



Rural Valuation Topic #RVT 24: Cost Approach Obsolescence

Functional Obsolescence is a part of depreciation analysis for improved properties and is defined as, “the impairment of functional capacity of a property or building according to its market tastes and standards; equivalent to functional obsolescence when ongoing change makes layouts and features obsolete and impairs value”¹.

External obsolescence is defined as, “a type of depreciation; a diminution in value caused by negative external influences and generally incurable on the part of the owner, landlord, or tenant. The external influence may be either temporary or permanent”².

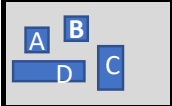
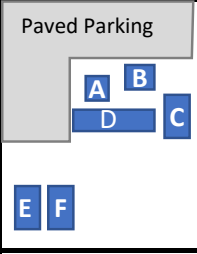
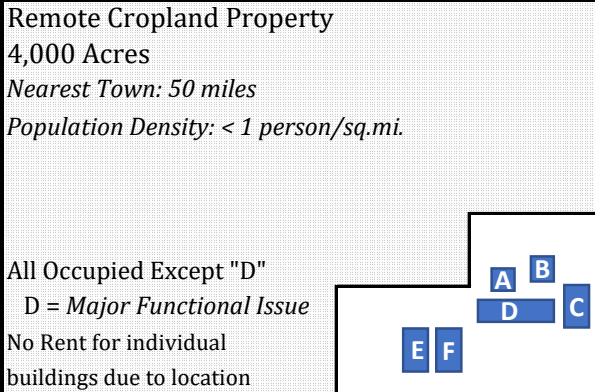
Both definitions are foundational to understand structural utility and market responses from a variety of curable and incurable factors. Functional obsolescence is relegated to the design and utility of a specific improvement; while external obsolescence is the result of a change in value originating outside the property. Functional non-utility (*in the property*) may be economically feasible to cure; however, external obsolescence is always incurable and changes in accordance with market standards.

The hypothetical example below consists of three properties; one zoned for commercial, light industrial, and a large agricultural property with 4,000 acres dry cropland and buildings.

The site and/or land varies in accordance with use, i.e., the higher zoning classification reflects higher priced land; then declines (\$/sq. ft.) for Property B. The larger agricultural property possesses the least expensive land. The more important issue is how the building contributions change in accordance to location, rentability, and functional or external obsolescence.

¹ Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 6th Ed., (Chicago: AI 2015, p. 97)

² Ibid, p. 83

<u>Property A</u> HBU: Comm.  <u>Urban</u> A: Occupied B: Occupied C: Rented \$15/sf D: Rented \$20/sf	<u>Property B</u> HBU: Lt. Industrial  <u>Urban</u> A-C: Occupied D: Vac.; \$12/sf prior E-F: Rented \$20/sf	<u>Property C</u> HBU: Agricultural (Cropland)  Remote Cropland Property 4,000 Acres Nearest Town: 50 miles Population Density: < 1 person/sq.mi. All Occupied Except "D" D = Major Functional Issue No Rent for individual buildings due to location
Land = \$ 800,000 Bldgs = \$ 2,000,000 Total = \$ 2,800,000 Bldg. % 71.43%	Land = \$ 750,000 Bldgs = \$ 1,300,000 Total = \$ 2,050,000 Bldg. % 63.41%	Land = \$ 20,000,000 Bldgs = \$ 250,000 Total = \$ 20,250,000 Bldg. % 1.23%

Buildings A-D are the same for this example; however, Building D on Property B (light industrial) has been vacant for four years due to a functional problem --- the most recent lease of that structure was \$5/sf.

One of the traditional methods to reflect the impact for functional problems is capitalizing the rent loss. The same building in Property A rents for \$15/sf but is commercial use. Assume for purposes of demonstration that the change in use (commercial v. light industrial) compared to the 4-year old lease on **Building D** on Property B at \$12/sf is offset for market conditions (time). The rental difference is \$3/sf (\$15/sf for Property A versus \$12/sf for Property B's Building D). If the capitalization rate in this market is 8%, the rent loss is calculated at \$37.50/sf (\$3/sf difference ÷ 8%).

The second portion of the example involves Property C, a large rural tract with 4,000 acres of cropland 50 miles from the nearest "town". Building D is very similar to the same building on Property A and B. In remote rural areas, buildings seldom rent --- especially one building at a time. Looking through the "rural valuation lens", how do you measure the impact of Building D on Property C due to the functional issue?

ASFMRA Recommendation: The first observation is the level of building contribution expressed as a percentage of the total price. Building intensive Property A, shows the structural contribution at 71.43% based in \$2 million structural contribution; 63.41% for Property B with structures contributing \$1.3 million; versus Property C where the structures contribute 1.23% of the total at \$250,000 and are nearly identical buildings compared to Property B.

The procedure applied to the sale of Property C began with estimating the underlying contribution for 4,000 acres of dry cropland leaving \$250,000 for the building contribution for the same structural sizes and configurations as shown for Property B (light industrial). It appears the functional issue for

Building D has already been measured within the total structural contribution at \$250,000. However, if the depreciation was broken down in accordance with traditional cost approach procedures, the physical depreciation and external obsolescence for the structures would be relatively consistent after consideration of the age and condition differences. But, Building D should have a third calculation to address its functional issue. This exercise may not be meaningful because the total structural contribution at 1.23% is relatively insignificant. Any attempt to isolate and measure the level of Building B's functional problems may be insignificant when evaluated against the total sale price of \$20.25 million.

Quantification between Property A and B is logical to some degree; but extending that urban situation into a rural market may not be defensible.

- One possibility is measuring the difference between reproduction versus replacement costs. That too, in rural areas, can be misleading because replacement cost is the standard. Simply, buildings with considerable age still reflect functional utility at much higher levels than the same structures in urban areas.
- A second possibility is that this rural market may not be able to provide quantifiable evidence beyond an acknowledgement that functional problems exist with one (or more) building which, given its functional limitations, may not contribute to value.