FEATURES

A Discussion of Excess Land Concepts and Theory

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ABSTRACT

This article discusses the criteria to identify excess land and formulates a framework for examining the potential discount or premium of the market value of excess land and remainder tract relative to its sum of the parts. A number of scenarios that an appraiser may encounter are discussed in the article, such as a highest and best use analysis for identifying surplus versus excess land, and cases where land should be analyzed as a separate tract despite its absence resulting in a diminution in value to the remainder tract.

The principle of excess land is a fundamental concept in appraisal practice, but surprisingly few articles have been devoted to this topic. According to *The Dictionary of Real Estate Appraisal*, fifth edition, *excess land* may be defined as,

> Land that is not needed to serve or support the existing improvement. The highest and best use of the excess land may or may not be the same as the highest and best use of the improved parcel. Excess land may have the potential to be sold separately and is valued separately.[1]

As indicated by the definition above, excess land may have a different highest and best use than the remainder improved parcel as a result of its potential to be sold separately. This differs from surplus land, which lacks potential of severability, and therefore, has the same highest and best use as the remainder tract. It should be noted that the use of the words "parcel," "tract," and "site" are employed interchangeably throughout this article.

The valuation of excess land may require a different set of comparable sales from the remainder tract, and the group of potential purchasers may vary as well. A different level of emphasis may be given to certain elements of comparison in the valuation, and the numerical adjustments for the differences between the subject property and the comparable sales may not be the same as that used in the valuation of the remainder.[2] For example, an appraiser may determine the highest and best use of the excess land to be for office development, with the remainder of the site having a highest and best use of retail development. In this case, the appraiser would likely use a different set of comparable sales in the excess land valuation, relative to that of the remainder tract. The range of optimal sizes for retail sites may vary from that of office sites, and the adjustments made for discrepancies in size between the subject and the comparable sales may differ as well.

Identifying Excess Land

Three tests are used to determine whether a portion of a site may be excess land:

1. Marketability
2. Severability

1. Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 5th ed. (Chicago: Appraisal Institute, 2010), s.v. "excess land."
2. Ibid., s.v. "surplus land."

3. Preservation of the highest and best use of the remainder tract (vacant sites) or preservation of value to remainder tract (improved properties)

The first factor to consider in identifying potentially excess land is whether the area in question is marketable as a separate tract. Some markets may not recognize excess land if it lacks direct road frontage, although other markets may determine that an area lacking road frontage is marketable if an access easement is created. Or, a property may have a land-to-building ratio above typical levels for the market, although the area that could potentially be recognized as excess land has a narrow configuration to the degree that there is limited or no marketability for this area. In these cases, this area would be more appropriately identified as surplus land. The market dictates whether it is appropriate to identify land as excess.

The second factor to consider in identifying potentially excess land is severability, which is based on governmental regulations in the market. In a situation where an area is identified as potentially being excess land but is not subdivided separately, an appraiser should ensure that this hypothetical property satisfies all zoning requirements and that subdivision is likely to be approved by this jurisdiction. It is possible in some markets that a hypothetical tract may be treated as excess, despite not meeting all zoning restrictions. For example, a market may have adequate demand for lots that are below the minimum lot width specified by the current zoning classification. If the jurisdiction has a history of granting variances in these cases, it is possible that an area that does not meet the minimum lot width may still be identified as excess land. However, if the market does not view the potential that the hypothetical site could be subdivided as highly probable, it would likely be regarded as surplus land.

If subdivision of an area that an appraiser recognizes as excess land has already been approved by a jurisdiction, consideration of governmental restrictions is still necessary. There may be restrictions in the approved subdivision agreement with the jurisdiction that may affect the value of the excess land. Some of these restrictions may include use, parking, and setback restrictions above the minimum specified by the current zoning classification.

The third factor to consider in identifying potentially excess land is how the treatment of the area as excess land will affect the remainder tract. The appraiser should maintain cognizance of whether separation of the land that is potentially being recognized as excess would preserve the highest and best use of the remainder tract. In the case of a vacant site, the additional land could potentially be regarded as excess if separation of this area does not alter the highest and best use of the remainder tract. If separation of land does not preserve the highest and best use of the remainder tract, the ideal improvement is affected and it does not satisfy the three tests of excess land.

In the case of an improved property, separation of land that is potentially excess should not result in diminution in value to the remainder tract. While a land-to-building or parking ratio may be above typical levels for the market, it is possible that there are factors, such as building placement or configuration of the overall tract, which may warrant retention of the entire site for its principal improved use. In this case, separation of the additional land would result in a higher level of functional obsolescence and a lower economic life to the building improvement or improvements. It could be argued that this test is also a test of preserving the highest and best use of the remainder tract, and there are cases where removal of land that is not truly excess results in a different highest and best use for the remainder tract that is improved with buildings. However, in many cases, the highest and best use of the property as improved is not fundamentally changed, despite the deduction of land resulting in diminution in value to the remainder tract.

Surplus Land

If the hypothetical property does not meet one or more of the tests described above, it is more likely to be regarded as surplus land. *Surplus land* may be defined as,

> Land that is not currently needed to support the existing improvement but cannot be separated from the property and sold off. Surplus land does not have an independent highest and best use and may or may not contribute value to the improved parcel.[3]

3. Ibid.

Examples of surplus land are discussed below and illustrated in Figures 1 and 2.

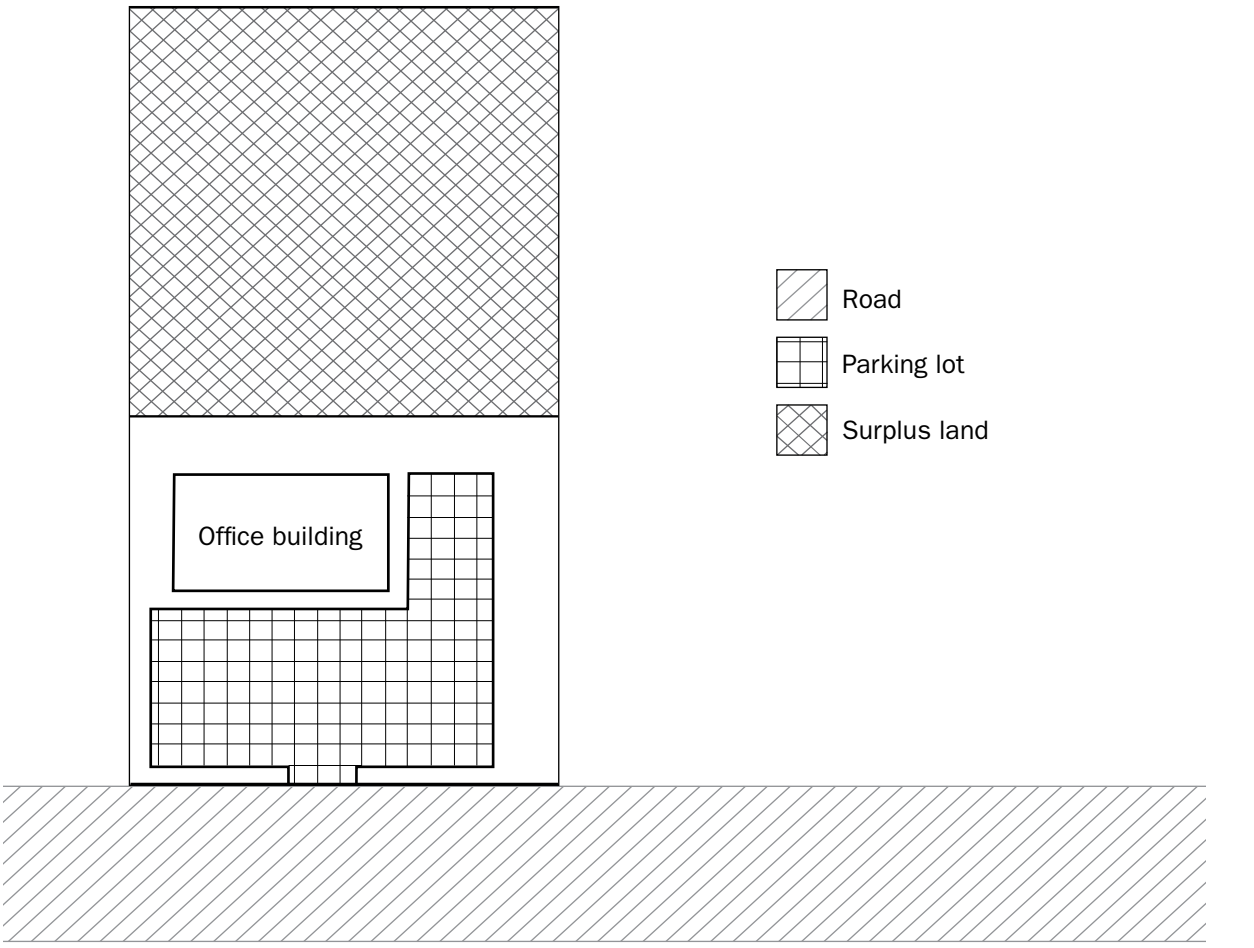
Example 1

In Example 1, there is land to the rear of the office building that is regarded as surplus land (Figure 1). While this land is potentially severable and is not needed to support the existing improvements, the lack of direct roadway access limits its marketability to the degree that it is regarded as surplus land.

Another type of scenario occurs when selling a tract of land separately adversely affects the value of the remainder, but the contributory value of this area more than offsets the diminution in value to the remainder. Land in this scenario should be analyzed in a similar manner as excess land, although the remainder tract would be valued based on a parking ratio, land-to-building ratio, and/or building setbacks that are below market standards.

In this case, the land is not recognized as surplus, as the definition of surplus land indicates that it cannot be sold separately, although it could be argued that this would be due to the resulting diminution in value to the remainder tract. It also does not meet the three tests of determining excess land, namely in respect to diminution in value to the remainder tract. Although a prudent and knowledgeable owner would consider marketing this property separately, as it results in the highest residual economic value, the definition of excess land states that it is not needed "to serve or support the existing improvement."[4] Although excess land is almost always in common ownership with the

Figure 1 Example 1 Office Building Tract



4. Ibid., s.v. "excess land."

remainder tract on the effective date of the appraisal, it is treated as a hypothetically separate property with a separate highest and best use. Therefore, removal of this area does not adversely affect the remainder tract. However, given that land in this scenario is analyzed in a similar manner as excess land, it may be referred to as excess land resulting in diminution in value to the remainder tract. This situation is illustrated in Example 2.

Example 2

An 85,000-square-foot distribution warehouse is situated on a 9-acre parcel. The property is on a busy street in a neighborhood that has transitioned from industrial to retail during the past few years. Given the higher than typical front setback, a 62,500-square-foot tract at the southwest corner has potential to be sold separately. This market demonstrates the highest demand, and consequently, the highest unit value, for tracts of this size and configuration. The contributory value of this hypothetical tract is $300,000.

There is parking in front of the warehouse, which is for use by visitors and office employees. Half of the parking lot is in the area that the highest and best use is to be sold separately. While there is some parking on the east side of the building, the overall functionality of the site layout is decreased and the front building setback is lower than typical. As a result, there is a $100,000 loss in value to the remainder tract. Given that the contributory value of the 62,500-square-foot tract exceeds the diminution in value to the remainder tract, the highest and best use is to sell this area separately.

It is recognized in this example that a portion of the 62,500 square feet may be surplus and/or excess land, although the entire 62,500-square-foot tract is neither excess nor surplus land. The exhibit in Figure 2 details the location of the building, parking lots and driveways relative to the excess land.

Sum-of-the-Parts Valuation

It has been common in appraisal practice that the market value of the excess land is added to the value of the remainder tract. *The Appraisal of Real Estate*, fourteenth edition, gives an example of how to treat excess land, and it states in this example that "if land values in the neighborhood are $1.00 per square foot, then the excess land in this situation would probably add the full $1.00 per square foot to the value of the subject property."[5] However, appraisers typically do not employ sum-of-the-parts methodology in the appraisal of most property types. Further, in the appraisal of single-family residences, most appraisers do not add the full unit value when making a site area adjustment, regardless of whether the additional area is regarded as excess or surplus land.

Prior to a 2007 article "Common Errors and Issues in Reports," by Janice Young and Stephanie Coleman,[6] there was only limited discussion in academic texts as to a potential discount or premium in the valuation of excess land. *The Appraisal of Real Estate*, fourteenth edition states, "Appraisers must exercise caution when adding the value of the excess land to the value of the rest of the property because the sum of the parts may or may not equal the whole"[7]; prior editions of *The Appraisal of Real Estate* did not include this cautionary note.

Standards Rule 1-4e of the Uniform Standards of Professional Appraisal Practice also addresses sum-of-the-parts valuation, stating as follows:

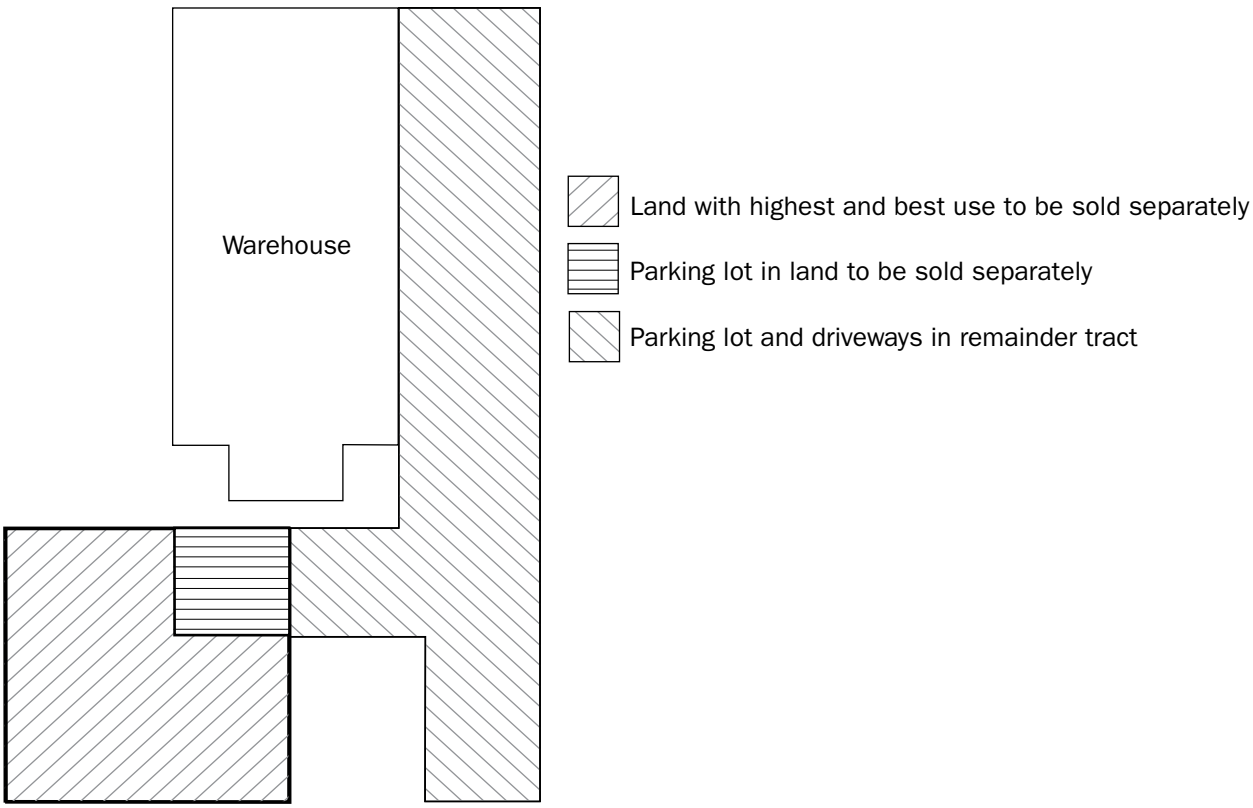
> When analyzing the assemblage of the various estates or component parts of a property, an appraiser must analyze the effect on value, if any, of the assemblage. An appraiser must refrain from valuing the whole solely by adding together the individual values of the various estates or component parts.[8]

It is recognized that this standards rule could be inferred to be based on assemblage of multiple parcels, or the relationship of fee simple, leased fee, and leasehold property rights. However, a parcel that is improved with multiple buildings would typically be based on an analysis of the entire parcel as a whole, and it could be argued that this type of valuation represents an assemblage of various component parts of the property, as referenced by this standards rule.

Similar to the value of multiple subdivision lots, there is a high degree of possibility that the market value of the excess land and remainder tract selling

5. Appraisal Institute, *The Appraisal of Real Estate*, 14th ed. (Chicago: Appraisal Institute, 2013), 200.
6. Janice F. Young and Stephanie Coleman, "Common Errors and Issues in Reports," *The Appraisal Journal* (Summer 2007): 264–272.
7. *The Appraisal of Real Estate*, 14th ed., 201.
8. Appraisal Standards Board, *Uniform Standards of Professional Appraisal Practice*, 2014–2015 ed. (Washington, DC: The Appraisal Foundation, 2014), Lines 607–610.

Figure 2 Example 2 Warehouse Tract



in a single transaction would result in a value that is different from the sum of the individual values, if sold separately. Property owners that do not directly use the area that is determined to be excess, and plan to sell it separately, incur ongoing expenses, expenses associated with sale of the property, and risk of future price changes. In some markets, the limited pool of potential purchasers for the land that is recognized as excess could result in a marketing period of several years. As a result, adding the individual value of the land that is determined to be excess to the value of the remainder tract may overstate the market value of the property, as a whole. Conversely, in cases where excess land is deducted from the price for comparable sales, not considering a discount to the market value of the excess land value may understate the value to the remainder tract.

Therefore, a discounted cash flow analysis would be appropriate to determine the contributory value of excess land. The rationale behind using a discounted cash flow analysis is that the contributory value of excess land, which is not needed to support the highest and best use of the remainder tract, is based on the present value of its future benefits. The discounted cash flow analysis is based on a six-step process:

1. Determine market value of excess land, as of effective date of appraisal
2. Project marketing time necessary to sell excess land
3. Estimate interim income during holding period
4. Determine expenses during holding period
5. Project appreciation or depreciation rates for the market value of the excess land, interim income, and expenses
6. Discount net income or loss for each period to present value by an appropriate rate

The market value of the excess land is based on it being immediately available for an alternative use as of the effective date of the appraisal. The interim income may be based on items such as yard storage or parking. Expenses related to sale of the property include, but are not limited to, surveying, legal, and brokerage fees. There are also expenses during the holding period, such as parking lot maintenance,

lawn care, snow removal, real estate taxes, and insurance on any existing improvements. For tracts in which the excess land is not legally subdivided on the effective date of the appraisal, a method to determine the additional tax expense, as a result of the excess land, may vary for different municipalities. For example, interviews with three assessors in central Illinois suggest there is not a consensus on the way in which excess land is handled for taxing purposes, with some assessors using a single unit value for the entire tract and others using a different unit value for what is deemed excess. It was confirmed by the International Association of Assessing Officers (IAAO) that there is not a single method used to value excess land for assessment purposes. Nonetheless, in this analysis the real estate taxes should be based on the incremental difference between the expense attributable to the entire property and the tax expense attributable to the remainder tract. It is recognized that, although excess land is considered a hypothetically separate property, some of the expenses, such as parking lot insurance/maintenance, snow removal, and lawn care, are also based on their incremental increase to the entire property. The projected interim income could potentially be based on its incremental increase to the entire property as well.

In ideal conditions, the discount rate is directly extracted by the market; however, there may be limited support to determine an appropriate discount rate in this manner. It should be noted that determination of the contributory value of the excess land is handled in a similar manner as subdivisions, although it is typically inappropriate to use discount rates for excess land valuation that are similar to subdivision discount rates, because the users of properties of this type often are different. Developers are typical purchasers for subdivisions, whereas the predominant purchasers for both the remainder tract and excess land may be owner-occupants or investors. Further, subdivision valuations are often based on a significant number of lots or units, whereas in excess land situations there usually are only two properties included in the valuation: the land determined to be excess and the remainder tract.

Capitalization rates found for similar ground leases may provide guidance in determining an appropriate discount rate. When income and values increase or decrease at the same rate, the discount rate may be calculated by adding growth rates to capitalization rates. However, this calculation may result in an inaccurate discount rate in cases where the highest and best use is for a use different from that which the capitalization rate was extracted. This is due to the varying risk levels for different property types. For example, capitalization rates found in central Illinois agricultural tracts are often 2%—3%. If land is currently used for agricultural production, but the highest and best use is for future development, then adding projected growth rates to a capitalization rate extracted from properties used for agricultural production would likely result in an inaccurate discount rate, as the type of risk for agricultural land differs from development land. In a case where the highest and best use of the excess land is for agricultural use, however, capitalization rates may provide a useful guide in determining an appropriate discount rate.

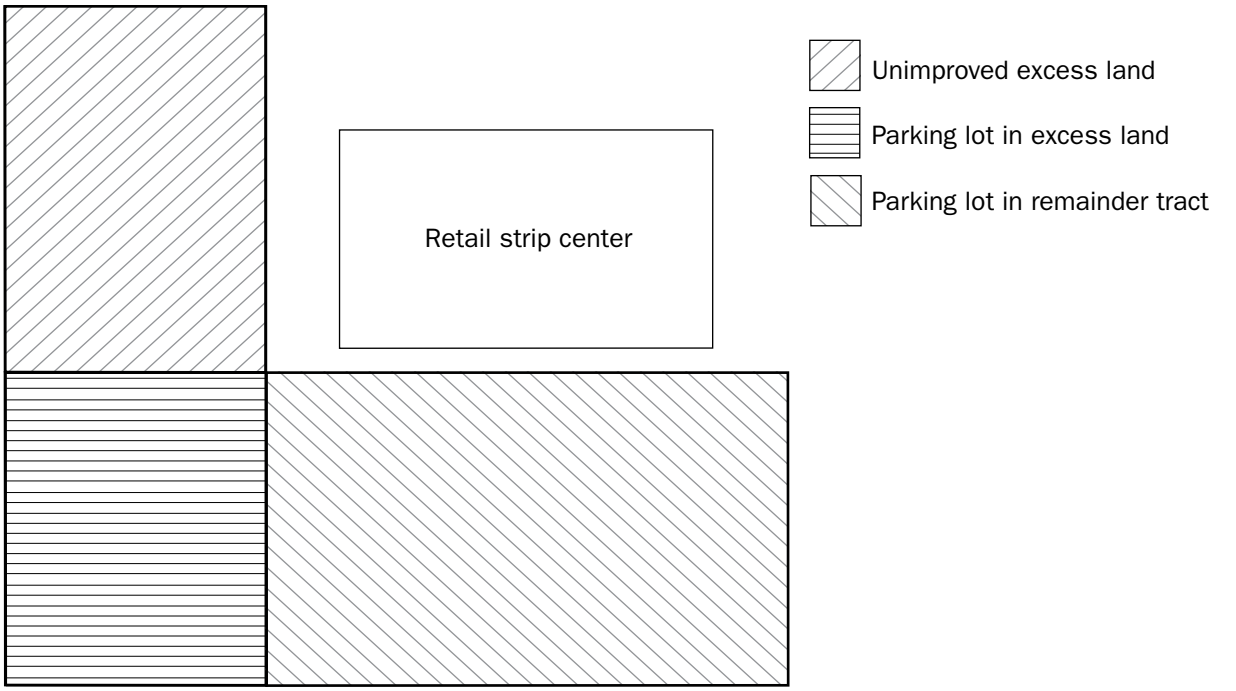
In the absence of sufficient market data, a discount rate that is based on the opportunity cost, or what type of return the owner may obtain for alternative investments of similar risk and liquidity, is appropriate.

Example 3

An appraiser is valuing a 10,000-square-foot retail strip center located on a 1.5-acre lot with 75 parking spaces. The building is configured in a manner that would allow the west 0.5 acre to be subdivided and sold separately, and there are 25 parking spaces on the excess land area. The parking ratio and land-to-building ratio, exclusive of excess land, is adequate for this market and separation of the land that is recognized as excess does not adversely affect the value to the remainder tract. This market demonstrates sufficient demand for 0.5-acre parcels in this location and of this configuration, while the remainder tract and the land that is identified as excess meet all minimum zoning requirements. The exhibit in Figure 3 details the location of the building and parking lot relative to the excess land.

In this example, the appraiser determines the market value of the excess land, if sold on the effective date of the appraisal, to be $200,000. Based on current market conditions, a projected marketing time of two years is appropriate. The owner has rented the excess parking spaces for an annual rate of $200 per space, and plans to continue this rental arrangement. The appraiser concludes this rental rate to be reasonable for this market. The projected expenses include the following:

Figure 3 Example 3 Retail Strip Center



- Lawn care and snow removal—$500 per year
- Parking lot maintenance—$500 per year
- Real estate taxes—$3,500 per year
- Insurance—$250 per year
- Brokerage fees—6% of sale proceeds
- Surveying/ legal—$2,000 (in Year 2)
- Management—5% of interim income

The real estate taxes were based on the incremental increase for this parcel as a result of the excess land. It should be noted that additional management expense associated with subdividing and marketing the excess land could arguably be recognized. However, there are often varying motivations for purchasing properties with excess land, and some market participants may not recognize this as an expense item.

Land values have historically increased by 2% per year, and the appraiser projects this appreciation rate to continue for several years. No appreciation is projected for the interim income or expenses. Based on an analysis of similar investments, a 9% discount rate is reasonable, based on the commensurate risk and liquidity of the excess land. The discounted cash flow analysis for this scenario is shown in Table 1, with the analysis of income and expenses indicating the contributory value of the excess land in this example is $163,000, or an 18.5% discount.

Table 1 Example 3 Retail Strip Center–Discounted Cash Flow Analysis

Year	**1**	**2**
Lot sale	$0	$208,080
Interim income	$5,000	$5,000
Total income	**$5,000**	**$213,080**
Expenses		
Lawn care/snow removal	$500	$500
Parking lot maintenance	$500	$500
Insurance	$250	$250
Management	$250	$250
Real estate taxes	$3,500	$3,500
Surveying/legal	$0	$2,000
Brokerage fee	$0	$12,485
Total expenses	**$5,000**	**$19,485**
Net operating income	$0	$193,595
Discounted cash flow	$0	$162,945
Total	**$162,945**	
Rounded	**$163,000**	

Factors Affecting Discounts and Premiums for Excess Land

There are some exceptions to cases in which the market value of the excess land and remainder tract is less than the sum of the parts. It is well documented that property owners have a tendency to pay premiums for adjoining tracts. While the excess land is not needed to support the highest and best use of the remainder tract, it is possible that owners may wish to retain this land for uses such as an addition to the current building, expansion of parking, or construction of a building that would result in synergies with the use on the remainder tract. This factor may offset any potential discount, or it could potentially result in a premium, relative to the market value of the excess land and remainder tract.

The second factor that may result in a lack of discount is related to market forces. Based on market conditions for some properties, the income produced during the interim period as well as anticipated appreciation rates may offset the discount rate and projected expenses used in the discounted cash flow analysis. There are likely to be relatively low discounts, or potentially no discounts, in stronger markets as well as markets that have a larger pool of potential purchasers and a greater degree of liquidity. Some of the items that may alter the discount to excess land are as follows:

- Degree of interim income
- Level of expenses during holding period
- Anticipated appreciation or depreciation in excess land value, expenses, and interim income during holding period
- Level of market risk and rate of return required
- Anticipated marketing time

Note that each of the aforementioned items are all variables in the discounted cash flow analysis for determination of the contributory value of excess land.

Another factor affecting the degree of potential discount is whether the land that is recognized as excess is presently subdivided. If the land is currently subdivided it is reasonable to assume a lower discount, due to the seller not incurring surveying and legal expenses or the risk that it may not be approved as a separate parcel.

As previously mentioned, land that does not comply with minimum zoning requirements could potentially be recognized as excess land if the jurisdiction has a history of granting variances and there is good demand for lots of this size or configuration. In this case, the contributory value of the excess land may reflect a larger discount to account for the additional risk and expenses associated with approval. In cases where the land that is recognized as excess has a lower degree of marketability, a larger discount may be demonstrated, given that there may be a longer marketing time and/or greater risk that a suitable purchaser would be located. Or, if valuation of a property incorporates uncertainty regarding the timing of items such as utilities or roadway extension, a higher discount rate may be selected.

Although land may be determined to be excess and separation does not result in a diminution in value to the remainder tract, the future use of the excess land could potentially result in value increases or decreases to the remainder tract. Potential uses that could negatively affect the value of the remainder tract include, but are not limited to, competing properties, properties that result in decreases in conformity to the neighborhood, or uses that result in a higher degree of noise or traffic. The highest and best use analysis incorporates consideration of the use, users, and timing. If it is concluded that these negative types of uses are likely to be developed to the site, the anticipated marketing time may be extended and/or the projected future selling price may be lower, as the owner may incorporate use restrictions upon a prospective sale that could limit the pool of potential purchasers.

There is also potential that the future use of the excess land will have a positive effect on the value of the remainder tract. Examples of this type of use include, but are not limited to, properties that have synergistic benefits with the remainder tract or properties that increase nearby traffic, assuming that the remainder tract is utilized for a use that benefits from higher levels of exposure. If the appraiser determines this positive type of use to be probable, the discount of the contributory value of the excess land may be lower, or it could potentially result in a premium in some cases. In this case, the appraiser would use a lower discount rate, given that the owner or potential purchaser's incentive would be manifested in the remainder tract value rather than inherent in the discount rate.

Highest and Best Use as Excess versus Surplus Land

Due to the potential discount of the contributory value of excess land, relative to its market value, the appraiser should compare this value to its contributory value as surplus land. A tract that is potentially excess may have a higher market value than its contributory value as surplus land. However, the aforementioned factors affecting the discount of the contributory value of this land, based on it being excess, may result in the highest and best use of this area to be as surplus land. In Example 1, the land was identified as surplus, primarily due to lacking direct roadway frontage. It is possible that this tract may have demand in some markets, although based on its value as surplus land, relative to its contributory value as excess land, it may be inappropriate to treat it as excess. Example 4 illustrates this type of scenario.

Example 4

A tract of land has a market value of $125,000 based on it being excess land and it contributes $100,000 to the whole as surplus land. There has been limited development activity in this market, and the appraiser projects a ten-year marketing period, with no appreciation in the land value during this period. The appraiser uses a discounted cash flow analysis based on parameters supported by the market, which suggests a contributory value of less than $100,000. Therefore, the appraiser concludes that this land should be treated as surplus land.

The discussion regarding a discount or premium, relative to the sum of the parts, has thus far been based solely on application to the excess land value. In general, a discount or premium would not be applicable to the remainder tract value, as motivations of the potential purchaser are more frequently based on utilization of the remainder tract.

Alternative Approaches

The discounted cash flow analysis is regarded as the best method in evaluating the presence of a discount or premium of excess land. The primary weakness of this approach is that some market participants may not formally employ discounted cash flow analysis in determining the contributory value of excess land. Alternative methods to determine the contributory value of the excess land, relative to its market value, include examining comparable sales to determine the respective discount or premium of the contributory value of excess land relative to its market value. This would be handled by the following formula:

Sale price
Less: Market value of remainder tract
Less: Market value of excess land
Equals: Discount or premium of excess land (in dollars)
Divided by: Market value of excess land
Equals: Discount or premium of the contributory value of excess land (as a percentage), relative to the market value of excess land.

This formula is demonstrated in Example 5.

Example 5

An improved property with excess land recently sold for $1,100,000. The market value of the remainder tract is $900,000, and the excess land has a market value of $250,000. The indicated discount or premium of this excess land may be calculated as follows:

Sale price	$1,100,000
Less: Market value of remainder tract	($900,000)
Less: Market value of excess land	($250,000)
Equals:	($50,000)

Therefore, the contributory value of excess land in this scenario demonstrates a 20% discount, relative to market value (-$50,000/$250,000).

There are three limitations to this type of approach. Typical market variance may inflate or deflate the suggested discount or premium, particularly in cases where the percentage of the sale price attributed to excess land is relatively low. Further, there may be a number of variables associated with the respective discount or premium extracted from the comparable sale, such as operating expenses, marketing time, and interim income, which may not be reflective of the subject property. As previously noted, the motivations of purchasers of properties that include excess land may affect the indicated discount or premium, as well.

Regardless of whether the sum-of-the-parts value is typically similar to the whole in the respective market where the property is located, comparable sales that have excess land may require additional verification, as the purchaser's motivation and intended use of the land that is determined to be excess may indicate the degree of a discount or premium.

Another approach to determine a respective discount or premium of the contributory value of excess land, relative to its market value, is by interviewing market participants. Similar to the

extraction of comparable sales, a weakness of this approach is the number of variables specific to the subject property that may affect its indicated discount or premium. There are often a relatively low number of sales that have excess land, and the number of market participants that have experience with these types of properties may be relatively low as well.

Additional Considerations

The discussion regarding the potential discount (or lack thereof) of the contributory value of excess land relative to its market value is based on the value of such land and the remainder tract selling in a single transaction. Based on conversations with the client, it may be determined that the excess land should be presented as a separate value from the remainder tract. In this case, a discount or premium relative to the value of the sum of the parts would be inappropriate. If the client determines that the non-subdivided excess should be presented separately, a hypothetical condition should be used that this area is legally subdivided as of the effective date of the appraisal. However, if the excess land and the remainder tract are presented in a single value, no hypothetical condition would be necessary, as the discounted cash flow analysis considers the risk and expense associated with future subdivision.

In many cases, excess land valuation would not require additional extraordinary assumptions. There are some exceptions, however, such as if the appraiser is projecting a time when the utilities or roadway would be installed. In the previous example of the land that was recognized as excess despite not meeting minimum zoning requirements, an extraordinary assumption may be used to reflect the probability that the jurisdiction will continue to grant variances in a similar manner as past trends.

Conclusion

Appraisals potentially involving excess and surplus land require consideration of numerous factors. The land which is determined to be excess may exhibit a discount or premium, relative to the sum of the parts, and this article is an attempt to formulate a framework to quantify any potential discount or premium. While adding the market value of the excess land to the market value of the remainder tract may not result in an inaccurate valuation, a more dynamic approach is preferable.

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Web Connections

Internet resources suggested by the Y. T. and Louise Lee Lum Library

Appraisal Institute—*Common Errors and Issues*
http://www.appraisalinstitute.org/assets/1/29/common-errors-issues_4-14-15.pdf

US Department of Housing and Urban Development—"The Valuation Process" in *Valuation Analysis for Single-Family One- to Four-Unit Dwellings*
http://www.hud.gov/offices/adm/hudclips/handbooks/hsgh/4150.2/41502c4HSGH.pdf