



HABITATIONAL | HOAs | CONDOMINIUM ASSOCIATIONS | LRO

Commercial Residential Property Intelligence:

Automate what can be automated and efficiently underwrite everything else.

Leading insurers have [automated underwriting](#) for small commercial property lines by applying new data sources and advanced analytics, following successful automation across homeowners. While few disclose underwriting automation, we see [online quoting](#) offered by insurtechs like [NEXT](#) or [Coverwallet](#) and by established brands including Allstate, Farmers Insurance, and Chubb.

Commercial property risks differ widely, requiring varied underwriting expertise and risk engineering. Due to the complexity of submissions, properties, and parcels, carriers struggled to build any automation into the underwriting workflow for commercial properties. Instead, they typically relied on large workforces to manage manual workflows with all their inherent disadvantages.

To state the obvious, certain large commercial properties like oil refineries or airports will continue to require expert risk engineering and specialized underwriting. The opportunity lies in effective segmentation and advanced analytics to automate what can be automated to lower expenses.

CAPE Analytics has invested in building commercial-specific solutions for the last five years. As the industry leader, we began by ingesting vast amounts of aerial imagery and then applied geospatial analytics, computer vision, machine learning, and other AI technologies to transform that data into actionable, up-to-date intelligence that's available instantly and on demand. We continue to invest in property intelligence to build on our innovative solutions.

This report focuses on the immediate opportunity to automate portions of the underwriting process for commercial residential property risks. Often referred to as habitational risks, these include small townhouse communities, condominium communities, HOAs, real estate portfolios bundling thousands of rentals into a single landlord policy, strip malls covered by a lessor's risk only (LRO) policy, or free-standing houses in a development. These more commodified portfolios also face greater pressure on the expense side, including [rising reinsurance costs](#).

Automating Underwriting for Commercial Residential Properties

The main challenge in underwriting a habitational property is that a single "property" can refer to many separate properties or structures. Before the carrier gets to underwriting, they must tackle the front-end issue of ingesting messy and often incomplete submissions.

The commercial residential segment runs from a five-unit townhouse to a 200-plus-building retirement community. In practical terms, this means there is no standard underwriting submission form: individual brokers and agents prepare the Statement of Value (SOV) or Building Schedule differently.

While an ideal SOV or Building Schedule would list all the buildings that belong to the property risk, their addresses, and COPE and replacement cost information, the reality is far different. Carriers typically receive submissions through email with an attached spreadsheet or PDF in varied formats. Often, the SOV is a spreadsheet showing just one address as the anchor for a housing development or senior community that includes dozens of residences. Sometimes, the SOV is nothing more than a single photo taken from old documents and does not include the number of buildings on the property.

Inconsistent and incomplete SOVs mean that the underwriter does not have all the necessary information about the property—not even the guarantee that the SOV includes all the buildings that belong to that community. If the SOV submission says there are five buildings but provides only one street address, the underwriter will likely pull up a map and look for five structures that likely belong together. Today, this is a manual step requiring a human expert. What’s straightforward for five buildings quickly becomes time-consuming when there are dozens, even hundreds, of residential buildings.



Fortunately, habitation property underwriting makes a strong use case for geospatial data and AI.

CAPE offers unmatched solutions to help automate submission and underwriting: Property Mapper and Roof Condition Rating (RCR).

- **Property Mapper**

- By predicting the structures belonging to a habitation property, Property Mapper helps automate the many tedious tasks associated with new and renewal underwriting.

- Clear identification of structures allows for more accurate joining and analysis of disparate data sets.

- **Roof Condition Rating (RCR)**

- The industry long relied on roof age as a proxy for property condition and a go-to for risk assessment. In reality, traditional, non-imagery based roof age data is sparse and often inaccurate.
- Accurate and objective roof condition derived from imagery using AI, however, predicts losses from wind, hail and all perils; bad roofs (rated severe or poor) perform twice as badly as good roofs (rated excellent or good). RCR is singularly useful for underwriting property because it supports risk selection, segmentation, and rating.
- CAPE Analytics pioneered the Roof Condition Rating (RCR) attribute, which indicates the roof's overall condition on a 5-point scale. Carriers across the U.S., Canada, and Australia use RCR for rating, quoting, underwriting, and inspection triage.
- Built specifically for commercial properties, CAPE's commercial lines RCR provides a score on a 5-point scale that indicates the overall condition of complex roofing for habitational properties.
- Roof Condition Ratings range from excellent, where the roof is in pristine condition and shows no visible defects, to severe, where the roof has obvious, pronounced, and widespread signs of defects. RCR has become the gold standard for assessing rooftops for property underwriting and pricing and is extremely predictive of loss potential.

- CAPE can provide an average RCR for a multi-structure property, flag the worst-condition roofs, or zero in on specific rooftops with detailed reason codes that give additional insight into each rating—improving explainability.
- **Additional Roof Insights:** Roof age, solar panel presence, and HVAC units are risk factors that insurers should consider throughout the policy lifecycle.

Construction Insights: CAPE provides information on the number of stories, interior area, construction type, exterior of the structure, foundation, year built, and other similar attributes that can aid habitational underwriters in accurately calculating replacement costs. Construction-related attributes are mostly valuable for replacement costs.

Lot Insights: Paved area illumination, paved area deterioration, and pool presence are additional components of understanding liability risk.

Hazard and Peril-Aligned Vulnerability: CAPE provides insights into property hazards and building-specific vulnerability to wildfire, hail, and wind, in addition to historical weather events.

How Does Property Intelligence Streamline the Underwriting Process?

Three simple steps open the door to automated habitational underwriting. First, Property Mapper automates much of the risk selection process, thus enabling the underwriter to integrate Property Mapper's output with Roof Condition Rating and other roof, lot, and construction attributes. This integrated approach makes the submission process more efficient and creates the glide path to automation.

Here's how it works:

1. The underwriter or underwriting assistant goes to CAPE's website, types in a single address, and gets a map image with the likely boundaries, including every address or structure of interest on that property.
2. The underwriter or assistant reviews the image and decides whether to adjust the boundary lines.
3. The underwriter combines the mapping with clear boundaries from Property Mapper with the weighted Roof Condition Rating to determine both the number of structures included in the property and their condition.

The CAPE commercial solution includes a growing set of property attributes, anchored by the gold-standard Roof Condition Rating, that support rating and underwriting. Insurers can access property data via API, batch, or web application to fit the appropriate workflow.

Automated Insights for Commercial Residential Properties

CAPE's Property Mapper uses advanced analytics, including AI, to ingest unstructured documents and enhance strategic data pre-fill. Advanced property mapping technology can resolve issues with non-standard submissions by analyzing the relationships between building appearance and drawing likely property boundaries. The underwriter can type in a single address, receive every address or structure of interest to that property portfolio, and then make adjustments as warranted. By eliminating tedious tasks, this mapping tool allows the automation process to begin at submission and frees up underwriters to focus on more specialized tasks that require their expertise.

In various formats, carriers receive submissions for complex properties like habitational communities or “campus” style risks like office parks from agents/brokers. Most commonly, underwriters receive those submissions through email with an attached spreadsheet, usually called a Statement of Value or Building Schedule in the insurance industry.

An ideal Building Schedule lists all buildings that belong to the property, their addresses, and COPE and replacement cost information. In reality, underwriters receive Building Schedules that list only a single address 70% of the time and, in some cases, only pictures taken with a phone from decade-old printouts.

SEAFIRE

INSURANCE SERVICES

A Division of Firebird Capital, LLC

STATEMENT OF VALUES

Building Coverage

Date:

Effective Date:

Name Insured:

Agency:

Producing Agent:

Phone Number:

Prem #	Bldg #	Address of Property	RC Or ACV	Blanket	Agreed Value
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$
				n/a	\$

*blanket coverage is not available for property insured for Agreed Value.

Agreed value - This confirms both parties agree that the limit of the insurance policy is the business income limit listed at the specific described location on this form. It is further agreed that the specific location agreed value limit is the most that can be paid by the insurer for a loss at described location.

Officers Name:

Signature:

Title:

Date:

Image: Sample Statement of Values template

Carriers deal with this inconsistent data by implementing manual workflows. An analyst or underwriter invests time in understanding each Building Schedule to transform it into something that can be used for underwriting.

Typically, this manual underwriting workflow includes

- Normalizing addresses.
- Looking up individual addresses on maps.
- Comparing plot maps (rarely provided as part of the submission) to buildings on maps.
- Researching parcel data on the county tax assessor's website.
- Looking for similar-looking buildings on maps in the surrounding area.
- Comparing the number of buildings listed on the schedule with similar-looking structures in the surrounding area.
- Creating a property boundary using annotation tools or simply by 'remembering' what the community looks like during underwriting.

This cumbersome workflow creates three issues impacting underwriting quality and the customer experience because it's:

- Time-consuming: A human needs between 30 minutes to several hours to translate information from the schedule to something that can be used for underwriting.
- Error-prone: Two people working on the same schedule can arrive at different results.
- Highly transactional: Most carriers repeat this cumbersome process for every subsequent renewal cycle.

Now's the Time to Automate

CAPE invested in Property Mapper to provide complete information in cases where a property consists of multiple parcels.

Property Mapper goes a long way toward removing the barrier to automation and serves to unlock the value of CAPE's Commercial Lines property application. Looking at the steps that humans take in manual workflows, CAPE identified two that can be solved with algorithms and machine learning to predict the property boundary programmatically:

1. Leveraging relationships between parcels and parcels with structures.
2. Determining the similarity between structures in the same general area.
3. Providing sufficient detail to allow the underwriting expert to review and manually define the area of interest (AOI) if warranted.

Thus, Property Mapper addresses a major barrier to automation.

Property Mapper Facilitates Integration with Third-party Data Sets

Joining disparate data sets is challenging, particularly for geospatial data sets for complex commercial properties with multiple parcels, structures, and addresses.

CAPE's commercial lines product offers access to four third-party data sets: public records, building permits, occupancy, and hazard data. Because all four data sets are organized by address, and most typical submissions have incomplete addresses, joining addresses to any of these third-party data sets delivers few usable records and creates a high risk of including records that belong to a neighboring property due to geocoding inaccuracies.

Property Mapper directly queries building permits, eliminating the need to ingest street addresses and all their incumbent issues. Extensive testing confirms that applying this innovation identifies permits that were otherwise difficult or impossible to confirm.

Opportunities in Automating Commercial Property Underwriting

Carriers that tackle segments like habitational property will reap short-term returns and long-term learning curve advantages in the race to automate commercial property underwriting.

CAPE'S commercial clients have streamlined underwriting efficiency, reducing time spent on an application by up to 80% by:

- Reducing the number of inspections while improving the quality of their book of business.
- Minimizing downstream underwriting expenses.
- Lessening unexpected loss by catching ineligible business at the time of submission and again at renewal.

Contact us to learn how CAPE's Commercial Property Intelligence, including Property Mapper and Roof Condition Rating, can help drive underwriting automation.