

Greater Utilization of the Cost Approach

In two articles published in 1977^{1&2}, the author and Dr. Steve Kapplin discussed the premise originally suggested by Dr. Richard U. Radcliff; i.e., that the Cost Approach is not an indication of *market value*. We concluded that three primary applications of the Cost Approach in the estimation of Market Value were:

- Cost of production as the basis of the Highest and Best (Most Probable) Use Analysis.
- Reproduction Cost is critical input in construction loan underwriting on proposed projects and decision making.
- A primary function of the Cost Approach is to test feasibility.

While these conclusions are still the author's opinions, the Cost Approach has taken on much greater importance recently in an area also minimally related to either the estimate of *market value* or *feasibility analysis*.

Replacement Cost Analysis

The recent hurricanes and flooding along the Coast of the Gulf of Mexico in the U.S. have significantly increased the need for Replacement Cost Analyses. ***Replacement Cost*** is defined as: "The estimated cost to construct, at current prices as of the effective appraisal date, a building with utility equivalent to the building being appraised, using modern materials and current standards, design, and layout."³ The increased need is not limited to the storm-damaged areas but also in other areas subject to possible storms and flooding. This increased demand is in addition to the ongoing demand for support of the insurance coverage limits, which has become

significantly more important due to the rapidly increasing building costs. **Replacement Cost Coverage** is defined as: “Type of insurance that guarantees that the insurance company will pay to replace the damaged property with new property.”⁴

The Assignment

The assignment was to estimate the Replacement Cost of an existing condominium. The cost estimate was to be used to assist the condominium association in ascertaining the adequate amount of insurance coverage. This assignment brought several points to our attention that, in our opinion, needed further consideration and discussion.

Identifying the Intended Users

USPAP has increased the importance of the Intended Use and the Intended User of our reports. This analysis is particularly important since the use of the Departure Provision was eliminated in the 2006 edition of USPAP with greater emphasis on intended use and user. This assignment illustrated the importance of the Intended User(s) and Intended Use. The client was the condominium owner’s association; the party ordering the report was the professional manager of the condominium. So there were at least two **Intended Users** of the report.

The **Intended Use** was to assist the client and/or the Intended Users in estimating the appropriate amounts of Replacement Cost Coverage. So the Intended Users would very likely include the insurance agent and/or the company underwriting the Replacement Value policy. The appraiser needs to clearly define the user to limit liability to other readers of the report. The following condition should be included in each report: Reading the appraisal report or possessing the

report does not constitute use. Relying on the appraisal report to understand how the appraiser developed the opinion of value does not constitute use. Use means the specified client of this report relying on this appraisal report to make the appropriate decision.

The Specific Problem

The improvements were located in a FEMA flood zone. So the assignment required that the Replacement Costs be presented in sufficient detail that both the flood and hazard insurance could be properly underwritten.

Since this was a condominium development, Florida law also affected this assignment. Under Florida Condominium Law, the definition of “Building” does not include unit floor coverings, wall coverings, or ceiling coverings. In addition, the term “building” does not include equipment if it is located within a unit. The unit owner is required to repair or replace such equipment. These items typically include: electrical fixtures, appliances, air conditioning or heating equipment, hot water heaters, and built-in cabinets. Even though an estimate of replacement cost was developed and presented, the intended user of the report needed the appraiser to calculate the “exclusions” to meet the definitions of Florida Law and the appropriate insurance underwriting requirements.

Specific Requirements

- 1) Typical Hazard Insurance Replacement Value estimates in condominium development include the replacement cost of the building **excluding** appliances (water heaters and air conditioner/heating equipment), floor coverings (to include carpeting, tile and wood

flooring), wall coverings (to include paint and texture), ceiling coverings (to include paint and texture), built-in cabinetry, countertops and plumbing fixtures such as faucets and shower nozzles.

- 2) Flood Insurance Replacement Value estimates typically include the complete replacement costs of the building, including all interior finish, appliances (excluding free-standing appliances), cabinets, electrical fixtures and foundations below ground.
- 3) Another estimate that could be requested might be the replacement value incorporating any specific underwriting requirements of a particular insurance company.

The Applications

In the cost analysis for **flood coverage**, all building components except free-standing appliances are included: Figure One illustrates the analysis for flood insurance.

In the estimates for hazard insurance, the following are excluded:

Window treatments

Water filters and water softeners

Appliances (excluding water heaters and air conditioner/heating equipment)

Floor coverings (to include carpeting, tile and wood flooring)

Wall coverings (to include paint and texture)

Built-in cabinetry

Countertops

Plumbing fixtures (such as faucets and shower nozzles)

Also excluded are excavation costs, foundation and pipes below ground, which are standard exclusions in a hazard insurance policy.

Figure Two illustrates the analysis for hazard insurance. The grids included in the two figures illustrate the different results derived between the hazard and flood analyses. These grids are based on the Marshall Valuation Service – Segregated Cost Method. These costs should also be supported by current costs of projects constructed in the local area. To illustrate the importance of properly estimating these exclusions, **the difference between the hazard and flood replacement cost estimates is 25.38%.**

The Mortgage Underwriter

Another possible user is the mortgage lender. The mortgage lender/underwriter needs to ascertain if the insurance coverage is sufficient to protect their investment in case of a loss.

It is particularly important to a lender underwriting a loan on **an individual condominium unit in an existing condominium** to ascertain two things:

- Does the “homeowner’s” policy of the specific unit cover not only the value of the furnishings but also the real estate items excluded in the hazard insurance replacement estimate? These include appliances, floor and wall coverings, cabinets, countertops and plumbing fixtures.
- Is the hazard and flood Replacement Cost Coverage for the entire building or complex adequate?

Reports Prepared for Other Users

In order to address the question of adequate insurance coverage, many lenders and/or underwriters are relying on appraisal reports prepared for other intended uses. For example, many lenders are requiring appraisers to include a cost approach in the form #1004 on single-family residences in order to estimate the adequacy of insurance coverage. In our opinion this practice is not appropriate for several reasons:

- 1) The definitions of Replacement Cost Coverage and Market Value are not consistent.

Market Value is defined as: the most probable price which a specified interest in real property is likely to bring under all of the following conditions:

- Consummation of a sale occurs as of a specified date
- An open and competitive market exists for the property interest appraised.
- The buyer and seller are each acting prudently and knowledgeably.
- The price is not affected by undue stimulus.
- The buyer and seller are typically motivated.
- Both parties are acting in what they consider their best interest.
- Marketing efforts were adequate and a reasonable time was allowed for exposure in the open market.
- Payment was made in cash in U.S. dollars or in terms of financial arrangements comparable thereto.
- The price represents the normal consideration for the property sold, unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

This definition can also be modified to provide for valuation with specified financing terms.⁵

- 2) In order for the intended user to calculate accurately the various exclusions, the replacement cost needs to be estimated utilizing some form of segregated cost, such as illustrated in Figures One and Two or a Unit In Place method. The typical comparative unit method (per sq. ft.) would not typically be in sufficient detail to calculate the exclusions.

Limiting Conditions

Due to the increasing importance of hazard and flood analysis, we suggest two additional special assumptions that the appraiser should, after consulting with an attorney, consider including in any cost analyses:

- 1) **It is the responsibility of the client and the intended users to obtain a legal interpretation as to adherence to the appropriate Statutes in regards to flood and hazard insurance.**
- 2) Any individual residential report prepared on a standardized form estimating Market Value should include the following statement: **The Cost Approach in the report should not be relied upon as the basis of analyzing the adequacy of insurance coverage.**

Important Points to Review

Appraiser

- Cost is a critical factor in feasibility analysis.

- Replacement cost analysis could be an increasing part of an appraisal and consultation practice.
- Replacement cost coverage should utilize either a segregated cost or unit in place method due to the exclusions applicable to hazard and flood insurance coverage.
- Pay close attention to the intended users. Many may be relying on reports that do not meet their needs.

Lender

- Reproduction cost is critical when underwriting a construction or development loan. Since a construction loan involves **proposed construction**, the cost analysis should be based on **Reproduction Cost** which is defined as: “The estimated cost to construct, at current prices as of the effective date of the appraisal, an exact duplicate or replica of the building being appraised, using the same materials, construction standards, design, layout, and quality of workmanship and embodying all the deficiencies, superadequacies, and obsolescence of the subject building.”⁶
- Always specify to the appraiser if a replacement cost analysis is needed on an individual residential report. The Cost Approach on typical form reports is not in enough detail to adequately estimate the proper insurance coverage. A separate schedule needs to be attached to any form report, if insurance coverage is involved.
- In underwriting individual condominium unit loans, lender needs to scrutinize the “homeowner’s” policy carefully, since in condos, replacement cost of the interior of the unit is the responsibility of the unit owner.

- May need to analyze “master” hazard and flood policies in a condominium development to ascertain if both coverages are adequate.

Questions to Consider

The rapid increase in building costs makes the cost analysis more important than ever, since feasibility of a proposed project is directly affected.

The cost of originating a loan could increase due to the additional “due diligence” required in the area of insurance, both as to premium cost and adequacy of coverage.

**Figure One
Flood Insurance**

**Happy Homes @ Snugville
Replacement Cost - Segregated Cost Method**

Analysis Year	2005	Analysis Type: Flood Insurance	Total Number of Units: 6
Source	Marshall Valuation Service		
Occupancy	Section: 42 - Residences	Page(s): 1 - 8	Area Estimate
Building Class & Quality	Class: D	Quality: Above Avg	Gross Building Area 13,630
Stories / Height	Stories: 2	Height: 20	Gross Living Area 10,928
Perimeter / Height / Floor Year Built	Perimeter: 602	Height/Floor: 10.00	Garages 2,296
Age & Condition	1991		Entries, porches & balconies 406
Region / Climate	Age: 14	Condition: Good	Building Footprint (1st Level) 7,224
	Region: Southeast	Climate: Moderate	Building Roof Area 7,224

FLOOR AREA COSTS - Living Levels		Cost Range Rating			
		Low	Average	Above Avg	High
Excavation	Site Preparation Only			\$0.31	
Foundation	Concrete Spread Footing Continuous & CB Stem Wall			\$3.18	
Frame	CB Bearing Walls (dividing units) & wood framing			\$2.27	
Floor Structure	Wood joist & sheathing plus vapor barrier			\$7.06	
Floor Covering(s)	Combination of tile, carpet & vinyl			\$10.00	
Ceiling	Gypsum board, spray-on texture			\$3.30	
Interior Construction	Typical Row/townhouse			\$20.66	
Plumbing	Typical Row/townhouse			\$7.21	
Sprinklers	None			\$0.00	
HVAC	Warm & cooled air			\$7.01	
Electrical	Typical Row/townhouse			\$5.15	
	Total Floor Area Unit Cost	\$0.00	\$0.00	\$66.15	\$0.00
	Total Cost PSF This Section			\$66.15	

FLOOR AREA COSTS - Garage		Cost Range Rating			
		Low	Average	Above Avg	High
Excavation	Site Preparation Only			\$0.31	
Foundation	Concrete Spread Footing Continuous			\$3.18	
Frame	CB Bearing Walls (dividing units) & wood framing			\$2.27	
Floor Structure	Concrete slab			\$4.39	
Interior Construction	Minimal			\$3.50	
Plumbing	None				
Sprinklers	None				
HVAC	None				
Electrical	Outlets, Supply & Lighting			\$2.67	
	Total Floor Area Unit Cost	\$0.00	\$0.00	\$16.32	\$0.00
	Total Cost PSF This Section			\$16.32	

WALL COSTS		Unit Cost	Area SF	Total Cost
Exterior Walls	Frame with stucco	\$20.53	11,504	\$236,177
Ornamentation	Included above	\$0.00	11,504	\$0
	Total Exterior Wall Unit Cost			\$236,177

ROOF COSTS		Unit Cost	Area SF	Total Cost
Roof Structure	Wood joists	\$7.33	7,224	\$52,952
Roof Cover	Concrete tile (colored)	\$6.79	7,224	\$49,051
	Total Roof Unit Costs			\$102,003

OTHER ITEMS		Unit Cost	# of Units	Total Cost
Appliances		\$2,525	6	\$15,150
	(not included in hazard)			

FINAL CALCULATIONS		Unit Cost	Area SF	Total Cost
Floor Area Costs (Living)		\$66.15	10,928	\$722,887
Floor Area Costs (Garage)		\$16.32	2,296	\$37,471
Exterior Walls				\$236,177
Roof				\$102,003
Entries, Porches, Balconies				\$6,000
Other (Appliances)				\$15,150
Sub Total				\$1,119,688
Story Multiplier (add .25% for each story over 3)	x		1.0000	
Sub Total				\$1,119,688
Architect/Eng. Fees	3.9%			43,668
Total				\$1,163,356
Current Cost Multiplier	x		1.11	
Local Multiplier	x		0.98	

		Cost PSF		
		GBA	GLA	
Total Building Replacement Cost		\$1,265,498		
Rounded to		\$1,265,000	\$92.81	\$115.76

**Figure Two
Hazard Insurance**

Happy Homes @ Snugville																	
Replacement Cost - Segregated Cost Method																	
Analysis Year	2005	Analysis Type: Hazard Insurance	Total Number of Units: 6														
Source	Marshall Valuation Service	Page(s): 1 - 8	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Area Estimate</th> <th style="text-align: right;">Sq. Ft.</th> </tr> <tr> <td>Gross Building Area</td> <td style="text-align: right;">13,630</td> </tr> <tr> <td>Gross Living Area</td> <td style="text-align: right;">10,928</td> </tr> <tr> <td>Garages</td> <td style="text-align: right;">2,296</td> </tr> <tr> <td>Entries, porches & balconies</td> <td style="text-align: right;">406</td> </tr> <tr> <td>Building Footprint (1st Level)</td> <td style="text-align: right;">7,224</td> </tr> <tr> <td>Building Roof Area</td> <td style="text-align: right;">7,224</td> </tr> </table>	Area Estimate	Sq. Ft.	Gross Building Area	13,630	Gross Living Area	10,928	Garages	2,296	Entries, porches & balconies	406	Building Footprint (1st Level)	7,224	Building Roof Area	7,224
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FLOOR AREA COSTS - Living Levels		Cost Range Rating			
		Low	Average	Above Avg	High
		UNIT COSTS			
Excavation	Site Preparation Only			\$0.31	
Foundation	Concrete Spread Footing Continuous & CB Stem Wall			\$3.18	
Frame	CB Bearing Walls (dividing units) & wood framing			\$2.27	
Floor Structure	Wood joist & sheathing plus vapor barrier			\$7.06	
Floor Covering(s)	Combination of tile, carpet & vinyl			\$0.00	
Ceiling	Gypsum board			\$1.70	
Interior Construction	Typical Row/townhouse			\$12.00	
Plumbing	Typical Row/townhouse			\$6.90	
Sprinklers	None			\$0.00	
HVAC	Warm & cooled air			\$7.01	
Electrical	Typical Row/townhouse			\$5.15	
Total Floor Area Unit Cost		\$0.00	\$0.00	\$45.58	\$0.00
Total Cost PSF This Section		\$45.58			
		Cost Range Rating			
		Low	Average	Above Avg	High

FLOOR AREA COSTS - Garage		UNIT COSTS			
		Low	Average	Above Avg	High
Excavation	Site Preparation Only			\$0.31	
Foundation	Concrete Spread Footing Continuous			\$3.18	
Frame	CB Bearing Walls (dividing units) & wood framing			\$2.27	
Floor Structure	Concrete slab			\$4.39	
Interior Construction	Minimal			\$2.00	
Plumbing	None				
Sprinklers	None				
HVAC	None				
Electrical	Outlets, Supply & Lighting			\$2.67	
Total Floor Area Unit Cost		\$0.00	\$0.00	\$14.82	\$0.00
Total Cost PSF This Section		\$14.82			

WALL COSTS		Unit Cost	Area SF	Total Cost
Exterior Walls	Frame with stucco	\$20.53	11,504	\$236,177
Ornamentation	Included above	\$0.00	11,504	\$0
Total Exterior Wall Unit Cost				\$236,177

ROOF COSTS		Unit Cost	Area SF	Total Cost
Roof Structure	Wood joists	\$7.33	7,224	\$52,952
Roof Cover	Concrete tile (colored)	\$6.79	7,224	\$49,051
Total Roof Unit Costs				\$102,003

OTHER ITEMS		Unit Cost	# of Units	Total Cost
Appliances		\$0	6	\$0
		(not included in hazard)		

FINAL CALCULATIONS		Unit Cost	Area SF	Total Cost
Floor Area Costs (Living)		\$45.58	10,928	\$498,098
Floor Area Costs (Garage)		\$14.82	2,296	\$34,027
Exterior Walls				\$236,177
Roof				\$102,003
Entries, Porches, Balconies				\$6,000
Other (Appliances)				\$0
Sub Total				\$876,305
Story Multiplier (add .25% for each story over 3)	x			1.0000
Sub Total				\$876,305
Architect/Eng. Fees	3.9%			34,176
Total				\$910,481
Current Cost Multiplier	x			1.11
Local Multiplier	x			0.98
Total Building Replacement Cost				\$990,421
Rounded to		\$990,000	\$72.63	\$90.59
LESS: Exclusions				
Excavation		\$4,099		
Foundations (Below Ground)		\$42,052		
				(\$46,152)
Insurable Replacement Cost				\$943,848
Rounded to		\$944,000		

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PUBLICATIONS OF HENRY C ENTREKEN, JR., MAI SRA

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