAYS C&I	DAYS Res	DAYS C&I	
2011	81	74,910	990	1,142	2,132	866	382	1,248	3,380	1,856	1,524	2.8%	14	2	15	10	9	76	
2012	82	61,953	1,578	714	2,292	383	387	770	3,062	1,961	1,101	3.7%	14	2	15	10	9	55	
2013	80	59,769	672	421	1,093	413	371	784	1,877	1,085	792	1.8%	14	2	15	10	5	40	
2014	81	-	806	1,589	2,395	219	262	481	2,876	1,025	1,851		14	2	15	10	5	93	
Baltimore City		First Level Assessment Appeals FY 2011 to 2014																	
		In Cycle	In Cycle			Out Cycle			Grand	Total	Total	In Cycle %	Field	Filed	Appeal	Appeal	Appeal	Appeal	
	GEO	Notices	Res	C&I	Total	Res	C&I	Total	Total	Res	C&I	of Notice	Res Ass	C&I *	DAYS Res	DAYS C&I	DAYS Res	DAYS C&I	
2011	81	74,910	4,817	1,085	5,902	2,185	525	2,710	8,612	7,002	1,610	7.9%	18	5	15	10	26	32	
2012	82	61,953	7,036	1,009	8,045	2,583	344	2,927	10,972	9,619	1,353	13.0%	18	5	15	10	36	27	
2013	80	59,769	3,628	1,068	4,696	2,408	175	2,583	7,279	6,036	1,243	7.9%	18	5	15	10	22	25	
2014	81	-	5,570	1,174	6,744	379	492	871	7,615	5,949	1,666		18	5	15	10	22	33	

1st Level Appeals Summary – Baltimore Co. And Montgomery

Baltimore Co		First Level Assessment Appeals FY 2011 to 2014																	
		In Cycle	In Cycle			Out Cycle			Grand	Total	Total	In Cycle %	Field	Filed	Appeal	Appeal	Appeal	Appeal	
	GEO	Notices	Res	C&I	Total	Res	C&I	Total	Total	Res	C&I	of Notice	Res Ass	C&I *	DAYs Res	DAYs C&I	DAYs Res	DAYs C&I	
2011	81	90,876	2,610	1,790	4,400	1,434	440	1,874	6,274	4,044	2,230	4.8%	17	4	15	10	16	56	
2012	82	98,931	3,309	1,844	5,153	1,102	559	1,661	6,814	4,411	2,403	5.2%	17	4	15	10	17	60	
2013	80	86,745	834	1,235	2,069	959	377	1,336	3,405	1,793	1,612	2.4%	17	4	15	10	7	40	
2014	81		1,393	1,726	3,119	379	492	871	3,990	1,772	2,218		17	4	15	10	7	55	
Montgomery		First Level Assessment Appeals FY 2011 to 2014																	
		In Cycle	In Cycle			Out Cycle			Grand	Total	Total	In Cycle %	Field	Filed	Appeal	Appeal	Appeal	Appeal	
	GEO	Notices	Res	C&I	Total	Res	C&I	Total	Total	Res	C&I	of Notice	Res Ass	C&I *	DAYs Res	DAYs C&I	DAYs Res	DAYs C&I	
2011	81	91,923	2,359	1,118	3,477	1,804	587	2,391	5,868	4,163	1,705	3.8%	24	6	15	10	12	28	
2012	82	118,485	3,020	1,962	4,982	789	612	1,401	6,383	3,809	2,574	4.2%	24	6	15	10	11	43	
2013	80	102,446	1,609	630	2,239	507	347	854	3,093	2,116	977	2.2%	24	6	15	10	6	16	
2014	81		1,750	1,333	3,083	285	568	853	3,936	2,035	1,901		24	6	15	10	6	32	

1st Level Appeals Summary – Prince Georges

Princes Georges		First Level Assessment Appeals FY 2011 to 2014																
		In Cycle				Out Cycle			Grand	Total	Total	In Cycle %	Field	Filed	Appeal	Appeal	Appeal	Appeal
	GEO	Notices	Res	C&I	Total	Res	C&I	Total	Total	Res	C&I	of Notice	Res Ass	C&I *	DAYS Res	DAYS C&I	DAYS Res	DAYS C&I
2011	81	112,287	5,141	1,859	7,000	3,903	285	4,188	11,188	9,044	2,144	6.2%	11	6	15	10	55	36
2012	82	84,612	1,728	1,126	2,854	2,616	1,230	3,846	6,700	4,344	2,356	3.4%	11	6	15	10	26	39
2013	80	77,606	1,086	963	2,049	1,354	816	2,170	4,219	2,440	1,779	2.6%	11	6	15	10	15	30
2014	81		1,982	1,439	3,421	568	1,063	1,631	5,052	2,550	2,502		11	6	15	10	15	42

County Samples

In order to conduct an objective analysis regarding the correctness of current building characteristics a random sample of properties have been reviewed.

Reviews were conducted in the following jurisdictions:

- Allegany
- Baltimore City
- Harford
- Howard
- St. Mary's
- Worcester

IAAO Mass Appraisal Standard

There is a Mass Appraisal Standard

Pages 187-197

3.3.4 Maintaining Property Characteristic Data

Summary

- Property characteristics data should be continually updated in response to changes brought about by new construction, new parcels, remodeling, demolition, and destruction.
- There are several ways of updating data.
 - Building permits
 - Aerial photography
 - Multiple listing sources
 - Periodic field inspections
- Periodic Field Inspections should be conducted at least every 4 to 6 years.

IAAO 2013 Staffing Study

Selected Information from 2013 IAAO Staffing Study

IAAO 2013 Staffing Study

Table 4. Number of parcels by type of agency

Type of Agency	Respondents	Number of Parcels			
		Mean	Median	Minimum	Maximum
County	311	74,200	25,000	745	1,800,000
Municipality	217	14,843	7,100	753	197,000
Township	64	8,640	5,922	504	39,360
Public multiple	22	67,425	16,611	2,722	908,073
Private multiple	15	25,418	12,267	1,080	101,000
State/Province	14	285,859	27,914	3,462	2,282,385
Overall	643	50,882	13,600	504	2,282,385

Table 11. Number of full-time employees by type of agency

Type of Agency	Number of Respondents	Number of Full-time Employees			
		Mean	Median	Minimum	Maximum
County	311	22.2	7	1	623
Municipality	217	5.8	3	1	84
Township	64	2.8	2	1	11
Public multiple	22	17.2	4	1	200
Private multiple	15	5.2	5	1	11
State/Province	14	68.9	10	1	576
Overall	643	15.2	5	1	623

IAAO 2013 Staffing Study

Table 18. Total budget per permanent employee

Type of Agency	Number of Respondents	Total Budget per Permanent Employee			
		Mean	Median	Minimum	Maximum
County	301	\$77,721	\$70,453	\$819	\$851,813
Municipality	219	\$73,068	\$70,284	\$600	\$793,569
Township	75	\$57,156	\$56,000	\$760	\$206,583
Public multiple	25	\$74,350	\$70,000	\$21,667	\$213,000
Private multiple	15	\$58,627	\$37,000	\$3,453	\$164,450
State/Province	13	\$72,864	\$68,330	\$1,267	\$229,488
Overall	648	\$73,099	\$68,886	\$600	\$851,813

Table 19. Total budget per parcel

Type of Agency	Number of Respondents	Total Budget per Parcel			
		Mean	Median	Minimum	Maximum
County	302	\$26.38	\$21.85	\$2.72	\$329.29
Municipality	223	\$30.79	\$28.02	\$1.05	\$328.67
Township	80	\$23.71	\$20.26	\$1.55	\$68.70
Public multiple	26	\$20.91	\$17.35	\$9.17	\$46.30
Private multiple	17	\$12.53	\$12.00	\$3.20	\$26.69
State/Province	13	\$24.05	\$21.02	\$1.10	\$56.91
Overall	661	\$26.93	\$23.23	\$1.05	\$329.29

IAAO 2013 Staffing Study

Table 20. Total salaries and benefits per employee*

Type of Agency	Number of Respondents	Total Salaries and Benefits per Employee			
		Mean	Median	Minimum	Maximum
County	214	\$52,589	\$50,091	\$0	\$185,283
Municipality	163	\$49,270	\$49,890	\$0	\$194,828
Township	59	\$43,525	\$37,717	\$0	\$150,000
Public multiple	18	\$55,908	\$55,785	\$15,000	\$99,720
Private multiple	7	\$64,310	\$39,500	\$0	\$282,500
State/Province	5	\$48,812	\$56,092	\$9,750	\$80,396
Overall	466	\$50,544	\$49,268	\$0	\$282,500

* Includes permanent and temporary employees.

IAAO 2013 Staffing Study

Agency Technology

Use in Assessment Process

One area that has changed radically since the 1986 survey is the use of technology in the assessment process. The following list summarizes some of the technology often available to assessors:

- 88.6 percent use aerial imagery
- 83.4 percent use geographic information systems (GIS)
- 72.6 percent have digital property sketches
- 40.7 percent use oblique photography
- 32.9 percent have their own office library.

There are specific pieces of equipment often employed in the field by assessment staff. Table 27 reports the percentage of

IAAO 2013 Staffing Study

Table 27. Equipment used in the field for data collection and recordation

Equipment Type	Field Use (Respondents = 663)
Photographic equipment	93.51%
Video equipment	2.11%
Laptop/notebook	32.28%
Electronic distance measuring device (EDM)	20.51%
Tablet	13.73%
Digital pen	1.51%
GPS unit	12.52%
Cell phone	41.33%
Remote electronic data entry device	3.62%
Audio recorders	2.71%
Real-time remote access to assessment data	7.39%
Other ²	16.14%

²Most common "other" response was a tape measure.

IAAO 2013 Staffing Study

Table 29. Relative availability of technologies

Technology Classification	Technology	Agency Use
Most common	Aerial imagery used by agency	88.6%
	GIS used by agency	83.4%
	Digital property sketches	72.6%
Less common	Cell phones used in field inspections	41.3%
	Oblique photography used by agency	40.7%
	Agency has its own office library	32.9%
	Laptop/notebook used in field inspections	32.3%
Least common	Electronic distance measuring device used in field inspections	20.5%
	Tablet used in field inspections	13.7%
	GPS unit used in field inspections	12.5%
	Real-time remote access to assessment data used in field inspections	7.4%
	Photographic equipment used in field inspections	6.5%
	Remote electronic data entry device used in field inspections	3.6%
	Audio recorders used in field inspections	2.7%
	Video equipment used in field inspections	2.1%
	Digital pen used in field inspections	1.5%

IAAO 2013 Staffing Study

Table 31. Technology by type of agency (respondents = 683)

Type of Agency	Mean Technology Index Score	Technologies Available		
		Most Common ^a (Maximum = 3)	Less Common ^b (Maximum = 4)	Least Common ^c (Maximum = 9)
County	10.10	2.62	1.64	1.69
City	8.22	2.31	1.20	1.36
Township	7.27	2.09	1.05	1.27
Public multiple	10.38	2.41	1.93	1.90
Private multiple	9.00	2.33	1.90	1.71
State/Province	7.82	2.27	1.27	1.18

^a GIS, aerial imagery, and digital property sketches

^b Oblique photography, office library, cell phone, laptop/notebook

^c Photographic equipment, audio recorders, digital pen, real-time remote access to assessment data, remote electronic data entry device, tablet, video equipment, EDM device, GPS unit

Field Inspection and Technology

1. Physical Field Inspection only
2. Ortho-photography review and change detection
3. Oblique-photography with LIDAR
4. Street View Images
5. Field Verification Services - Geo Code street view images and/or oblique-images or ortho-images maps, and property characteristics
6. To be most efficient in property characteristic review – aerial photography must be linked to each account in the valuation system or a subset of the system.

Field Inspection and Technology

The technology that would be best for assessor remote verification of property characteristics is oblique aerial photography linked to the valuation system. This is because this technology is the only one that would not require on site inspection to verify property sections and dimensions.

The advantages and disadvantages of the various technological alternatives are:

Street view images

Advantage - view exterior of property to identify style, grade, and condition of the property

Disadvantage – cannot see the whole property, can only view from the property front, cannot view property in relation to surroundings, cannot view if vegetation or trees are in the way, and cannot view improvements unless it is near the street.

Field Inspection and Technology

Ortho images

Advantage - can view the foot print of the building directly and determine if large additions have been made

Disadvantage – difficult to view property is much higher than oblique imagery, can only see property from above and cannot measure exterior wall length without adjusting (guessing) for roof eaves, cannot view if leaf cover is on, cannot judge exterior condition of improvements, difficult to measure small additions porches, pools, decking, and on commercial properties verifying paving, walks, or verifying exterior lighting

Oblique images

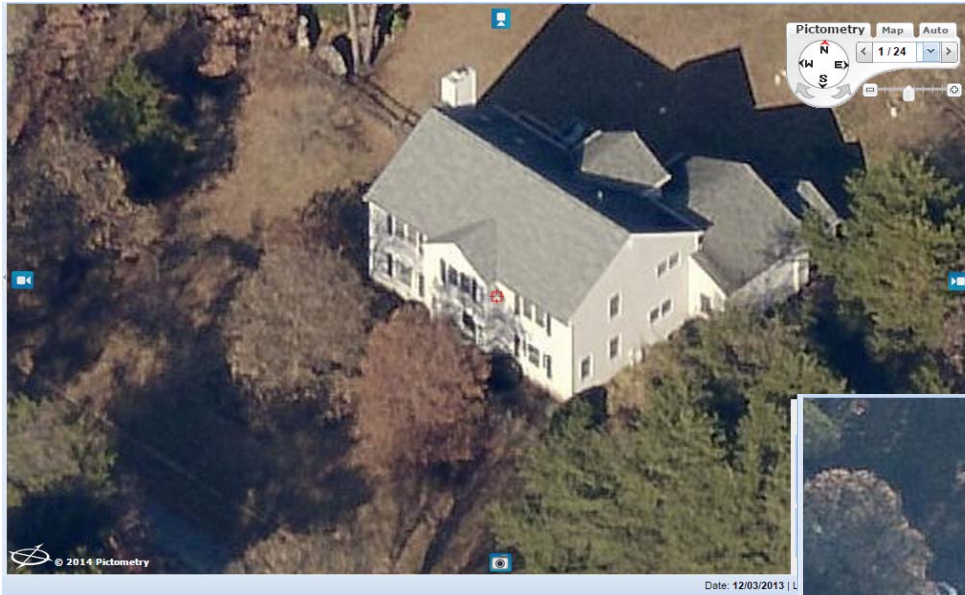
Advantage – can view property the best from oblique images, can view improvements directly from each side (four sides from a 40 degree angle view), can measure improvements on the exterior wall (not having to adjust for roof eaves), can view property in relation to adjoining properties identifying fences, possible encroachments, and judging a property in relation to adjoining properties, can easily identify if additions have been made, can judge exterior condition, can measure changes

Disadvantage – if flown with leaf cover cannot view property accurately

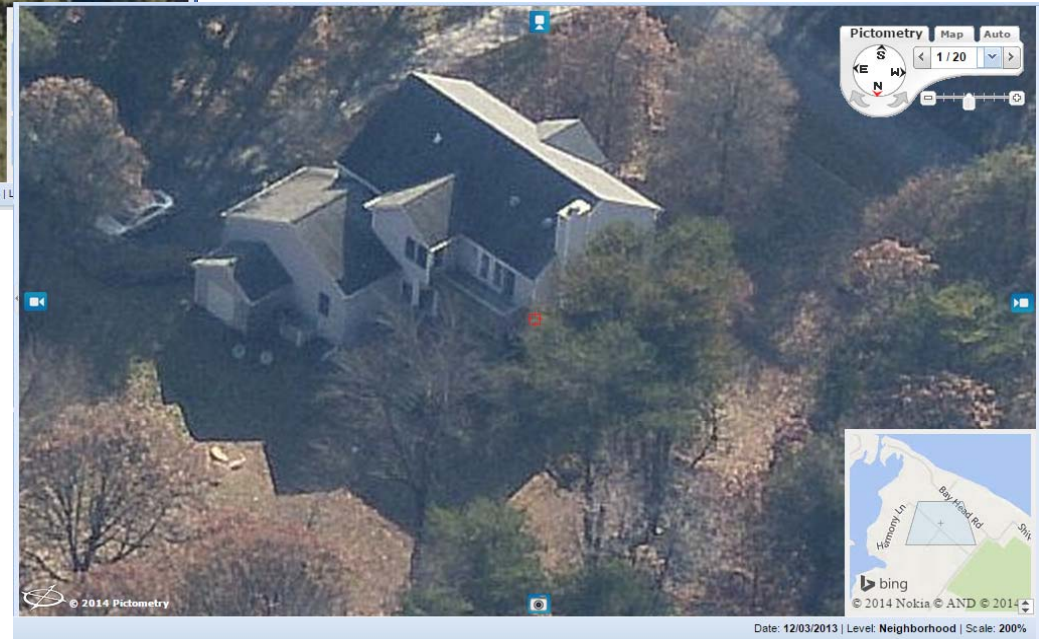
Field Inspection and Technology

Oblique images – Views from each of the four cardinal directions (see two below)

Oblique image (slanting or side-looking) (Dec, 2013) – looking from South to North

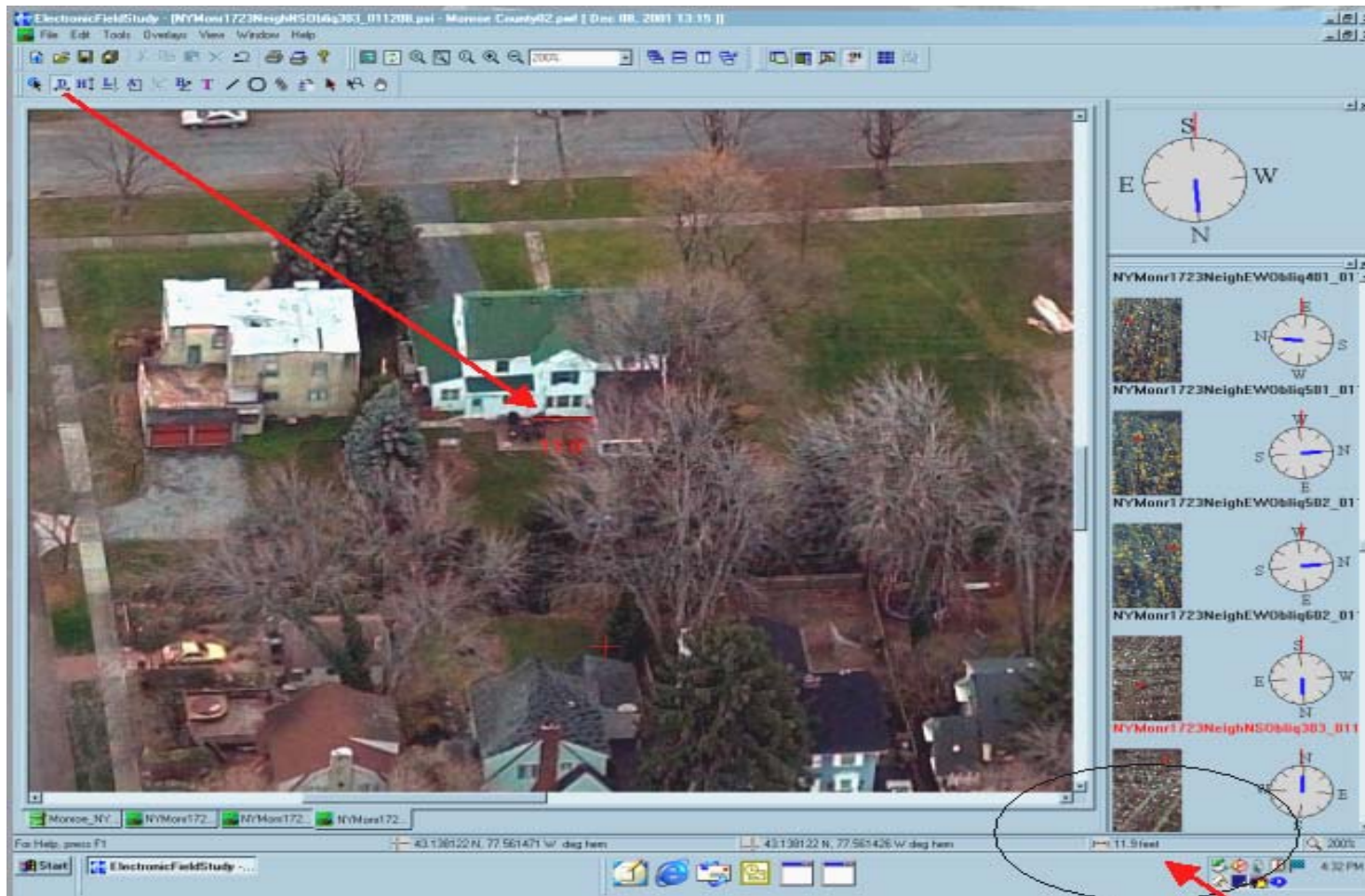


(Dec, 2013) – looking from South to North



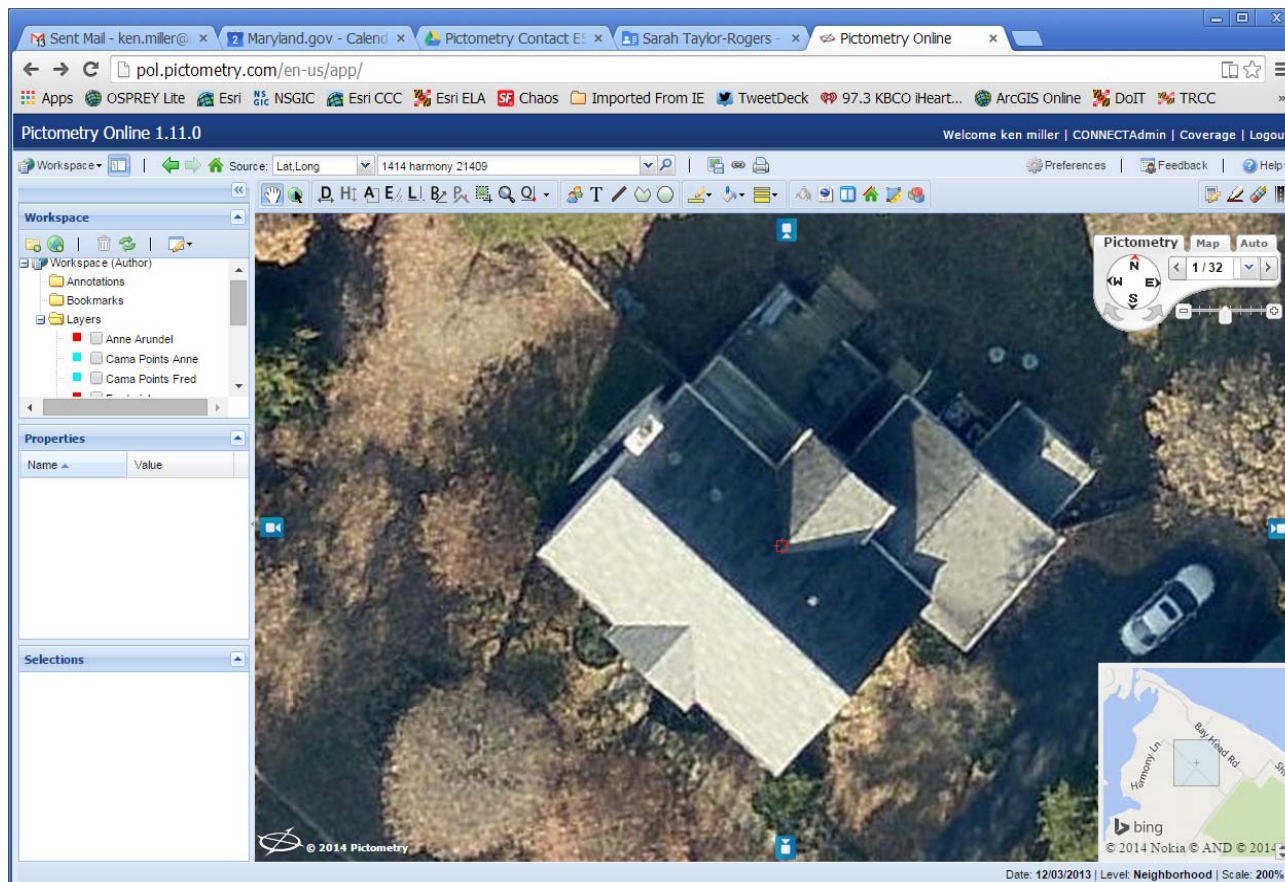
Field Inspection and Technology

Oblique images – use of measuring tool with oblique aerial photography



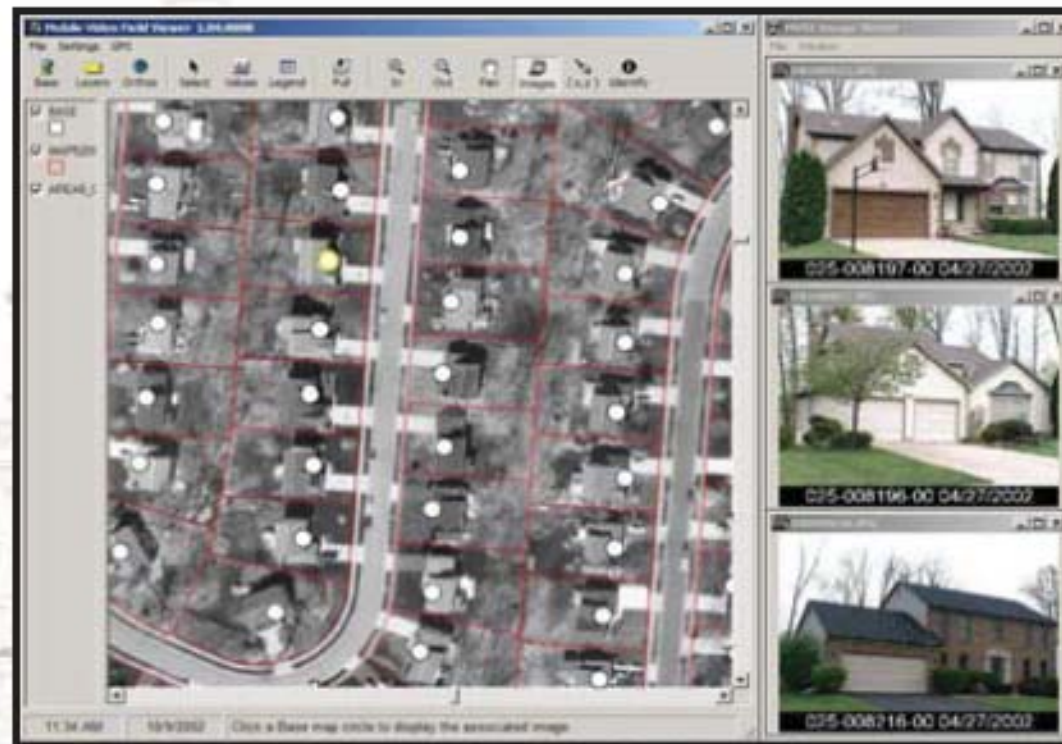
Field Inspection and Technology

Ortho images – only looks straight down – cannot accurately measure because of overhangs and cannot get an oblique view from each side of the property



Field Inspection and Technology

X-Y Coordinates



Intelligent points link each structure's x-y coordinate to its parcel number, verified address, CAMA file and street-view photograph

Field Inspection and Technology

Verify Appraisal Data

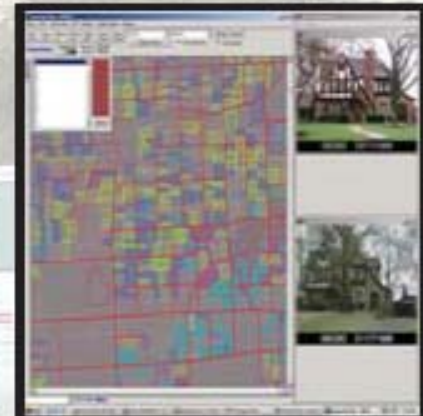


Field Inspection and Technology

Verify Appraisal Data

Data for Field Verification

- CAMA Data
- PRC JPEG
- Property Sketches
- GIS
- Orthophotographs
- Planimetric Footprints
- Oblique Imagery



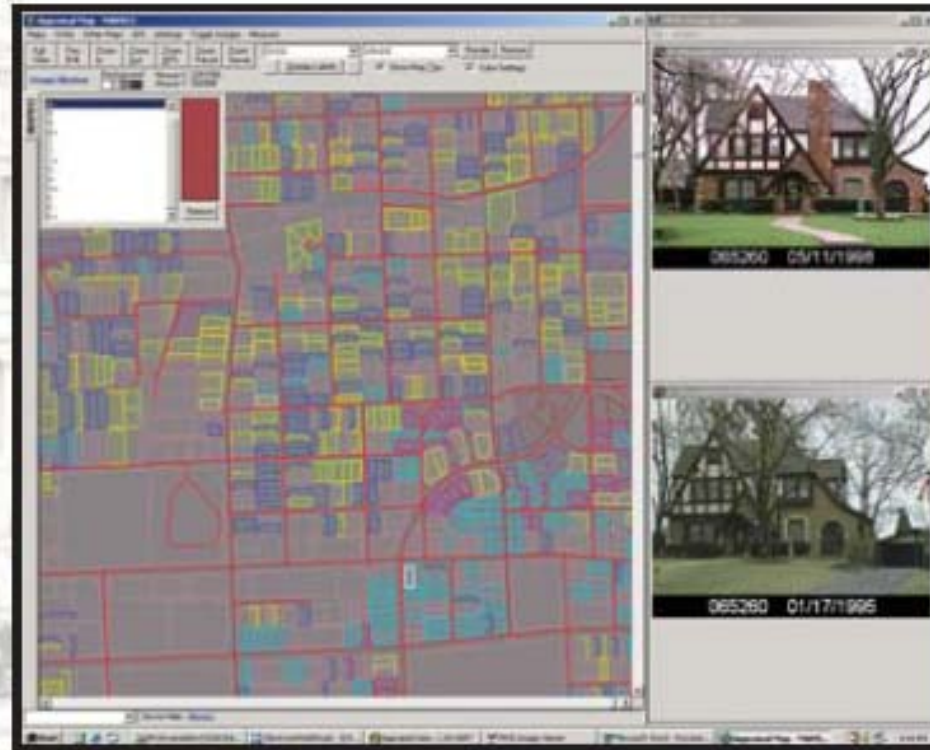
Field Inspection and Technology

Verify Appraisal Data

Subjective Characteristics

- Grade
- Condition
- Location Factors
- Jurisdiction-Specific Factors

The integration of data with GIS, sketch and imaging provides for a high-quality review and enhanced productivity.



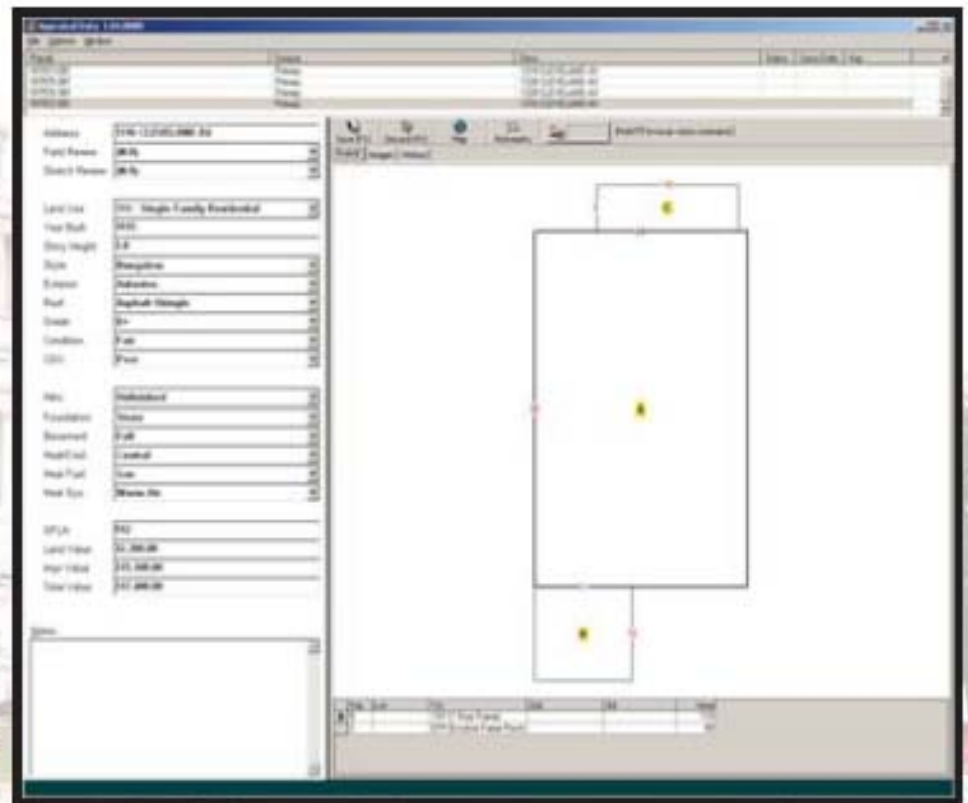
TEAM
consulting

Field Inspection and Technology

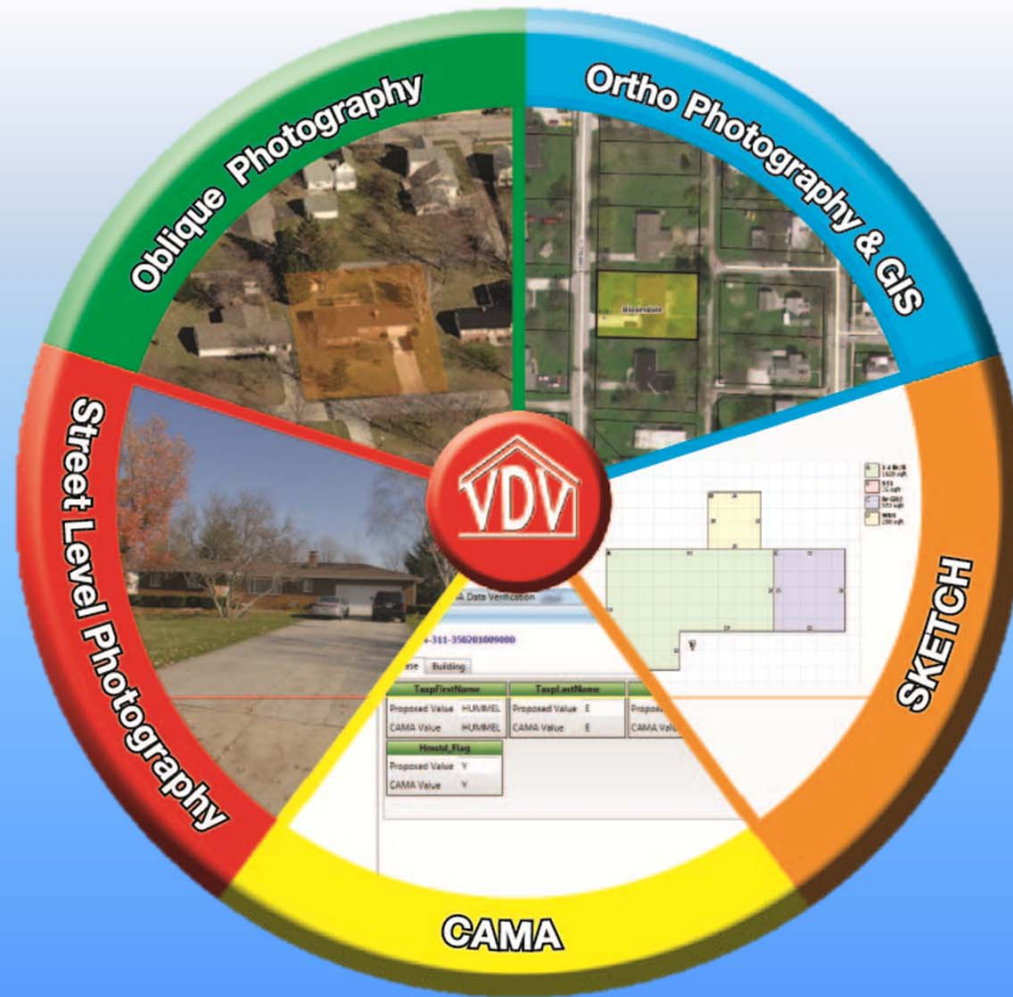
Verify Appraisal Data

Objective Characteristics

- Property Class-Use
- Style
- Effective Age
- Exterior Walls
- Story Height
- Roof Material
- Attic
- Basement
- Foundation
- Air Conditioning
- Out Buildings
- Parking
- Jurisdiction-Specific Factors



Technology and Services



Field Review Alternatives and Technology

Physical review alternatives

- **IAAO mass appraisal standard**
- **Staff Only**
- **Staff and technology**
- **Review Cycles**

Technology – hardware/software

- **GIS**
- **Imagery – street view, ortho, oblique**
- **Change detection – sketch overlay**
- **SDAT sketch data**
- **Linking with AAVS – alternatives**

New Property Pick Up

- New Property Pick-up includes all new buildings and any renovations over a cost of \$100,000 in each triennial group
- New Property Pickup occurs at least twice a year for the July 1 – Full Year Levy and the January 1 Half year levy - 6 counties with quarterly pickup
- Renovations with a cost of less than \$100,000 are to be picked up in reappraisal cycle once every three years.

New Property Pick-up and Changes

- New construction is picked up and placed on the tax roll twice a year for Full Year Levy (July 1) or Half Year Levy (Jan 1)
- Several counties have a Quarterly Levy – Baltimore City, Baltimore County, Charles, Howard, Montgomery, Prince Georges
- New property consists of new improvements to land (buildings and site improvements or additions/renovations to property)
- New improvements to land are picked up for Full Year and Half Year (or Quarterly when substantially complete)

New Property Pick-up and Changes

- Additions/renovations to property are picked up for Full Year and Half Year (or Quarterly when complete if the cost is greater than \$100,000. If cost is less than \$100,000 additions/renovations are picked up in the triennial valuation cycle during.
- Change of use to land is picked up for Full Year Levy
- Building permits are key to identification of new improvements/additions/renovations. However property owners sometimes make improvements without going through the permit process, the only way to identify this is through field review or the use of imagery.

New Property Pick-up and Changes

- Most counties have automated building permit systems for the issuance and processing of building permits for the county and municipalities within a county.
- Some municipalities have their own building permit systems
- Historically, counties and municipalities forward paper copies of building permits and certificates of occupancy to each local assessment office and/or listings of permits & Certificates of Occupancy (C of O)

New Property Pick-up and Changes

- Today there are various methods of transmitting permit information to the assessment office. These include:
 - Paper permit or lists
 - Periodic Adobe file (monthly) of what would be paper permits
 - Assessment access to county permit system
 - Electronic extract from county system (typically Excel) which can be used by assessment managers for management of the pick-up process and for loading of permit information to each account in the AAVS system

- It is important for all counties and municipalities to work closely with the local assessment office to provide permit and C of O information as efficiently, as possible to help insure proper pickup

Building Permits

- Sample summary statistics – Anne Arundel Co.

ANNE ARUNDEL COUNTY PERMITS THAT HAVE BEEN ENTERED INTO AAVS	
ADO	PERMITS WITH POTENTIAL PICK UP VALUE OF \$100,000 FOR ANNUAL OR 6 MONTH BILLING-INCLUDES NEW BLDGS AND ADDITIONS
ADU	PERMITS THAT WILL NOT ADD \$100,000 - REVIEWED DURING REASSESSMENT
OTH	MOSTLY DEMOLITIONS- ARE REVIEWED AND ABATED THROUGHOUT THE YEAR IN ALL GEO AREAS
NOTES	STARTING LATE 2012, CERTAIN PERMITS WERE NOT LOADED- FENCES, ABOVE GROUND POOLS, SIGNS ETC. 2014 IS THROUGH APRIL

Count of A		Permit~Type			Grand Total
YEAR	MONTH	ADO	ADU	OTH	
2011	1	127	349	13	489
	2	95	406	16	517
	3	151	520	25	696
	4	81	490	14	585
	5	94	607	15	716
	6	118	599	17	734
	7	109	504	11	624
	8	157	540	8	705
	9	136	491	10	637
	10	112	516	8	636
	11	103	343	10	456
	12	105	261	13	379
2011 Total		1388	5626	160	7174

Building Permits

- Sample summary statistics – (Anne Arundel Cont.)

2012	1	110	326	13	449
	2	112	356	22	490
	3	230	344	6	580
	4	105	359	11	475
	5	122	314	8	444
	6	136	360	8	504
	7	161	379	3	543
	8	152	379	4	535
	9	74	302	3	379
	10	114	317	2	433
	11	130	283	7	420
	12	107	270	16	393
2012 Total		1553	3989	103	5645
2013	1	138	252	13	403
	2	128	213	13	354
	3	151	239	12	402
	4	179	359	36	574
	5	177	315	26	518
	6	135	376	41	552
	7	189	398	39	626
	8	193	417	40	650
	9	180	312	35	527
	10	194	393	47	634
	11	114	188	22	324
	12	106	153	8	267
2013 Total		1884	3615	332	5831
2014	1	270	312	12	594
	2	95	150	13	258
	3	245	310	11	566
	4	200	391	23	614
2014 Total		810	1163	59	2032
Grand Total		5635	14393	654	20682

Building Permits

- Sample summary statistics – (Anne Arundel Cont.)

Anne Arundel					
2011 to June 2014		Permits	Estimated Total		
2011	>100,000	1,388	776,630,302		
2012	>100,000	248	496,816,264		
2013	>100,000	294	558,632,100		
2014	>100,000	157	184,475,286		
		2,087	2,016,553,952	966,245	Per Permit

Building Permits

- Sample summary statistics – Baltimore City
 - Total 2011 > 100,000 — 232
All permits – 16,234
 - Total 2012 > 100,000 — 248
All permits – 16,234
 - Total 2013 > 100,000 — 294
All permits – 17,112
 - Total 2014 (to June) > 100,000 — 167
All permits – 8317

- Baltimore City has new home credit program and vacant and abandoned property program

Baltimore City					
2011 to June 2014		Permits	Estimated Total		
2011	>100,000	232	109,427,928		
2012	>100,000	248	224,391,560		
2013	>100,000	294	500,771,874		
2014	>100,000	157	282,615,544		
		931	1,117,206,906	1,200,007	Per Permit

Building Permits

- Sample summary statistics – Montgomery Co.
- 2011 to June 2014
 - Commercial > \$100,000 - 2,024 permits – Total 5,414
 - Residential file 1 > \$100,000 - 4,670 Permits -Total 19,999
 - Residential file 2 > \$100,000 - 5,002 Permits -Total 19,721
 - Demolition Total 867

2011 to June 2014		Permits	Declared Value			
Commercial	>100,000	2,024	3,722,194,455			
Residential 1	>100,000	4,670	1,294,002,855			
Residential 2	>100,000	5,002	1,366,589,733			
Demolition		867		Months		
		Total	6,382,787,043	42	151,971,120	per Month
					1,823,653,441	12 Months
					911,826,720	6 Months

Bldg. Permit / Sample Excel Extract

21	020100007978900	B02303226	4/16/2014	1119 MT AIRY RD	ADD RGA 24'X30'X14' POLE BUILDING	BEALES THOMAS W	R	ADU	35251	4	2014
22	020100008599300	B02301914	3/13/2014	620 CENTRAL AVE E	NEW STR CONSTRUCT 35'X80' STORAGE BLDG IN REAR OF	LOCH HAVEN PROPERTY LLC	C	ADO	135000	3	2014
23	020100008671805	B02299992	2/10/2014	3737 ELMER F HAGNER LN	NEW REC ERECT A FRAMED FABRIC STRUCTURE ON A CC SL	ANNE ARUNDEL COUNTY	EC	ADO	300000	2	2014
24	020100008917600	B02302445	4/3/2014	4726 WOODFIELD RD	ADD RGA PROPOSED DEMO & REBUILD OF DETACHED GARAGE	CASALI SR RICHARD A	R	ADU	60000	4	2014
25	020100009047905	B02301100	2/7/2014	2991 SOLOMONS ISLAND RD	NEW SFD CONSTRUCT NEW SFD-NEW CASTLE, ELEVATION 4	JACKSON PAUL W II	R	ADO	237233	2	2014
26	020100090013909	B02302415	3/28/2014	439 CENTRAL AVE	ADD CSP INSTALL A 18'X36' MAX DEPTH 20" DOG BONE S	FULL CIRCLE LLC	R	ADU	30000	3	2014
27	020100090017904	B02300963	1/23/2014	4861 CHURCH LN	ADD SFD ENCLOSE 9X20.5 PART OF EXISTING PORCH TO C	OYSTER COVE PTNSHP	CR	ADU	20000	1	2014
28	020100090022014	B02301938	3/4/2014	15 LEELAND RD	ADD CTW INSTALL 3 PANEL ANTENNAS	AMERICAN TOWER LP	C	ADU	30000	3	2014
29	020100090029225	B02301993	3/6/2014	361 POLLING HOUSE RD	DEM SFD DEMO EXISTING SFD FOR FUTURE NEW SFD	ETKINS ROBERT J	R	OTH	9000	3	2014
30	020100090035464	INVEST	3/12/2014	353 HARWOOD RD	ADD STABLE 14/15 & USE CHANGE	DALTON BRUCE A	A	OTH	0	3	2014
31	020100090039784	B02300052	1/17/2014	5175 SOLOMONS ISLAND RD	NEW EDU PROVIDE FIRE SPRINKLERS FOR NEW BUILDING I	ANNE ARUNDEL COUNTY BD OF ED	EC	ADO	300000	1	2014
32	020100090043926	B02303532	4/30/2014	4573 S POLLING HOUSE RD	ADD POR RMV EXSTNG FRNT STOOP & RPLC W/COVERED FR	TURNQUIST SCOTT R	R	ADU	25000	4	2014
33	020100090052264	B02302378	3/6/2014	4785 SANDS RD	ADD RSP CONSTRUCT A 18X44 INGROUND POOL W/FENCE TO	JACKSON MONIQUE H	R	ADU	40000	3	2014
34	020100090073276	B02225506	1/1/2014	40 S RIVER CLUBHOUSE RD	ADD SFD 16X20 ADDITION FOR KITCHEN	KRAMPF WILLIAM R	R	ADU	19539	1	2014
35	020100090098002	B02300201	3/10/2014	227 BRICK CHURCH RD	RBL SFD DEMO EXST SFD/CNST NEW 1 1/2STY SFD W/FIN	DELCORE SCOTT M	A	OTH	258509	3	2014
36	020100090211358	INVEST	1/1/2014	POLLING HOUSE RD	FARM BLDG 32 X 41	SHAW TRUSTEE ROSE ANN	A	ADU	60000	1	2014

SDAT – Website

Pages 198-204

MARYLAND DEPARTMENT OF ASSESSMENTS & TAXATION

[:: About SDAT](#) [:: Businesses](#) [:: Real Property](#) [:: Forms & Applications](#) [:: SDAT/Stats](#) [:: Services](#)

What's New

Job Announcements:
Real Property Assessor I (Wicomico Co)
Computer Network Specialist II

The next meeting of the Property Assessment Workgroup meeting will be held on Tuesday, August 26, 2014, from 1:00-4:00 p.m. at the Department of Housing and Community Development, 100 Community Place, Crownsville, Md. The meeting is open to the public. For further information, contact:
sdat.assessmentworkgroup@maryland.gov.

Property Owners

[How to make changes to a property mailing address](#)

[FAQ's about the Homestead Application](#)

Find the [status of your Homestead Application](#) by looking up your property in the [Real Property database](#)

Contact your local Assessment office

[How to make changes to a property mailing address](#)

Tax Credit Programs and Exemption Applications

Online Services

Status of online services
Temporary outages and scheduled update information.

Real Property Data Search
Search Maryland property ownership, assessment value, property sales.

Homestead Eligibility Application
[Potential Domestic Forfeiture Search](#)

Business Data Search
Business information, UCC filings, trade names, Resident agents, business personal property assessment and view recently filed documents. Rate Stabilization Notices for electric companies.

Certificate of Status (Certificate of Good Standing)
Print a Certificate of Status for business entities registered with SDAT.
[Other ways of getting a Certificate of Status](#)

Our web site is getting a new look! The redesign is in compliance with guidelines set forth by the Maryland Department of Information Technology. The following pages & others have been converted:
[Ground Rent Information](#)
[2014-2015 Tax Rates](#)

Businesses

2014 Business Personal Property Forms
[Personal Property Forms for prior years](#)

Charter Frequently Asked Questions

A Checklist for New Businesses

Q&A for Non-Maryland (Foreign) Businesses

Why is a business not in good standing?
[Questions & Answers on Forfeiture](#)

Verify certified copies of documents issued by SDAT through the business registration portal.

[Register Your Business Online](#) **MARYLAND MADE EASY.**

What's New
Governor Martin O'Malley
Lt. Governor Anthony G. Brown

Contact Us | Site Map | Email SDAT | Privacy Notice |
Department of Assessments & Taxation 301 W. Preston St., Baltimore, MD 21201-2395
410-767-1184 | Outside the Baltimore Metro Area 888-246-5041 | Maryland Relay 800-735-2258
Revised 08/20/2014 09:20:00

SDAT – Website

- **Wealth of Information** – real property, personal property, corporate charter & certificate of status, property exemptions, SDAT statistics, annual reports, ratio studies, assessment process, appeal process, forms and applications
- **Web site** - 14.5 million pages viewed in per month
- **Real Property Data Base** – not possible without CAMA and Automated Property Maps
 - Access accounts by account id, address, map reference, and property sales
 - Property Map for each property
 - Summary of Assessment Roll and Property Information
 - Property Sales

SDAT – Website

- SDAT provides its website data to MRIS – regional multiple list system for the public data section of that system
- SDAT receives access to the MRIS system for assessors to have its additional property information services

SDAT – Website - Property Account

View Map		View GroundRent Redemption			View GroundRent Registration				
Account Identifier:		District - 04 Subdivision - 302			Account Number - 90081465				
Owner Information									
Owner Name:		KUKLIS JON P			Use:		RESIDENTIAL		
Mailing Address:		1455 GRAHAM FARM CIR SEVERN MD 21144-1086			Principal Residence:		YES		
					Deed Reference:		/27454/ 00118		
Location & Structure Information									
Premises Address:		1455 GRAHAM FARM CIR SEVERN 21144-0000			Legal Description:		LT 82 1455 GRAHAM FARM CIR GRAHAM FARM		
Map:	Grid:	Parcel:	Sub District:	Subdivision:	Section:	Block:	Lot:	Assessment Year:	Plat No:
0014	0011	0091		302			82	2014	Plat Ref: 0151/ 0033
Special Tax Areas:					Town:		NONE		
					Ad Valorem:				
					Tax Class:				
Primary Structure Built		Above Grade Enclosed Area		Finished Basement Area		Property Land Area		County Use	
1997		1,692 SF				7,000 SF			
Stories	Basement	Type	Exterior	Full/Half Bath	Garage	Last Major Renovation			
2	YES	STANDARD UNIT	SIDING	2 full/ 1 half	1 Attached				
Value Information									
		Base Value		Value		Phase-in Assessments			
				As of		As of		As of	
				01/01/2014		07/01/2014		07/01/2015	
Land:		125,200		135,200					
Improvements		184,200		162,600					
Total:		309,400		297,800		297,800		297,800	
Preferential Land:		0						0	
Transfer Information									
Seller: ANDERSON TODD D				Date: 07/15/2014			Price: \$339,000		
Type: ARMS LENGTH IMPROVED				Deed1: /27454/ 00118			Deed2:		

Summary

- **Goal of Assessment**
- **Assessment Process and Types of Property**
- **Appraisal Process – single property vs. mass appraisal**
- **Approaches to value**
- **Mass Appraisal Process**
- **Maryland market calibrated cost approach (residential - C&I property)**
- **Maryland Commercial and Industrial approaches and models**
- **Field inspections – importance and steps**
- **Ratio Studies**
- **Trending and Indexing Assessment Appeals**
- **Assessment Calendar**
- **Assessment Offices**
- Organization – staffing, CORE processes, work loads, budgets,**
- **New Property/renovations/demolition Pick up**
- **Physical Review Alternatives**
- **Technology- Hardware and Software**
- **SDAT Website**
- **Sketching and Field Review**

Details Page Summary

Detail Pages

	Main Page	High Level Topic	Detail Pages
1	p27	Personal Property	148-153
2	p35	Appraisal Process	153
3	p38	USPAP STD 1,2,&6	154-156
4	p47	Mass Appraisal	157-158
5	p48	Record Card, Insection	
		Cost Model	159-181
6	p81	County Budgets	182-184
7	p101	Appeals	185-187
8	p108	Mass Appraisal STD	188-198
9	p85	Property Sketches	199-204

Personal Property – Form 1 – Page 1

Personal Property Return As of January 1, 2014 Due April 15, 2014
 STATE OF MARYLAND, DEPARTMENT OF ASSESSMENTS AND TAXATION, PERSONAL PROPERTY DIVISION
 301 West Preston Street, Room 801, Baltimore, Maryland 21201-2395 • www.dat.state.md.us • (410) 767-1170 • (888) 246-6941 within Maryland

2014

Form 1
Page 1 of 4

PPA

CHECK ONE

Type of Business	ID # Prefix	Filing Fee	Type of Business	ID # Prefix	Filing Fee
<input type="checkbox"/> Domestic Stock Corporation (D)	(D)	\$300	<input type="checkbox"/> Domestic Limited Liability Company (W)	(W)	\$300
<input type="checkbox"/> Foreign Stock Corporation (F)	(F)	\$300	<input type="checkbox"/> Foreign Limited Liability Company (Z)	(Z)	\$300
<input type="checkbox"/> Domestic Non-Stock Corporation (D)	(D)	- 0 -	<input type="checkbox"/> Domestic Limited Partnership (M)	(M)	\$300
<input type="checkbox"/> Foreign Non-Stock Corporation (F)	(F)	- 0 -	<input type="checkbox"/> Foreign Limited Partnership (P)	(P)	\$300
<input type="checkbox"/> Foreign Insurance Corporation (F)	(F)	\$300	<input type="checkbox"/> Domestic Limited Liability Partnership (A)	(A)	\$300
<input type="checkbox"/> Foreign Interstate Corporation (F)	(F)	- 0 -	<input type="checkbox"/> Foreign Limited Liability Partnership (E)	(E)	\$300
<input type="checkbox"/> SDAT Certified Family Farm (A,D,M,W)	(A,D,M,W)	\$100	<input type="checkbox"/> Domestic Statutory Trust (B)	(B)	\$300
<input type="checkbox"/> Real Estate Investment Trust (D)	(D)	\$300	<input type="checkbox"/> Foreign Statutory Trust (S)	(S)	\$300

Date Received by Department

Name of Business
 Mailing Address

Make Address Corrections Here

Check here if this is a change of address.

DEPARTMENT ID NUMBER ID# PREFIX <input type="checkbox"/>		FEDERAL EMPLOYER IDENTIFICATION NUMBER	
DATE OF INCORPORATION OR FORMATION	STATE OF INCORPORATION OR FORMATION	FEDERAL PRINCIPAL BUSINESS CODE	
TRADING AS NAME		<input type="checkbox"/> Please check here if you do not want personal property forms mailed to you next year.	

Type or Print Department ID Number Here

INCLUDE DEPARTMENT ID NUMBER ON CHECK PLEASE STAPLE CHECK HERE

SECTION I

A. Is any business conducted in Maryland? _____ Date began: _____
(Yes or No)

B. Nature of business conducted in Maryland: _____

C. Does the business own, lease or use personal property located in Maryland? _____ If No, skip SECTION II.
(Yes or No)

ONLY CORPORATIONS COMPLETE ITEM D

D. Names and addresses of officers and names of directors (type or print):

	Names	ADDRESSES
President	_____	_____
Vice-President	_____	_____
Secretary	_____	_____
Treasurer	_____	_____

Names	DIRECTORS	Names
_____	_____	_____
_____	_____	_____
_____	_____	_____

Personal Property – Form 1 – Page 2

BUSINESS TANGIBLE PERSONAL PROPERTY LOCATED IN MARYLAND

EACH QUESTION MUST BE ANSWERED—SEE INSTRUCTIONS

ROUND CENTS TO THE NEAREST WHOLE DOLLAR

2014

Form 1
continued
Page 2 of 4

PPA

SECTION II

A. IMPORTANT: Show exact location of all personal property owned and used in the State of Maryland, including county, town, and street address (PO Boxes are not acceptable). This assures proper distribution of assessments. If property is located in two or more jurisdictions, provide breakdown by locations by completing additional copies of Section II for each location.

		(County)
(Address, Number and Street)		(Zip Code)
<input type="checkbox"/>	Check here if this location has changed from the 2013 return.	(Incorporated Town)
Is the property located inside the limits of an incorporated town?		(Yes or No)

Note: If all of the personal property of this business is located entirely in the following exempt counties: Frederick, Garrett, Kent, Queen Anne's, or Talbot, you may be eligible to skip the remainder of Section II. Refer to Specific Instructions, Section II, A for more information.

- ① **Furniture, fixtures, tools, machinery and equipment not used for manufacturing or research and development.** State the original cost of the property by year of acquisition and category of property as described in the Depreciation Rate Chart on page 4. Include all fully depreciated property and property expensed under IRS rules.

Columns B through G require an explanation of the type of property being reported. Use the lines provided below. If additional space is needed, provide a supplemental schedule. Failure to explain the type of property will result in the property being treated as Category A property (see instructions for example). Refer to the 2014 Depreciation Rate Chart on page 4 for computer equipment rates for categories B and D.

ORIGINAL COST BY YEAR OF ACQUISITION								
SPECIAL DEPRECIATION RATES (SEE PAGE 4)								
	A	B	C	D	E	F	G	TOTAL COST
2013								0
2012								0
2011								0
2010								0
2009								0
2008								0
2007								0
2006 and prior								0
TOTAL COST COLUMNS A-G →								0

DESCRIBE B through G PROPERTY HERE:

- ② **Commercial Inventory.** Furnish an average of 12 monthly inventory values taken in Maryland during 2013 at cost or market value of merchandise and stock in trade. Include products manufactured by the business and held for retail sale and inventory held on consignment. (Do not include raw materials or supplies used in manufacturing.) Note: LIFO prohibited in computing inventory value.

Average Commercial Inventory	Furnish from the latest Maryland Income Tax return:
\$	Opening Inventory - date _____ amount \$ _____
	Closing Inventory - date _____ amount \$ _____

Note: Businesses that need a Trader's License must report commercial inventory here.

- ③ **Supplies.** Furnish the average cost of consumable items not held for sale (e.g., contractor's supplies, office supplies, etc.).

Average Cost
\$

- ④ **Manufacturing/Research and Development (R&D) Inventory.** Furnish an average of 12 monthly inventory values taken in Maryland during 2013 at cost or market value of raw materials, supplies, goods in process and finished products used in and resulting from manufacturing/R&D by the business. (Do not include manufactured products held for retail sale.)

Average Manufacturing/R&D Inventory	Furnish from the latest Maryland Income Tax return:
\$	Opening Inventory - date _____ amount \$ _____
	Closing Inventory - date _____ amount \$ _____

Personal Property – Form 1 – Page 3

2014
Form 1
continued
Page 3 of 4



⑤ **Tools, machinery and equipment used for manufacturing or research and development:** State the original cost of the property by year of acquisition. Include all fully depreciated property and property expensed under IRS rules. If this business is engaged in manufacturing / R&D, and is claiming such an exemption for the first time, a **manufacturing / R&D exemption application must be submitted on or before September 1, 2014** before an exemption can be granted. See instruction 11 for exception. Contact the Department or visit www.dat.state.md.us for an application.
If the property is located in a taxable jurisdiction, a detailed schedule by depreciation category should be included to take advantage of higher depreciation allowances.

ORIGINAL COST BY YEAR OF ACQUISITION			
2013		2009	
2012		2008	
2011		2007	
2010		2006 and prior	

TOTAL COST \$ 0

⑥ **Vehicles with Interchangeable Registration** (dealer, recycler, finance company, special mobile equipment, and transporter plates) and unregistered vehicles should be reported here. See specific instructions.

ORIGINAL COST BY YEAR OF ACQUISITION			
2013		2011	
2012		2010 and prior	

TOTAL COST \$ 0

⑦ **Non-farming livestock** \$ (Book Value) \$ (Market Value)

⑧ **Other personal property** Total Cost \$
File separate schedule giving a description of property, original cost and the date of acquisition.

⑨ **Property owned by others and used or held by the business** as lessee or otherwise... Total Cost \$
File separate schedule showing names and addresses of owners, lease number, description of property, installation date and separate cost in each case.

⑩ **Property owned by the business but used or held by others** as lessee or otherwise... Total Cost \$
File separate schedule showing names and addresses of lessees, lease number, description of property, installation date and original cost by year of acquisition for each location. Schedule should group leases by county where the property is located. Manufacturer lessors should submit the retail selling price of the property not the manufacturing cost.

SECTION III This Section must be completed.

A. Total Gross Sales, or amount of business transacted during 2013 in Maryland: \$
If the business has sales in Maryland and does not report any personal property, explain how the business is conducted without personal property. If the business is using the personal property of another business, provide the name and address of that business.

B. If the business operates on a fiscal year, state beginning and ending dates:

C. If this is the business' first Maryland personal property return, state whether or not it succeeds an established business and give name:

D. Does the business own any fully depreciated and/or expensed personal property located in Maryland? yes no
If yes, is that property reported on this return? yes no

E. Does the submitted balance sheet or depreciation schedule reflect personal property located outside of Maryland? yes no
If yes, reconcile it with this return.

F. Has the business disposed of assets or transferred assets in or out of Maryland during 2013? yes no If yes, complete Form 4C (Disposal and Transfer Reconciliation).

- PLEASE READ "IMPORTANT REMINDERS" ON PAGE 4 BEFORE SIGNING -

I declare under the penalties of perjury, pursuant to Tax-Property Article 1-201 of the Annotated Code of Maryland, that this return, including any accompanying schedules and statements, has been examined by me and to the best of my knowledge and belief is a true, correct and complete return.

NAME OF FIRM, OTHER THAN TAXPAYER, PREPARING THIS RETURN

PRINT OR TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL OF OTHER ENTITY TITLE

X SIGNATURE OF PREPARER DATE

X SIGNATURE OF CORPORATE OFFICER OR PRINCIPAL DATE

PREPARER'S PHONE NUMBER F.A.I.L. ADDRESS

RETURNER'S PHONE NUMBER F.A.I.L. ADDRESS

Personal Property – Balance Sheet

STATE OF MARYLAND
DEPARTMENT OF ASSESSMENTS AND TAXATION
PERSONAL PROPERTY DIVISION
FORM 4A

Balance Sheet

2014

Form 4A



Name of Business _____
Department ID Number _____

	Beginning of Period			End of Period		
	month	day	year	month	day	year
	WITHIN MARYLAND	TOTAL*		WITHIN MARYLAND	TOTAL*	
ASSETS						
CURRENT ASSETS						
1. Cash						
2. Marketable Securities						
3. Accounts Receivable						
4. Inventory						
5. Other Current Assets						
PROPERTY, PLANT AND EQUIPMENT						
6. Land						
7. Buildings						
8. Leasehold Improvements						
9. Equipment						
10. SUBTOTAL Property, Plant and Equipment						
11. Accumulated Depreciation						
12. Net Property, Plant and Equipment						
INTANGIBLE AND OTHER ASSETS						
13. Intangible						
14. Other (provide schedule)						
15. TOTAL ASSETS						
LIABILITIES AND EQUITY						
CURRENT LIABILITIES						
16. Accounts Payable						
17. Other Current Liabilities						
LONG TERM LIABILITIES AND EQUITY						
18. Mortgage, Notes, Bonds Payable						
19. Other Long Term Liabilities						
20. Capital Stock						
21. Paid in or Capital Surplus						
22. Retained Earnings						
23. Other						
24. TOTAL LIABILITIES AND EQUITY						

*Omit TOTAL columns when all assets are located in Maryland.

This form was printed from the DAT web site.

Personal Property – Dep. Schedule

Maryland
Form 4B

Depreciation Schedule

PROPERTY IN MARYLAND AS OF _____/_____/_____

2014

Form 4B & 4C

PPA

	TOTAL COST	DEPRECIATION THIS YEAR	ACCUMULATED DEPRECIATION	BOOK VALUE
1. Land				
2. Building				
3. Leasehold Improvements				
4. Transportation Equipment (Registered) ^A				
5. Transportation Equipment (Not Registered and Interchangeable Registrations)				
6. Furniture & Fixtures				
7. Machinery & Equipment				
8. Other (Specify)				
9. Totals: ^B				
10. Expensed Property (Not Reported on Depreciation Schedule) ^C				
11. Exempt Personal Property ^D (Included in line 9 above and not reported on the return)				

Type of Organization	EXEMPTION CLAIMED	Type of Property
<input type="checkbox"/> Charitable <input type="checkbox"/> Educational <input type="checkbox"/> Other	<input type="checkbox"/> Religious <input type="checkbox"/> Veterans	<input type="checkbox"/> Vehicles (Registered) <input type="checkbox"/> Aircraft <input type="checkbox"/> Rental Heavy Equipment ^E
<input type="checkbox"/> Vessels (under 100 ft.) <input type="checkbox"/> Farming Implements (Farmers Only)	<input type="checkbox"/> Other	SPECIFY

- A. Vehicles with Interchangeable Registrations (dealer, recycler, finance company, special mobile equipment, and transporter plates) are to be reported on line 5.
- B. Total line must equal Line 10 on the Balance Sheet Form 4A.
- C. Include all expensed property located in Maryland not reported on the Depreciation Schedule Form 4B.
- D. If exempt property is owned check the appropriate boxes under line 11. Exempt organizations need to provide written justification for the claimed exemption with the return. Organizations required to file IRS Form 990 should also submit a copy of the latest available filing.
- E. For Rental Heavy Equipment Only – An entity must meet all of the following provisions: 1) largest segment of its total receipts is from the short-term lease or rental of heavy equipment at retail without operators; 2) it must be defined under Code 532412 of the North American Industry Classification System; 3) the property must meet the definition of heavy equipment property in § 9-609(D)(5) of the Political Subdivisions Article and 4) the lease or rental of the heavy equipment property is for a period of 365 days or less.

Maryland
Form 4C

DISPOSAL AND TRANSFER RECONCILIATION

	BALANCE 1/1/2013	TRANSFERS IN DURING 2013	2013 ACQUISITIONS	TRANSFERS OUT & DISPOSALS*	BALANCE 1/1/2014
1. Furniture, Fixtures, Tools Machinery and Equipment					
2. Motor Vehicles					
3. Manufacturing/R&D Equip.					
4. Leased Property					
5. Totals					

This section must be completed by those businesses which transferred or disposed of personal property located in Maryland during 2013.

Property "Transferred In" from locations outside Maryland, property acquired and property "Disposed Of" or "Transferred Out" during 2013 must be reported above and reconciled with the totals from last year's return.

*If transfers out and disposals made during 2013 are more than \$200,000 or greater than 50% of the total property reported as of 1/1/2013, complete the information below.

TRANSFERS	Date of transfer:	Location where transferred?	
		City:	State:
DISPOSALS	Date of disposal:	Manner of disposal? (sale, junked, donation, etc.)	Name of buyer? (For Sales Only)

This form was printed from the DAT web site.

Appraisal Process

1. Define the valuation problem		
1.1 Identify the intended use and users of the appraisal		
1.2 Define value(s) to be developed		
1.3 Establish date(s) of value opinion(s)		
1.4 Identify and locate the real estate		
1.5 Identify the property rights to be valued		
1.6 Identify limiting conditions or assumptions		
2. Determine the required scope of work		
3. Make a preliminary analysis and plan		
General (market):	Specific property:	Competitive properties:
3.1 Market analysis	3.2 Property analysis	3.3 Comparison analysis
3.1.1 Demand components	3.2.1 Site/improvements	3.3.1 Sales
3.1.2 Supply components	3.2.2 Size	3.3.2 Rentals
3.1.3 Trends	3.2.3 Age and condition	3.3.3 Costs
3.1.4 Forecasts	3.2.4 Location	3.3.4 Elements of comparison
	3.2.5 Legal (title, use)	3.3.5 Units of comparison
4. Select and collect the data		
5. Determine highest and best use		
5.1 Land as if vacant and available		
5.2 Property as improved (existing or proposed)		
6. Apply appropriate valuation approaches		
6.1 Sales comparison		
6.2 Income capitalization		
6.3 Cost		
7. Reconcile value indicators and report opinion(s) of value(s)		

Appraisal Process - USPAP

USPAP- STANDARD 1 & 2 & STANDARD 6

Table 1. Six steps in the appraisal process under Standards 1, 2, and 6

Step 1. Definition of the Problem						Standard Rule 1-2 Standard Rule 6-1
Identify client and other intended use	Identify the intended use	Identify effective value date	Identify the type and definition of value	Identify relevant characteristics of the property	Assignment conditions*	
					Extraordinary assumptions	Hypothetical conditions
Step 2. Scope of Work						Competency Rule Scope of Work Rule

Appraisal Process – USPAP (Cont.)

STANDARD 1 & 2 and STANDARD 6

Step 3. Data Collection and Analysis

Market Analysis Demand studies Supply studies Marketability studies	Highest and Best Use Analysis Site as though vacant Ideal improvement Property as improved	Standard Rule 1-3 Standard Rule 6-3
---	--	--

Step 4. Application of the Approaches to Value

Cost	Sales Comparison	Income Capitalization	Standard Rule 1-4 Standard Rules 6-4, 6-5, and 6-6
-------------	-------------------------	------------------------------	---

Standard 6-4 (b) deals with valuation model specification – characteristics that affect value

Standard 6-4 (c) model calibration – development of rates or coefficients used in the model

Appraisal Process – USPAP (cont.)

STANDARD 1 & 2 and STANDARD 6

Step 5. Reconciliation of Value Indicators and Final Value Opinion

Standard Rule 1-6
Standard Rule 6-7

Step 6. Report of Defined Value Opinions

Standard 2
Standard Rules 6-8
and 6-9

** Assignment conditions also include jurisdictional exceptions, assumptions, and limiting conditions*

Standards Rule 6-7 deals with model testing, quality control, and correlation of values

Mass Appraisal

Model Calibration (Cont.)

- Cost manual tables are examples of calibrated parameters, as well as the coefficients (rates) in a linear or nonlinear model. Models must be calibrated using recognized techniques, including, but not limited to, multiple linear regression, nonlinear regression, and adaptive estimation.
- Models must be calibrated using recognized techniques, including, but not limited to, multiple linear regression, nonlinear regression, and adaptive estimation.

Mass Appraisal

Model Calibration (Cont.)

- Cost manual tables are examples of calibrated parameters, or coefficients (rates) they include cost, depreciation tables, and land tables and coefficients can be linear or nonlinear models.
- Models must be calibrated using recognized techniques, including, that include market and statistical analysis of relevant market data and may include but not limited to linear regression, non-linear regression and adaptive estimation feedback

Market Calibrated Cost Model

Simple Cost Model

$$MV = RCN - D + LV$$

- **MV = Market Value**
- **RCN = Replacement Cost New**
- **D = Depreciation**
- **LV = Land Value**

Expanded Cost Model

- $MV = LQ * LR + IQ * IR$

- **MV = Market Value**
- **LQ = Land Size**
- **LR = Land Rate**
- **IQ = Improvement Size**
- **IR = Improvement Rate**

Market Calibrated Cost Model

STEPS IN THE COST APPROACH TO VALUE

- 1. Estimate the land (site) value as if vacant and available for development to its highest and best use.**
- 2. Estimate the total cost new of the improvements.**
- 3. Estimate the total amount of depreciation from all causes.**
- 4. Subtract the total dollar amount of depreciation from the total cost new of the primary improvements.**
- 5. Estimate the total cost new of any accessory improvements and site improvements.**
- 6. Add site value to the depreciated cost of the primary improvements, accessory improvements, and site improvements, to arrive at a value indication by the cost approach.**

Market Calibrated Cost Model

- **Through market analysis in the calibration process,** rates are developed for construction cost, depreciation and land
- **In market analysis,** property sales are analyzed.
- **Properties are grouped by geographic areas – Market Areas and Neighborhoods**
- **The developed rates are applied to each property to** value the land and building.
- **Within each Market Area and Neighborhood** comparable sale properties are valued by the cost model.
- **An Assessment to Sale Price ratio is calculated for each comparable sale** that is valued by the cost model.

Market Calibrated Cost Model

- **Through market analysis in the calibration process,** rates are developed for construction costs (improvement cost new), depreciation (from observed condition and indirect method, and land (from direct sale comparison, allocation, or abstraction).
- **In market analysis,** property sales are analyzed.
- **Properties are grouped by geographic areas – Market Areas and Neighborhoods** - which have similar market influences and economic characteristics.
- **The developed rates are applied to each individual property** (relevant characteristics - quantitative and qualitative) to value the land and building.

Market Calibrated Cost Model

- The **model may be reapplied** until acceptable results are attained.
- Then the **model rates or coefficients** used to value the sale properties **are then applied to value the all non-sale** comparable properties.
- Throughout the re-appraisal - **assessment performance analysis (ratio study) is conducted.**
- **Accurate values** begin with **accurate data.**
- **Assessors must ensure** that the appropriate data is being captured accurately and consistently.
- **Market transfers** must be timely **entered** into the valuation system and existing property data characteristics must be updated for changes.

Market Calibrated Cost Model

- **Properties should be regularly re-inspected** to ensure existing data is accurate and current – Maryland is to physically inspect once every three years.
- **IAAO standards** call for routine property inspections **at least every six years**. Many states have laws requiring more frequent cycles.
- **Often Building permits, and technology** - aerial/oblique photography, street view images and the linking of this data with the assessors valuation system (CAMA or AAVS) **allows for a timely and efficient review of property record characteristics**.
- SDAT does not have aerial, oblique photography, or street view images which should be linked to the valuation system.

Market Calibrated Cost Model

- With these technologies, properties with changes can be identified and field inspections can be made to verify data as need.
- In many cases data can be updated in the office using these systems.
- The largest cost of any mass appraisal is data collection and review.

Cost Model Steps

- Sales analysis - Current Sales Price to Prior Assessment Ratio
 - $\text{Prior Assessment} = \frac{300,000}{360,000} = .8333$
- Statutory Goal = 100%
- Verify property characteristics - change if not correct
- **Estimate Replacement Cost New** for Dwelling for current year and location – calculate cost – and cost per square foot new for comparison purposes
- Estimate Improvement cost new for Accessory Structures

Cost Model Steps

- **Estimate Depreciation** – loss in value from all causes
 - Physical Deterioration
 - Functional Obsolescence
 - Locational Obsolescence / market conditions
- Methods for estimating Depreciation
 - Observed condition – physical deterioration
 - Indirect Method – Age Life/Economic Life
- Estimate Depreciation as a percent, determine depreciation for typical condition homes in neighborhood, dwellings in better condition less depreciation, dwellings in worst condition more depreciation.

Cost Model Steps

3. Total Physical Depreciation of Improvements / Divided by Cost New of Improvements:

$$\text{\$50,000.} / \text{\$130,000.} = \text{.3846}$$

4. This is the total percentage of loss from cost new: .3846 or 38.5%

5. Total percentage of loss from cost new is multiplied by Total Economic Life (TEL) of the structure: 38.5% X 70 years = 26.9 years (Effective Age)

6. Depreciation Percent per Year = .3846 / 26.9 = .014

- **Just as with Paired Sales Analysis, the results of the comparable sales calculations can be used for the subject property's Effective Age and Depreciation Estimate**

Cost Model Steps

- **Estimate – Improved Site (land) value.**
 - Primary value in the smallest buildable lot in neighborhood
 - Land rates vary by zoning and property use/density
 - Land rates – lot size > land value per unit declines – can be linear or non-linear.
 - Methods of estimating – calibrating land rates
 - Direct Sales Comparison
 - Allocation
 - Abstraction
 - Value land on each property using land rate table and land size with adjustments as needed

Cost Model Steps

- If acceptable ratio statistics are not attained and neighborhood edits show non-acceptable results, the model would be re-applied to the sale properties with individual adjustments in cost, depreciation, land rates, as needed. Then a new sales analysis is conducted with sale assessment ratios. The model may be reapplied several time until acceptable results are attained.
- Sometimes a Market Value Index (MVI) analysis is conducted by property model (type of construction, size range, age, style, etc.). This develops market adjustments of individual model types to adjust the model to the common level of assessment of all other properties in the neighborhood.

Property Record Card

OV

Assess # 220900015 STATE OF MARYLAND DEPARTMENT OF ASSESSMENTS AND TAXATION PROPERTY RECORD CARD - REASSESSMENT YEAR 2012 Page 1 of 1 PRINTED 12/09/2011

1	Owner: JOHN G. DOE Mail Addr: 12345 ANYWHERE DR ANYPLACE, MD 21111-1111	Property Use: Residential Occupancy: Owner Occupied Valued By: Value Method MO Value	Assessor: 2209007 70223 71245 7 Field Sequence Number: 01234-000-00-00 Neighborhood: 001007T.02	Map/GIS/Parcel/BALL: 000007 70223 71245 7 Field Sequence Number: 01234-000-00-00 Neighborhood: 001007T.02	Legal Description: 4.13 ACRES PAR A 12345 ANYWHERE DR MARYLAND ACRES	<table border="1"> <tr> <th colspan="3">VALUE SUMMARY</th> </tr> <tr> <th colspan="3">FULL CASH VALUE</th> </tr> <tr> <td>Total Land</td> <td>Price</td> <td>Current</td> </tr> <tr> <td>Total Improvements</td> <td>348,000</td> <td>283,300</td> </tr> <tr> <td>Total Value</td> <td>464,300</td> <td>348,600</td> </tr> <tr> <td>Preferential Land</td> <td>0</td> <td>0</td> </tr> <tr> <td>Carriage</td> <td>464,300</td> <td>348,600</td> </tr> </table>	VALUE SUMMARY			FULL CASH VALUE			Total Land	Price	Current	Total Improvements	348,000	283,300	Total Value	464,300	348,600	Preferential Land	0	0	Carriage	464,300	348,600																														
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Property Record Card

OV

1. **Administrative data:** Reassessment Year - Owner, Address, Property Use and Location, Field Sequence #, Neighborhood, Legal Description
2. **Dwelling Data:** Year built, Type, Quality

 Section Name: Section name, Area, Heated area, Total Heated Area
3. **Dwelling Characteristics:** Category, Type, % - Category, Units
4. **Depreciation and Adjustments:** Depreciation Type and Adjustment, Total Depreciation
5. **Price Index Type:** Neighborhood Adjustment, County Multiplier, Quality Adjustment, Structure Adjustment
6. **Description:** Land Value
8. **Improvement Sketch:** Shows each section of main improvement, Site Address is show at bottom of sketch box
9. **Value Summary – Full Cash Value:** Prior and Current Years, Improvement, Land, Total, Preferential Land, Curtelage
10. **Sale Data:** Date of Sale and Sale Price
11. **Building Notes:** - includes permit data
12. **Outbuilding Data:** Description, Year built, Units, Quality Price, %condition, Value, Notes
13. **Dwelling Value:** Total Dwelling Value, Value per # of Heated Area

Cost Model Method

Dwelling cost valuation method in AAVS (MD Value method):

$$\begin{aligned} & \text{(Constant Rate of dwelling style)} \\ & + \\ & \text{(Dwelling Area \#1 * Sq. Ft. Rate of area type)} \\ & + \\ & \text{(Dwelling Area \#2 * Sq. Ft. Rate of area type)} \\ & + \\ & \text{(Dwelling Area \#3 * Sq. Ft. Rate of area type)} \\ & + \\ & \text{(Any additional dwelling areas * Sq. Ft. Rate of area type)} \\ & * \\ & \text{(Exterior Wall Adjustment \#1 + Ext. Wall Adj. \#2 + Ext. Wall Adj. \#3, etc.)} \\ & * \\ & \text{Townhouse Adjustment (if necessary)} \\ & = \\ & \text{Dwelling Adjusted Base Value} \\ & + \\ & \text{(Porch Area * Sq. Ft. Rate of area type) (plus any additional porches)} \\ & + \\ & \text{(Garage Area * Sq. Ft. Rate of area type) (plus any additional garage areas)} \\ & + \\ & \text{(Area of any other attached items * Sq. Ft. Rate of area type)} \\ & + \\ & \text{Structural Element Charges (Bathrooms, fireplaces, A/C, etc.)} \\ & = \\ & \text{Total Base Value * Quality Index * County Index} \\ & = \\ & \text{Replacement Cost New (RCN) * (100\% - (Depreciation Rate + Obsolescence Rate))} \\ & * \\ & \text{Neighborhood Adjustment (AKA Market Value Index or MVI)} \\ & = \\ & \text{Dwelling Value} \\ & + \\ & \text{Extra Feature Values (AKA Accessory Structures)} \\ & + \\ & \text{Land Value} \\ & = \\ & \text{Total Property Value} \end{aligned}$$

Dwelling Base Cost Rates

DWELLING BASE RATES

	1 STORY			1 1/2 STORY		2 STORY		2 1/2 STORY		3 STORY		4 STORY	
	NO BSMT	BSMT	Split Foyer	NO BSMT	BSMT	NO BSMT	BSMT	NO BSMT	BSMT	NO BSMT	BSMT	NO BSMT	BSMT
STANDARD DWELLING - CONSTANT	31760	35570	35570	34700	37750	37890	40960	41380	44440	45185	48220	49340	52320
STANDARD DWELLING - SQ. FT. RATE	79	89.25	104.4	75.75	85.5	72.5	81.9	69.45	78.45	66.55	75.15	63.75	72

EXTERIOR WALL ADJUSTMENTS	ADJ
FRAME ADJUSTMENT	1
BRICK ADJUSTMENT	1.13
STONE ADJUSTMENT	1.25
1/2 BRICK & FRAME ADJUSTMENT	1.07
1/2 STONE & FRAME ADJUSTMENT	1.13

COUNTY INDEX	
ALLEGANY	0.9
ANNE ARUNDEL	1.11
BALTIMORE CITY	1.1
BALTIMORE COUNTY	1.1
CALVERT	1.06
CAROLINE	1.01
CARROLL	1.01
CECIL	1.01
CHARLES	1.06
DORCHESTER	1.01
FREDERICK	1.01
GARRETT	0.9
HARFORD	1.1
HOWARD	1.1
KENT	1.01
MONTGOMERY	1.13
PRINCE GEORGE'S	1.13
QUEEN ANNE'S	1.01
SAINT MARY'S	1.06
SOMERSET	1.01
TALBOT	1.01
WASHINGTON	1.01
WICOMICO	1.01
WORCESTER	1.01

QUALITY INDEX ADJUSTMENT			
Index Value = 1.17			
Base Quality = 4			
	Quality	Power	Index
1	LOW	-3	0.62
2	ECONOMY	-2	0.73
3	BELOW AVG	-1	0.85
4	AVERAGE	0	1
5	ABOVE AVG	1	1.17
6	GOOD	2	1.37
7	VERY GOOD	3	1.6
8	EXCELLENT	4	1.87
9	SUPERIOR	5	2.19

MOBILE HOMES	
Quality	Sq. Ft. Rate
1	25.11
2	28.35
3	45.36
4	51.84

TOWNHOUSE ADJUSTMENTS	
END UNIT	0.97
CENTER UNIT	0.93

Dwelling Structural Element Rates

STRUCTURAL ELEMENT RATES			
FIELD	Category Name	Code	Average
ROOF COVER	Comp Shingle	29	0.00
	Built-Up	34	0.00
	Tile	31	4.75
	Metal	33	2.50
	Slate	30	5.25
	Combination	35	0.00
DORMERS	Individual	DRI	1100.00
	Linear Foot	DRL	230.00
HEAT TYPE	Hot Air	40	0.00
	Hot Water Baseboard	41	2.05
	Heat Pump	42	0.00
	Hot Water Radiator	43	0.00
	Electric	44	0.00
	Solar	45	0.00
	Space Heater	46	-1.85
None	79	0.00	
AIR COND.	Combined System	47	2.70
	Separate System	48	5.20
FULL BATHS		BT	5000.00
HALF BATHS		HB	2840.00
PORCHES	Deck	F60	16.20
	Deck w/roof	F61	31.15
	Porch - no roof	F62	17.40
	1 Story Open	F63	32.35
	2 Story Open	F64	48.55
	3 Story Open	F65	64.75
	Enclosed Porch	F66	67.10
	Concrete Patio	F67	7.75
	Conc. Patio w/roof	F68	22.70
	Brick Patio	F69	11.25
	Brick Patio w/roof	F70	26.35
	Stone Patio	F71	16.45
	Stone Patio w/roof	F72	31.40
	Enclosed Patio	F91	53.65
	FIREPLACES	1 Story Frame	51
1 Story Brick		52	4850.00
1 Story Stone		88	5385.00
2 Story Frame		53	4845.00
2 Story Brick		54	5935.00
2 Story Stone		89	6585.00
3 Story Frame		55	5720.00
3 Story Brick		56	7000.00
3 Story Stone		90	7770.00
1 Story Same Chimney		57	2570.00
2 Story Same Chimney		58	3145.00
3 Story Same Chimney		59	3145.00
1 Story Gas		84	3600.00
2 Story Gas		85	3860.00
3 Story Gas		86	4090.00
Direct-vented gas	87	3250.00	
BASEMENT ROOMS	Basement Room	BSR	6270.00
	Basement Bedroom	BSB	4600.00
	Finished Basement	BSF	35.25

FIELD	Category Name	Code	Average
TRIM	Brick	TRB	16.65
	Stone	TRS	24.60
	Frame	F73	27.90
ATTACHED GARAGE	Brick	F74	35.45
	Stone	F75	39.70
	Built-in	F76	-53.20
	Basement	F77	6.60
	Carport	F78	19.15
	MISC. FEATURES	Extra Kitchen	KTE
Kitchen Sink	KTS	725.00	
Lavatory	LAV	850.00	
Water Closet	WC	875.00	
Bath Tub	BTB	1350.00	
Shower Stall	SHR	1215.00	
Laundry Tub	LTB	830.00	
Water Heater	WTH	1950.00	
Sauna	9	4900.00	
Whirlpool	10	2680.00	
Spa - Fiberglass	11	3975.00	
Spa - Concrete	12	5050.00	
Hot Tub	13	2620.00	
Wet Bar	14	1340.00	
Storage Over	15	4.85	
Room Over	RMO	59.25	
Basement Under	17	13.80	
Open Breezeway	F18	24.90	
Enclosed Breezeway	F19	60.05	
Loft/Balcony	22	24.05	
Walkout Basement	23	3500.00	
Attached Greenhouse	F24	53.05	
Attached Storage	F25	11.55	
Cathedral Ceiling	26	12.50	
Attic Room	38	22.00	
Unfinished Area	93	-35.50	
Elevators	92	19980.00	

Dwelling Extra Feature Rates

EXTRA FEATURE RATES			
FIELD	Category Name	Cat. #	Average
DETACHED GARAGES	Frame	33	38.70
	Frame w/Storage Over	34	40.22
	Frame w/Room Over	35	82.07
	Brick	36	46.76
	Brick w/Storage Over	37	48.28
	Brick w/Room Over	38	91.17
	Stone	39	51.60
	Stone w/Storage Over	40	53.12
	Stone w/Room Over	41	96.50
	Carport	42	24.50
	Room Over	46	41.76
	Full Bath	47	3547.00
	Half Bath	48	1636.00
	Kitchen	49	3305.00
FARM BUILDINGS	Pole Shed	21	7.82
	Stable	22	11.57
	Barn	23	9.24
	Dairy Barn	24	23.22
	Swine Barn	25	10.19
	Milking Parlor	26	24.38
	Poultry House	27	5.46
	Corn Crib	28	8.43
	Corn Bin	29	6.45
	Silo	30	20.96
	Agr. Greenhouse	31	14.50
	Tobacco Barn	32	10.57
	Grain Tank	43	1.63
	Machine Shed	44	11.00
	Horse Barn	45	20.96
PIERS	4' Wide Pier	10	112.46
	5' Wide Pier	11	115.21
	6' Wide Pier	12	118.02
	8' Wide Pier	13	127.31
	Pier w/Water	14	8.21
	Pier w/Electric	15	5.47
	Pier w/Water & Electric	16	13.70
	Pier Addition	17	4.58
	Boat House	18	25.60
Piles	19	281.00	
MISCELLANEOUS ACCESSORY STRUCTURES	Vinyl Pool	1	23.70
	Concrete Pool	2	39.50
	Pool Enclosure	3	18.32
	Bathhouse	4	28.21
	Tennis Court - Concrete	5	5.21
	Tennis Court - Asphalt	6	3.08
	Tennis Court Lights	7	5071.00
	Res. Greenhouse	8	36.83
	Gazebo	9	24.75
Shed	20	9.17	

Dwelling Cost Example of Record Card

Dwelling cost valuation method in AAVS (MD Value method): See example Property Record Card (PRC)

(Constant Rate of dwelling style	40,960	2 Story with Basement dwelling
+	+	
(Dwelling Area #1 * Sq. Ft. Rate of area type)	238,820	2 story with Basement - 2,916 sq.ft. * 81.90
+	+	
(Dwelling Area #2 * Sq. Ft. Rate of area type)	45,267	1 story no Basement - 573 sq.ft. * 79.00
*	*	
(Exterior Wall Adjustment #1 + Ext. Wall Adj. #2)	1.0325	75% Siding & 25% Brick - (1.00 * 0.75)+(1.13*0.25)
*		
Townhouse Adjustment (if necessary)	N/A	Example dwelling is not a townhouse
=	=	
Dwelling Adjusted Base Value	335,611	(40,960 + 238,820 + 45,267) * 1.0325
+	+	
(Porch Area * Sq. Ft. Rate of area type)	11,523	1 Story open Porch (216 sq.ft.*32.35) & Deck (280 sq.ft*16.20)
+	+	
(Garage Area * Sq. Ft. Rate of area type)	18,748	Frame Attached Garage (672 sq.ft * 27.90)
+	+	
Structural Element Charges (Bathrooms, fireplaces, A/C, etc.)	30,982	2 Full Bathroom (5,000), 1 Half Bathroom (2,840), & A/C (3,489 sq.ft.* 5.20)
=	=	
Total Base Value	396,864	335,611 + 11,523 + 18,748 + 30,982
*	*	
Quality Index	1.17	Above Average Quality
*	*	
County Index	1.01	Washington County Index
=	=	
Replacement Cost New (RCN)	468,974	396,864 * 1.17 * 1.01
*	*	
(100% - (Depreciation Rate + Obsolescence Rate))	0.750	20% Depreciation and 5% Obsolescence (100% - 25%)
*	*	
Neighborhood Adjustment (AKA Market Value Index or MVI)	0.70	Market Adjustment for this dwelling model in this neighborhood
=	=	
Dwelling Value	246,211	
+	+	
Extra Feature Values (AKA Accessory Structures)	6,511	Vinyl Pool - 544 sq.ft., Average Quality, 50% depreciation, located in Washington County (county adjustment of 1.01)
+	+	
Land Value	96,300	See Example PRC
=	=	
Total Property Value	349,000	246,211 + 6,511 + 96,300 = 349,022

Cost – Sales Analysis Summary

Camaset 4.13

ASSESSOR #0286

Land		Subset 1								
Subdivision		VAC CODE	PRIM CODE	UNIT	SIZE	PRIM RATE	VALUE	SEC CODE	SEC RATE	TER CODE
680	SEVEN OAKS									
	Duplexes		1101	SF	4000	\$20.00	\$80,000	2001	\$1.25	3001
	SFDs		1101	SF	4000	\$20.00	\$80,000	2001	\$1.25	3001
	Townhouses		1102	SITE	1	\$50,000	\$50,000			
	Back to Back Townhouses		1102	SITE	1	\$50,000	\$50,000			

Models		Subset 1		
Model	Description			MVI
40	SFDs		ALL GRADE	1.00
42	2 & 2 1/2 STY WB	END UNITS	GRADE 3	1.15
44	3 STY NB	END UNITS	GRADE 3	1.05
45	2 & 2 1/2 STY WB	CENTER UNITS	GRADE 3	1.10
47	3 STY NB	CENTER UNITS	GRADE 3	1.05
48	2 STY WB	DUPLEXES	GRADE 3	1.25
49	TOWNHOUSE	END & CENTER UNITS	GRADE 4	0.95
50	TOWNHOUSE	END & CENTER UNITS	GRADE 5	0.80
52	Back to Back TWNH	END & CENTER UNITS	GRADE 4	1.00
53	2 STY WB	DUPLEXES	GRADE 4	1.00

Subset 80
Saybrooke at Seven Oaks Condos # 680
4130080.02-1

Model		LAND	IMPS	\$ Per SF
101	UNITS LESS THAN 1000 SF	50%	50%	150
104	UNITS FROM 1000 TO 1199 SF	50%	50%	135
110	UNITS OVER 1200 SF	50%	50%	135

Enclave at Seven Oaks Condos # 680*
4130080.02-2

Model		LAND	IMPS	\$ Per SF
116	Townhouse Condo - Rear	25%	75%	130
117	Townhouse Condo - Front	25%	75%	130

*SF adjusted to remove built-in garage from living space. Changed to Townhouse Condo 4/21/2009

Cost – Sales Analysis

SET	413
SUBSET	1

SUBD	(All)
Exclude outliers	TRUE

MOD	MVI	MOD	YEAR	GR	DATE	DWG TYPE	SEC1 STY	PRICE	orig MVI	ACCT	LAND	Data						
												DWG RESID	DEPR. RCN	2. INDIC MVI	SEL MVI	MARKET VALUE	orig ratio	RATIO
		40	2011	4	1/4/2011	1	6	408,000	1	020468090 084204	84,400	323,600	277,500	1.09	1.00	361,900	89%	89%
			2011 Total									297,243	266,514	1.05	1.00	351,129	92%	92%
40 Tot	1.00	40 Total										285,302	257,848	1.04	1.00	341,096	93%	93%
		42	2013	3	7/31/2013	2	20	289,000	1.15	020468090 064312	80,000	209,000	159,391	1.22	1.15	263,300	91%	91%
					3/26/2013	2	20	290,000	1.15	020468090 096675	80,000	210,000	160,087	1.22	1.15	264,100	91%	91%
					3/11/2013	2	20	242,000	1.15	020468090 064491	80,000	162,000	139,826	1.07	1.15	240,800	100%	100%
					1/8/2013	2	20	299,900	1.15	020468090 062998	80,000	219,900	186,348	1.10	1.15	294,300	98%	98%
			2013 Total									200,225	161,413	1.15	1.15	285,625	95%	95%
			2012	3	10/5/2012	2	20	255,000	1.15	020468090 068576	80,000	175,000	147,826	1.10	1.15	250,000	98%	98%
					8/17/2012	2	20	283,000	1.15	020468090 068518	80,000	198,100	148,609	1.24	1.15	255,800	92%	90%
					7/24/2012	2	20	250,000	1.15	020468090 068996	80,000	170,000	141,130	1.12	1.15	242,300	97%	97%
					7/12/2012	2	20	250,000	1.15	020468090 096743	80,000	170,000	154,174	1.02	1.15	257,300	103%	103%
					5/18/2012	2	20	286,000	1.15	020468090 068533	80,000	206,000	190,000	1.01	1.15	298,500	104%	104%
					5/8/2012	2	20	292,000	1.15	020468090 096736	80,000	202,000	143,478	1.31	1.15	245,000	87%	87%
			2012 Total									186,850	154,203	1.13	1.15	258,150	97%	97%
			2011	3	4/7/2011	2	20	260,000	1.15	020468090 068690	80,000	180,000	136,957	1.22	1.15	237,500	91%	91%
			2011 Total									180,000	136,957	1.22	1.15	237,500	91%	91%
42 Tot	0.00	42 Total										191,091	155,257	1.15	1.15	258,991	96%	96%
		44	2013	3	3/11/2013	2	23	257,400	1	020468090 064467	80,000	177,400	153,000	1.08	1.05	240,650	91%	93%
					2/13/2013	2	23	165,000	1	020468090 095467	80,000	85,000	136,700	0.56	1.05	223,540	131%	135%
			2013 Total									131,200	144,850	0.82	1.05	232,095	111%	114%
			2012	3	11/20/2012	2	23	223,500	1	020468090 095526	80,000	143,500	138,200	0.96	1.05	225,110	98%	101%
					11/13/2012	2	23	270,000	1	020468090 063971	80,000	190,000	190,400	0.93	1.05	279,920	100%	104%
					11/9/2012	2	23	215,000	1	020468090 095399	80,000	135,000	141,000	0.88	1.05	228,050	103%	106%
					8/2/2012	2	23	271,000	1	020468090 064456	80,000	191,000	145,700	1.22	1.05	232,990	83%	86%

Class A - Assessment Budget's

		Budget Analysis									
		FY 2015 Budget**									
County		General Funds	Special Funds	Total	FTE	Total	Field	2015 Budget			
Class	County					Parcels	Assessor	per FTE	Per Parcel	Per Field	
A	Anne Arundel	1,170,355	1,170,356	2,340,711	34	211,308	17.5	68,844	11.08	133,755	
A	Baltimore City	2,090,459	2,090,459	4,180,918	45	236,929	24.5	92,909	17.65	170,650	
A	Baltimore	1,701,024	1,701,025	3,402,049	43	298,518	23	79,117	11.40	147,915	
A	Montgomery	2,149,258	2,149,258	4,298,516	53	336,785	30.5	81,104	12.76	140,935	
A	Prince George's	1,714,332	1,714,332	3,428,664	42	292,167	19.5	81,635	11.74	175,829	

Class B - Assessment Budget's

Budget Analysis										
FY 2015 Budget**										
County		General Funds	Special Funds	Total	FTE	Total	Field	2015 Budget		
Class	County					Parcels	Assessor	per FTE	Per Parcel	Per Field
B	Carroll	522,252	522,252	1,044,504	12	66,848	5.5	87,042	15.63	189,910
B	Charles	430,044	430,044	860,088	12	64,845	6	71,674	13.26	143,348
B	Frederick	615,102	615,103	1,230,205	14	94,520	6	87,872	13.02	205,034
B	Harford	578,397	578,398	1,156,795	15	98,336	7	77,120	11.76	165,256
B	Howard	611,104	611,105	1,222,209	15	104,085	8	81,481	11.74	152,776
B	Washington	474,542	474,543	949,085	11	58,904	5.5	86,280	16.11	172,561
B	Worcester	548,717	548,718	1,097,435	14	66,383	5.5	78,388	16.53	199,534

Class C - Assessment Budget's

		Budget Analysis									
		FY 2015 Budget**									
County Class	County	General Funds	Special Funds	Total	FTE	Total Parcels	Field Assessor	2015 Budget			
								per FTE	Per Parcel	Per Field	
C	Allegany	374,632	374,633	749,265	8	41,327	3	93,658	18.13	249,755	
C	Calvert	320,212	320,212	640,424	10	42,740	3	64,042	14.98	213,475	
C	Caroline	261,136	261,137	522,273	7	16,734	1	74,610	31.21	522,273	
C	Cecil	362,796	362,797	725,593	9	47,103	4	80,621	15.40	181,398	
C	Dorchester	236,780	236,781	473,561	6	23,171	2	78,927	20.44	236,781	
C	Garrett	365,178	365,178	730,356	9	29,393	3	81,151	24.85	243,452	
C	Kent	202,721	202,722	405,443	5	13,467	1	81,089	30.11	405,443	
C	Queen Anne's	287,612	287,613	575,225	6	25,829	2	95,871	22.27	287,613	
C	St. Mary's	472,961	472,961	945,922	10	48,813	4	94,592	19.38	236,481	
C	Somerset	223,530	223,531	447,061	6	17,109	2	74,510	26.13	223,531	
C	Talbot	293,725	293,725	587,450	7	21,180	2	83,921	27.74	293,725	
C	Vicomico	351,075	351,076	702,151	8	46,683	3	87,769	15.04	234,050	
Total		16,357,944	16,357,959	32,715,903	401	2,303,177	188.5	1,964,229	428.35	5,325,478	

1st Level Assessment Appeals

- **Supervisors level** appeal/owner can get a copy of worksheet/that information will be reviewed at the meeting.
- Your first level hearing is informal and should be viewed as an opportunity to present evidence which would indicate that the department's value of the property is inaccurate.
- Property owner should focus on points that affect value/math errors/differences in property characteristics, and property sales that supports the property owners findings as to value.

2nd Level Assessment Appeals

- Following the 1st level hearing, the property owner will be mailed a Final Notice of Assessment
- If the property owner does not agree with decision the may appeal to the **Property Tax Assessment Appeal Board** in the county where the property is located (three member independent board)
- Property owner can obtain a list of comparable properties if requested 15 days before hearing.
- Property owner is free to submit any supporting evidence.

3rd Level Assessment Appeals

- If dissatisfied with the notice of decision from the Appeal Board, you may file (within 30 days) to the **Maryland Tax Court.**

IAAO Mass Appraisal Standard

■ 3.3.4 Maintaining Property Characteristic Data

- Property characteristics data should be continually updated in response to changes brought about by new construction, new parcels, remodeling, demolition, and destruction. There are several ways of updating data.
- The most efficient method involves building permits. Ideally, strictly enforced local ordinances require building permits for all significant construction activity, and the assessor's office receives copies of the permits. This method allows the assessor to identify properties whose characteristics are likely to change, to inspect such parcels on a timely basis (preferably as close to the assessment date as possible), and to update the files accordingly

IAAO Mass Appraisal Standard

■ 3.3.4 Maintaining Property Characteristic Data

- Another method is aerial photography, which also can be helpful in identifying new or previously unrecorded construction and land use.
- Some jurisdictions use self-reporting, in which property owners review the assessor's records and submit additions or corrections.
- Information derived from multiple listing sources and other third-party vendors can also be used to validate property records.

IAAO Mass Appraisal Standard

■ 3.3.4 Maintaining Property Characteristic Data

- Another method is aerial photography, which also can be helpful in identifying new or previously unrecorded construction and land use.
- Some jurisdictions use self-reporting, in which property owners review the assessor's records and submit additions or corrections.
- Information derived from multiple listing sources and other third-party vendors can also be used to validate property records
- Periodic field inspections can help ensure that property characteristics data are complete and accurate.

IAAO Mass Appraisal Standard

■ 3.3.4 Maintaining Property Characteristic Data

- Assuming that most new construction activity is identified through building permits or other ongoing procedures, a physical review including an on-site verification of property characteristics should be conducted at least every 4 to 6 years.
- Re-inspections should include partial re-measurement of the two most complex sides of improvements and a walk around the improvement to identify additions and deletions. Photographs taken at previous physical inspections can help identify changes

IAAO Mass Appraisal Standard

■ 3.3.5 Alternatives to Periodic On-site Inspection

- Provided that initial physical inspections are timely completed and that an effective system of building permits or other methods of routinely identifying physical changes is in place, jurisdictions may employ a set of digital imaging technology tools to supplement field re-inspections with a computer-assisted office review.

These imaging tools should include the following:

- Current high-resolution street-view images (at a sub-inch pixel resolution that enables quality grade and physical condition to be verified)

IAAO Mass Appraisal Standard

■ 3.3.5 Alternatives to Periodic On-site Inspection

- Ortho-photo images (minimum 6” pixel resolution in urban/suburban and 12” resolution in rural areas, updated every 2 years in rapid growth areas, or 6–10 years in slow growth areas).
- Low level oblique images capable of being used for measurement verification (four cardinal directions, minimum 6-inch pixel resolution in urban/suburban and 12-inch pixel resolution in rural areas, updated every 2 years in rapid growth areas or, 6–10 years in slow growth areas).

IAAO Mass Appraisal Standard

■ 3.3.5 Alternatives to Periodic On-site Inspection

- These tool sets may incorporate change detection techniques that compare building dimension data (footprints) in the CAMA system to geo-referenced imagery or remote sensing data from sources (such as LIDAR [light detection and ranging]) and identify potential CAMA sketch discrepancies for further investigation.
- Assessment jurisdictions and oversight agencies must ensure that images meet expected quality standards. Standards required for vendor-supplied images should be spelled out in the Request for Proposal (RFP) and contract for services, and images should be checked for compliance with specified...

IAAO Mass Appraisal Standard

3.3.5 Alternatives to Periodic On-site Inspection

- These tool sets may incorporate change detection techniques that compare building dimension data (footprints) in the CAMA system to geo-referenced imagery or remote sensing data from sources (such as LiDAR [light detection and ranging]) and identify potential CAMA sketch discrepancies for further investigation.
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IAAO Mass Appraisal Standard

3.3.5 Alternatives to Periodic On-site Inspection

- In addition, appraisers should visit assigned areas on an annual basis to observe changes in neighborhood condition, trends, and property characteristics. An on-site physical review is recommended when significant construction changes are detected, a property is sold, or an area is affected by catastrophic damage. Building permits should be regularly monitored and properties that have significant change should be inspected when work is complete.

IAAO Mass Appraisal Standard

■ 3.3.5 Alternatives to Periodic On-site Inspection

- Sections 3.3.4 and 3.3.5, property characteristics data should be reviewed and updated at least every 4 to 6 years. This can be accomplished in at least three ways:
 - Re-inspecting all property at periodic intervals (i.e., every 4 to 6 years)
 - Re-inspecting properties on a cyclical basis (e.g., one-fourth or one-sixth each year)
 - Re-inspecting properties on a priority basis as indicated by ratio studies or other considerations while still ensuring that all properties are examined at least every sixth year

IAAO Mass Appraisal Standard

■ 3.3.5 Alternatives to Periodic On-site Inspection

- Sections 3.3.4 and 3.3.5, property characteristics data should be reviewed and updated at least every 4 to 6 years. This can be accomplished in at least three ways:
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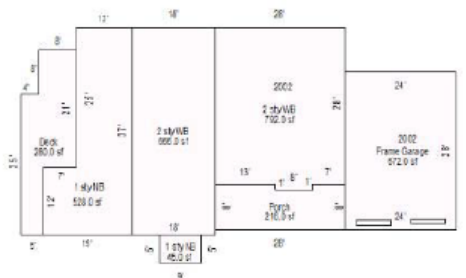
Property Sketches - Overview

Account # 2208065013

STATE OF MARYLAND DEPARTMENT OF ASSESSMENTS AND TAXATION
PROPERTY RECORD CARD - REASSESSMENT YEAR 2012

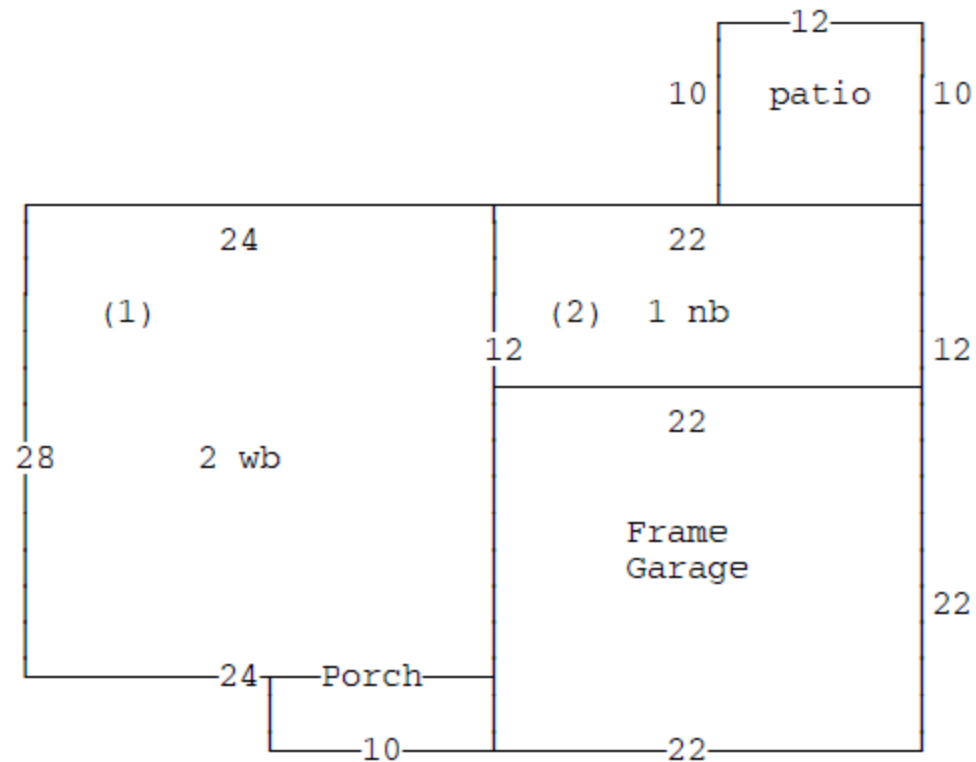
Page 1 of 1
PRINTED 12/09/2011

Owner JOHN Q. DOE Mail Addr 12345 ANYWHERE DR ANYPLACE, MD 21111-1111		Property Use Residential Occupancy Owner Occupied Valued By Value Method MD Value		Map/Gr/Par/Sec/BLt 220000 / 0023 / 0280 / / / A Field Sequence Number 01234-022-00-00 Neighborhood 3010077.22		Legal Description 4.13 ACRES PAR A 12345 ANYWHERE DR MARYLAND ACRES		VALUE SUMMARY FULL CASH VALUE																																									
DWELLING DATA Dwelling No. 1 Year Built 1982 Type Standard Unit Model No. 024 Quality Above Average Curtilage No								<table border="1"> <tr> <td>Total Land</td> <td>116,300</td> <td>96,300</td> </tr> <tr> <td>Total Improvements</td> <td>348,600</td> <td>253,300</td> </tr> <tr> <td>Total Value</td> <td>464,900</td> <td>349,600</td> </tr> <tr> <td>Preferential Land</td> <td>0</td> <td>0</td> </tr> <tr> <td>Curtilage</td> <td>464,900</td> <td>349,600</td> </tr> </table>			Total Land	116,300	96,300	Total Improvements	348,600	253,300	Total Value	464,900	349,600	Preferential Land	0	0	Curtilage	464,900	349,600																								
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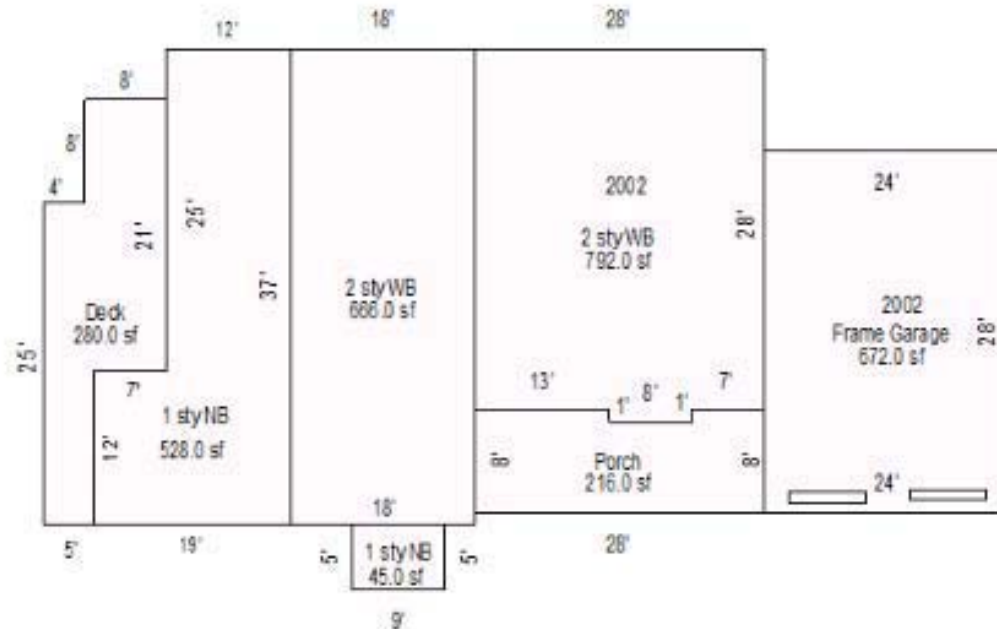


SITE ADDRESS: 12345 ANYWHERE DR, ANYPLACE 21111-1111

Property Sketches - Overview



Property Sketches - Overview



Sketch by iSpec Media™

Property Sketches - Status

<u>APRIL 2014</u>	Residential Sketches Possible	Residential Sketches Complete	Residential Sketches % Complete
Allegany	26,522	26,472	100%
AA Co	168,274	63,910	38%
Baltimore	139,088	75,619	54%
Baltimore Co	230,056	103,936	45%
Calvert	32,130	31,944	99%
Caroline	11,734	11,678	100%
Carroll	55,283	34,402	62%
Cecil	34,075	33,539	98%
Charles	50,682	29,753	59%
Dorchester	13,630	13,590	100%
Frederick	75,826	75,035	99%
Garrett	16,292	16,234	100%
Harford	78,971	12,287	16%
Howard	82,312	34,539	42%
Kent	8,954	8,713	97%
Montg Co	236,974	50,521	21%
PG Co	214,145	208,293	97%
QA Co	19,574	18,877	96%
St. Mary's	36,375	34,956	96%
Somerset	8,918	8,852	99%
Talbot	17,197	16,873	98%
Wash Co	47,586	47,343	99%
Wicomico	32,430	32,343	100%
Worcester	27,280	23,797	87%
	1,664,308	1,013,506	61%

Property Sketches - Overview

- Needed to quickly and accurately verify if building sections and sizes are correct
- Historically, sketch was on paper record.
- CAMA in 1990 did not have sketch routine
- In mid late 1990's, Apex sketch software was added and a digital sketch conversion project began.
- Preceding Chart is the status of digital sketch conversion
- Sketches are a combination of digital (in AAVS) and manual paper sketches on old property record cards

Property Sketches - Overview

- With 1,664,308 residential sketches, there should be adequately trained clerical staff to update sketches for changes or corrections on existing sketches. Both assessors and clerical should be trained.
- With New Property Pick-up, the most time consuming part of the process is the initial pick-up – measuring, sketching, listing of all property characteristics and then completing the initial data entry of all characteristics into AAVS