

**Valuation Guide**  
Gas Stations

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# Gas Stations

## 1.0 Introduction

This guide is designed to be applied only to certain types of **gas station** properties, and/or specific portions of a larger retail operation.

Before applying this guide the assessor must determine whether the property is a gas station or a retail outlet that includes fueling operations.

### Gas Stations

The term "gas station", as it is used in this guide, represents properties whose primary function is the fueling of motor vehicles. Encompassed within this term are two main types of gas stations:

Gas bars, and

Service stations.

Either type of property may also include a car wash and small retail operation.

#### Gas Bars

Gas bars have minimal structures on the property. A gas bar is likely to have only pump islands and a free standing booth for the attendant.

#### Service Stations

A service station is characterized by the presence of a building housing one or more service bays for the repair and maintenance of motor vehicles in addition to the fueling operation. In addition to service bays, there is also likely to be a small interior office in the garage that is used in conjunction with the servicing and repair operations.

## Car Wash

Gas station properties may have a structure used for washing motor vehicles. These car washes may be either the drive-through type that actually pull the vehicle through the structure (conveyor style) or the automatic style of car wash where the vehicle remains stationary inside the structure and the car wash equipment moves around the vehicle.

## Retail Operations

Increasingly common at gas stations are more elaborate structures containing convenience store and/or fast food operations. These are to be distinguished from a simple freestanding booth that may sell automotive-related products and snack foods.

If the **predominant nature** of the operation is as a **retail store** and/or fast food restaurant, the property should be **valued as a strip commercial** operation (refer to the Strip Commercial Valuation Guide). In these circumstances the pumps, associated gas booth (if any) and the car wash should be valued separately, according to this guide. The total value of the gas station improvements (not including land) can then be added to the value of the retail operation to arrive at an overall estimate of value for the entire property.

## Properties to Be Valued Using This Guide

The methods described in this valuation guide are designed to suit the valuation of both gas bars and service stations with or without associated car washes.

## Nature of Gas Station Operations

Gas stations tend to be developed and owned by large oil companies. In general, oil companies seek out sites as possible locations for gas stations and develop these sites from a vacant and undeveloped site to completion. Once developed, the oil companies either employ a salaried individual to operate the location or enter into a franchise agreement with a person who operates the gas station subject to the terms of an agreement.

Gas stations are properties that return revenues to their owners from sales of automobile fuel, related automotive products, and personal convenience items. The potential income from a gas station is affected by many factors, including the prices set for gas by the owner, the amount of vehicle traffic around the property, and the general efficiency of the overall operation. All of these conditions affect how the market views a gas station property and, thus, its market value.

Gas station properties are frequently redeveloped. To remain competitive in a high volume, low margin business, oil companies are continually redesigning the style of their locations. As a result, older designs can be expected to have limited life spans.

## Scope of Valuation Guide

### **This valuation guide:**

Presents a practical valuation tool utilizing the *cost approach* to value gas station properties.

Is designed as an aid in the valuation of gas station properties for assessment purposes.

With the accompanying spreadsheets, provides a practical tool to evaluate and determine these market values.

Is designed as a tool to aid the assessor, and is not intended to replace the assessor's judgment in the valuation process.

The methods presented in this valuation guide are aimed at deriving values for a variety of gas bar and service station properties.

## 2.0 Valuation Methods

### 2.1 Comments on Highest and Best Use

Of prime importance in the valuation of any type of property is the concept of highest and best use. This is of particular importance when valuing gas station properties. Highest and best use is that use, among possible alternate uses, that is physically practical, legally permissible, market-supportable, and most economically feasible. *The Appraisal of Real Estate*, published by the Appraisal Institute, defines highest and best use as follows:

*The reasonably probable and legal use of vacant land or an improved property, which is physically possible, appropriately supported, financially feasible and that results in the highest value.*

Before embarking on the valuation of a gas station utilizing this guide, the assessor must first arrive at the conclusion that the highest and best use of the property to be valued is a gas station use.

In the majority of instances, the determination of highest and best use will not be a difficult task. In certain instances, however, the determination of highest and best use becomes somewhat more complicated.

In instances where the property consists of a gas station and two or more businesses on the same site (such as a restaurant and a coffee shop), the property may be more accurately categorized as strip commercial.

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|--|
| <p>This guide, therefore, is applicable only to situations where the assessor has concluded that the highest and best use of the property is as a gas station.</p> |
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## 2.2 Analysis of Valuation Approaches

### Market Sales Comparison Approach

Gas station properties do not sell with any degree of regularity.

To the extent that sales of gas stations do take place, in many instances these sales could not be considered as free market transactions representing a willing buyer and a willing seller. Part of the reason to question the validity of gas station sales relates to the presence of franchise agreements. A majority of gas stations are likely to be individual franchisees of large national or multi national oil companies. Therefore, the sale of the gas station from one owner to another would be subject to approval by the franchiser.

This is not to suggest that all sales of gas station properties are necessarily invalid. With the proper investigation, there *may* prove to be a sufficient number of valid sales of a particular type of gas station upon which to make valuation conclusions.

### Income Approach

The income approach to value includes any method of converting an income stream into a present value estimate. Meaningful income and expense information is likely to be rare. Most gas stations are owned by oil companies that either employ a salaried person to operate the location or enter into a franchise arrangement and collect royalty payments based on the level of sales. When the income stream emanates from franchised gas station locations, payments are often capped at a certain level based on anticipated sales. Then the franchisee derives profit on sales above that predetermined limit.

A possible variation on the traditional income approach could be the use of gallonage rates. Under this scenario, there is an underlying assumption of a relationship between cost, net rental as a return on investment, and gallons pumped.

This argument may seem to make economic sense. However, it is not always successful in court. In one case, gas station land (18,000 square feet) was leased for \$15,000 per year to a “triple-A” tenant for 20 years with four 5-year options<sup>1</sup>. The taxpayer argued that the lease rent should not be used to measure the value of the land because the station was pumping only 700,000 gallons per year rather than the 900,000 gallons per year projected at the beginning of the lease.

The court rejected the exclusive application of the gallonage approach, saying that gallonage depends on brand name, management efficiency, advertising, price, location, suitable improvements and goodwill – most of which are foreign to the true value of real estate. Due to the absence of reliable information for gas station properties, it is not desirable to complete a valuation based on the *income approach* method.

## Cost Approach

In the cost approach, the value of an improved property is estimated by adding the estimated land value and the estimated cost new of the improvements less depreciation. The cost approach is preferred when neither reliable sales nor income data are available.

The rationale for using the cost approach is the economic principle of substitution. This principle holds that a rational person will pay no more for a property than the cost of acquiring a satisfactory substitute.

In the case of gas station properties, the general lack of other types of reliable data result in the cost approach being the best means of measuring value.

## Recommendation – Cost Approach

Because gas station properties are rarely bought and sold in the open market and because there is an absence of reliable income and expense data, the *cost approach* to value is the most practical way of valuing these properties. Since the *cost approach* relies on accurate property details, property inspections and detailed data collection are necessary. Therefore, the following recommendation is made:

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| In the assessment of properties in Alberta, the <i>cost approach</i> is recommended for use in the valuation of gas station properties. |
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<sup>1</sup> *Humble Oil & Refining Company v. Borough of Englewood Cliffs*, 71 N.J. 401, 365 A. 2d 929 (N.J.S.C.) 1976. See also *New Brunswick v. State of N.J. Div. Of Tax Appeals*, 39 N.J. 537, 189 A. 2d 702 (1963).

## 2.3 Application of the Cost Approach

There are two primary variations of the cost approach: reproduction cost and replacement cost.

### Reproduction Cost

Reproduction cost is the cost of replacing an existing property with a replica as of a particular date. Strictly construed, reproduction cost calls for identical materials and quality of workmanship. This variation of the cost approach is of limited usefulness because it is frequently not possible or desirable to duplicate an existing property, either because of a lack of certain materials or trade skills, or the functional obsolescence of an older property.

The difficulty of using reproduction cost increases as a property ages. However, this difficulty can be overcome if depreciation is accurately estimated.

### Replacement Cost

A replacement approach reflects what actually would be built if the improvements were to be reconstructed. Replacements are designed, therefore, to replace the existing functions and capacity of the property. To this end, replacements take advantage of advances in technology in the design, layout, and construction of the improvements. As a result, replacement costs take into account many of the elements that give rise to the functional obsolescence inherent in the property. The replacement cost concept is the most meaningful as far as the principle of substitution is concerned.

The replacement cost method is difficult to apply in the case of complex, one-of-a-kind structures because it is difficult to establish the functionality of the buildings and what would be required to replace them.

In the case of common properties such as gas stations that are reasonably similar in nature, the replacement cost approach is an acceptable and appropriate method of arriving at an indicator of fair market value.

## Overview of the Replacement Cost Approach

The primary method of estimating replacement cost is to apply current prices to the components of cost. In this method, the assessor applies current prices to a property's labor and material components.

Costs are determined by establishing the appropriate price per square foot to replace the existing structure on the property. The existing structure is compared to a replacement model. The costs of per square foot of model buildings are published in various cost manuals, which are kept current.

## Estimating Replacement Costs

Two principle tasks are involved in estimating replacement cost value:

- 1) Valuing the land, and
- 2) Valuing the improvements.

Land value is usually established through analysis of comparable market sales data.

To value the improvements:

Inspect the buildings and other improvements, quantify areas, note conditions, and analyze utility.

Estimate the cost new of the assessable improvements as of the valuation date.

Deduct from the costs new value an amount that reflects all forms of depreciation, including:

- Physical (curable and incurable),
- Functional (curable and incurable), and
- External (economic obsolescence).

The resulting value will be an estimate of the contribution of the improvements to the market value of the subject, depreciated for all causes.

The final sum of **land value** plus **improvement value** is the estimated market value of the real estate at the subject location.

## 2.4 Practical Valuation Process

In this valuation guide the *replacement cost approach* based on the square foot method has been developed into a practical valuation tool utilizing spreadsheets.

The following sections provide guidelines and instructions on the:

- Use of spreadsheets,
- Collection of data,
- Analysis of information,
- Application of valuation techniques,
- Development of market value, and
- Control of the quality of assessment values.

## 3.0 Gas Station Valuation Process

### Overview

**1) Collect appropriate information:**

- Detailed property data,
- Actual and projected annual gallonage (when available),
- Rents and financial information (when available),
- Sales data, and
- Construction cost data.

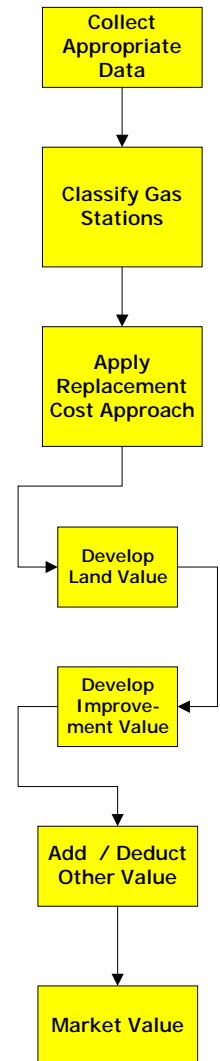
**2) Classify the gas station improvements.**

**3) Develop land values.**

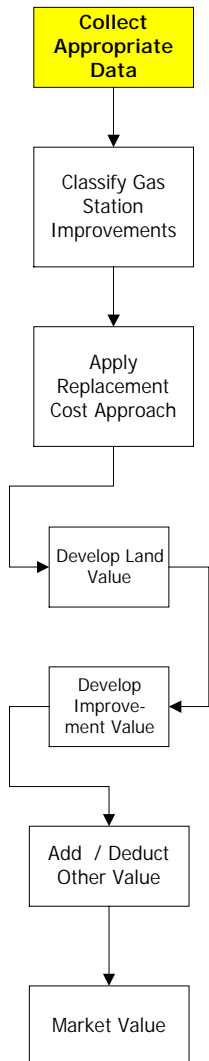
**4) Apply cost analysis to derive improvement values.**

**5) Add/deduct for other items – if required.**

**6) Reach a final market value conclusion.**



## 3.1 Collecting Appropriate Data



More than any other factor the type and quality of information available dictates the methods that can be used to value properties. The efforts put in at the information collection stage will determine the quality of the final analysis.

### Types of Information to be Collected:

- Detailed property information,
- Actual and projected annual gallonage,
- Rents and financial information, when available,
- Sales data, when available, and
- Construction cost data.

Even if the *income approach* or the *sales comparison approach* are not contemplated as possible methods of valuation, income and expense information, sales information, and actual and projected gallonage should still be collected. Such information may assist in estimating depreciation and obsolescence.

Helpful sources of information include: assessment records, owners, oil companies, real estate consultants and brokers, and title registration offices.

### Detailed Property Information

To compare properties, classify each gas station into the appropriate class or group, and develop useful valuation parameters, it is necessary to obtain pertinent physical and descriptive information about the property. The information collected should be entered on Form GS-1: Gas Station Data Entry Form.

### From Assessment Records

Historical information on file in the assessment records is the logical place to begin collecting property information. When possible, the assessor should verify this information while inspecting the property. If the information is not available or obtainable from inspection, then the property owner should be contacted to complete the data collection.

## From Property Inspection

To keep assessment records up to date all properties should be inspected from time to time. The following items should be noted when inspecting a gas station:

1) LAND:

General comments on traffic volumes and the location of the property, and  
General comments on access to the property.

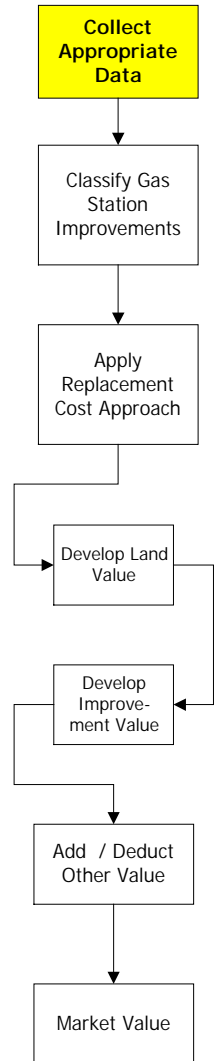
2) BUILDINGS:

Condition of buildings and effective age,  
Construction style and type,  
Total dimensions and area, and  
Use of buildings.

3) OTHER IMPROVEMENTS:

List of equipment,  
Details of gas pumps and tanks,  
Yard improvements including:

- Paving,
- Canopies,
- Yard lighting,
- Signs, posts or poles.



## Actual and Projected Annual Gallonage

Knowledge of actual and projected annual gallonage may be of assistance in determining the quality of the location and estimating depreciation and obsolescence in a cost approach analysis.

## Rents and Financial Information

Due to the existence of franchise agreements between oil companies and operators of gas stations, meaningful income and expense information is likely to be rare. However, the assessor may wish to consider collecting rental and other financial information to provide a possible basis for assessments derived on the income approach to value and to assist in determining the quality of the location for land value estimation.

## Sales Data

Free market sales of gas stations are likely to be rare given that most oil companies tend to **develop** gas station properties rather than purchase them. However, as is the case with rents and financial information, the assessor may wish to consider collecting sales data to provide a back-up against which to verify the accuracy of values arrived at through the cost approach. Where sales data is to be collected, the following information should be sought:

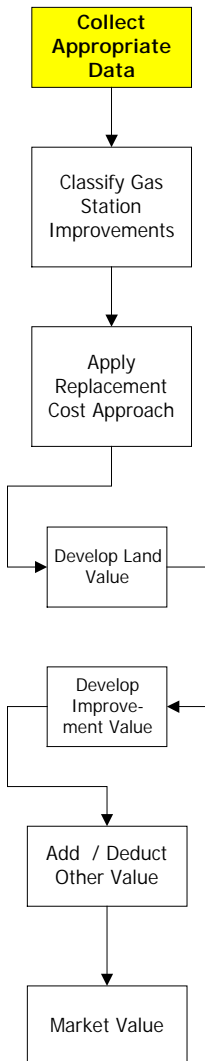
- Property address and legal description,
- Sales price,
- Date of transfer,
- Instrument number,
- Name and address of vendor and purchaser,
- Interests transferred (fee simple or other),
- Financing conditions, and
- Value of chattels.

The assessor must investigate all gas station sales to verify whether the sale is truly indicative of market value and whether the sale price includes the value of the gas station business. In the latter case, the value of the real estate must be delineated from the total sales price.

## Construction Cost Data

The sales approach is not the only approach that utilizes market data. Construction costs are also based on market data. The “bricks and mortar” construction costs of a building can be estimated from a number of different cost manuals. Some manuals, such as the *Marshall & Swift Valuation Services Manual*, also include “construction models” of gas stations that can be used to estimate costs new.

In determining the value of a particular type of property, it is also useful to analyze actual construction costs. Therefore, construction cost data for all new gas stations and for all major reconstruction work should be requested from the owners. In addition, it may be useful to consider the information provided on any building permit. The analysis of actual cost data will assist in confirming rates found in valuation manuals.



## Information on Land

Land value is directly related to the highest and best use determination. In fact, the determination of the highest and best use of land should be the starting point for an assessor in any valuation exercise.

Land has value because of its productivity related to a purpose or use. Land is to be assessed according to its highest and best use, which is a function of three general characteristics:

- Governmental restrictions,
- Physical characteristics, and
- Locational characteristics.

### Governmental Restrictions

Governmental restrictions, which place legal constraints on property use, significantly affects value. There are many types of governmental restrictions on land use, including zoning, subdivision control, and environmental regulations.

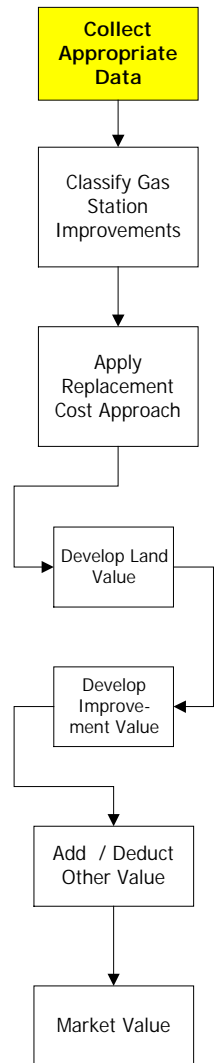
The zoning regulations of local government are the most significant form of governmental restriction. Zoning regulations address permitted uses of land, density or intensity of use, setback or side yard requirements, building height restrictions, on-site parking requirements, and other land-use matters. Zoning bylaws also stipulate the conditions under which variances from zoning restrictions are granted and how non-conforming uses are treated.

### Physical Characteristics

The physical characteristics of land significantly affect its development potential and hence its value. Important physical characteristics include parcel size and shape, frontage, topography, soil and subsoil conditions and drainage, site orientation, and existing on-site and off-site improvements.

### Locational Characteristics

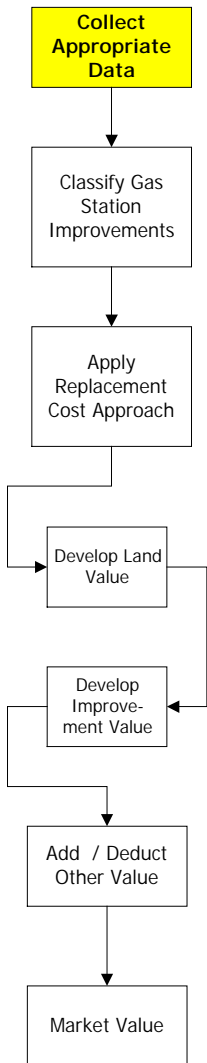
The most important single attribute of land is its location. The locational requirements of a given parcel of land depend on its use.



## Information on Improvements

Information must also be collected with on all assessable improvements on the gas station property. Virtually all properties deteriorate as they age, lowering their utility and reducing their value. Accordingly, the year built, effective age, and type of construction for all structures on the property should be determined to give allowances for physical deterioration.

In addition, accurate measurements of the buildings must also be maintained as well as the various uses of different areas of the buildings.



## 3.2 Classifying Gas Station Improvements

Since the cost approach valuation method relies on the principle of substitution or replacement, classifying the existing improvements requires the assessor to evaluate the type and construction style of improvements that would be used to **replace** the existing improvements. The functionality of a gas station property is largely dependent on its attributes: fueling activities, retail activities, service bays, and/or the presence of a car wash. The valuation of a gas station property, therefore, rests on the analysis of these features in respect of the amount of traffic volume in the area.

### Gas Bar Properties

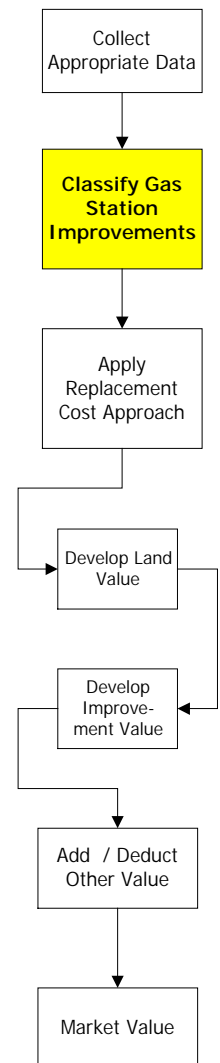
As indicated previously, gas bars tend to have minimal structures on the property. A gas bar is likely to have only pump islands and a freestanding booth for the attendant. Increasingly common at gas bars are convenience-store operations integrated within the property either with or without a car wash.

### Service Station Properties

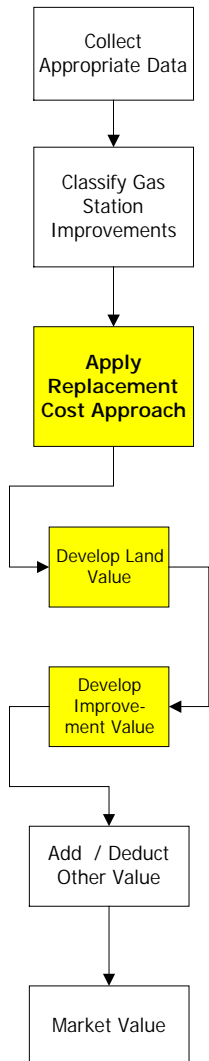
Service station properties are characterized by the presence of a building that houses one or more service bays for the repair and maintenance of motor vehicles.

### Strip Commercial Retail Properties

A number of properties with strip commercial retail activities such as convenience stores and fast food outlets also contain fueling operations. The assessor must determine the predominant nature of these types of properties. When the predominant nature is determined to be strip commercial, the retail operation should be valued using the procedure outlined in the Strip Commercial Valuation Guide. In such cases the fueling equipment, canopy, and attendant booth, if any, should be valued using the procedure presented in this gas station valuation guide and the total of these improvement values added to the value established for the strip commercial property.



### 3.3 Applying the Replacement Cost Approach



#### Overview of the Procedure

- 1) Establish land values, preferably using the market sales comparison approach; comparable sites will be of similar zoning and be located in a similar area.
- 2) Classify gas station improvements according to the type and size of buildings that would be required to replace the existing structures.
- 3) Estimate replacement costs new (RCN) of the improvements.
- 4) Determine normal age-related depreciation based on the quality and condition of improvements and deduct this amount from costs new.
- 5) Determine typical functional and economic obsolescence and deduct this from costs new to arrive at the market value of the improvements.
- 6) Add the market value of the land to the market value of the improvements to produce the indicated market value of the property.

#### Determine Land Rates

The cost approach requires valuation of the land along with analysis of building values. Land should be valued using the *market sales comparison approach*.

Preferably, the comparable land sales will be of sites having approximately the same area as the subject site, with similar zoning and situated in a comparable location. Ideally, these sales will have taken place as close as possible to the date of valuation.

Once comparable sales data has been obtained on and around the valuation date, it becomes possible to determine the market value of the gas station site by utilizing the *market sales comparison approach*. Land values should be established on the basis of \$ per square foot (or \$ per square meter).

## Classify Gas Station Improvements

Inspect the property and classify the replacements in accordance with the models provided in the cost manuals.

## Estimate RCN of the Improvements

Replacement costs new of a gas station will be based on the square foot area of the buildings, the size and quality of any offices, the cost estimates of other structures such as car washes, and other yard improvements. For properties that incorporate more than one function such as a restaurant or fast food outlet, these other components should be valued separately and their value added to the value of the gas station.

In this guide the *Marshall & Swift Valuation Services Manual* (Marshall & Swift) is used to demonstrate the cost procedure. It is up to the assessment office to select the appropriate cost manual or technique to apply to the valuation of gas stations.

*Marshall & Swift* provides two methods to determine costs new:

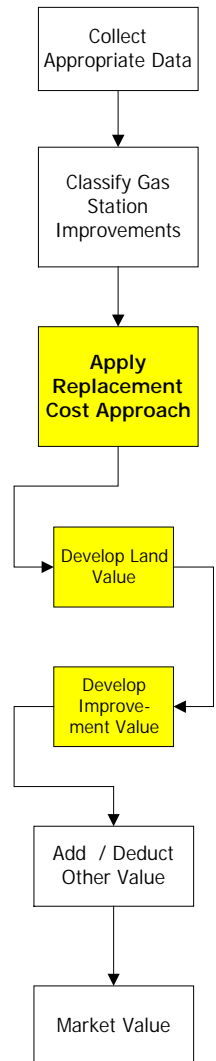
Calculator approach - a summary approach providing one base cost plus adjustments to produce costs new, and

Segregated approach – a more detailed cost analysis by building component, which is therefore suited to complex properties.

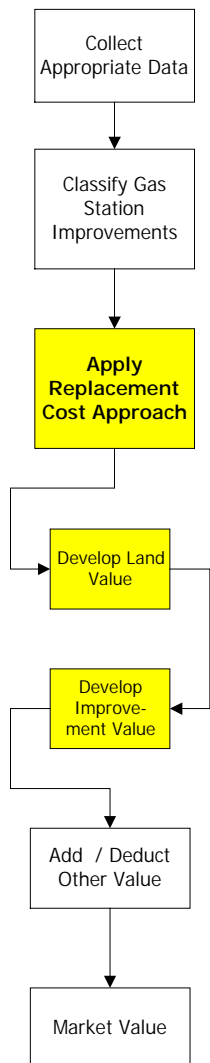
Either the calculator or segregated cost approach can be used. The example provided in this guide is based on the calculator method.

## Estimate RCN of Other Improvements

Other improvements include gas pumps and tanks, paving, canopies, yard lighting, signs, posts, and poles. These items should be classified and costed according to their quality. Costs per square foot or unit of assessment can be found in the cost manual.



## Using the Gas Station Cost Spreadsheet



Form GS2 – Gas Station Valuation Cost Summary works in conjunction with Form GS1 – Gas Station Data Entry. These forms provide for the valuation of buildings on a gas station property plus equipment, pumps and tanks, yard improvements, and car washes to be costed, based on *Marshall & Swift's calculator cost* method. The information entered about the property on GS1 will appear on Form GS2.

To use these forms, the assessor must establish the *base cost rate*. There are two types of additions and up to four rate adjustments that can be made to this rate.

### **Additions**

Heating, ventilation, and air-conditioning, and  
Sprinklers.

### **Rate Adjustments**

Floor area / perimeter multiplier,  
Height multiplier,  
Local cost multiplier, and  
Current cost multiplier.

Note: The cost analysis provided in the example is designed to cover most of the improvements found in a typical service station. For items not found in this study, please refer to the applicable cost manual.

## Deduct Age-Related Depreciation

Depreciation due to age reflects the physical deterioration of the property over time and the normal decline in value as the functionality of a property also declines. Such depreciation is usually expressed as a percentage of costs new.

It would also be advisable to differentiate between items with short-lived economic lives and long-lived economic lives. For example, the assessor may wish to consider developing separate life expectancy guidelines: one for replaceable components such as pumps (short-lived) and another for buildings (long-lived). Short-life improvements should be depreciated on the basis of their individual life expectancy.

### Depreciation Schedules

Most valuation manuals contain depreciation schedules that are intended to reflect the typical amount of normal, physical, and age-related depreciation in a property.

## Automatic Application of Depreciation Schedule

The spreadsheets provided herein to assist in the valuation of gas station properties have a built-in depreciation schedule based on *Marshall & Swift's* schedules. If desired, the schedule contained in the spreadsheet can be altered to reflect rates provided by other manuals.

Therefore, to determine the appropriate amount of age-related depreciation, the assessor must analyze and input the following into Form GS1:

The effective age for each improvement (e.g., 1978), and

The expected life of each improvement (e.g., 50 years - MS50).

The GS2 spreadsheet also allows flexibility to apply a uniform depreciation rate to all improvements as a whole, or individual rates to each improvement.

## Deduct Obsolescence

Since the depreciation schedules found in *Marshall & Swift* are developed on the basis of sales evidence, they reflect the depreciation *typically* found in properties. **Obsolescence** reflects the abnormal depreciation that arises in some properties due to functional and/or externally generated economic problems.

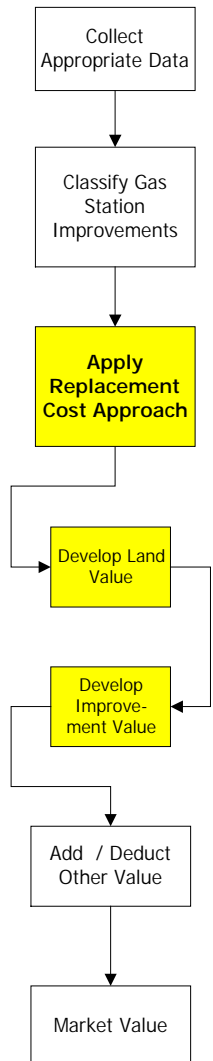
Many properties suffer from **functional obsolescence**. This can result from numerous factors: poor or outdated design, excess operating costs, etc.

The key to determining whether obsolescence exists in a property is addressed in the question:

Could the existing facility be replaced with a more modern, efficient substitute and, if so, what would constitute this modern unit?

Knowledge of current trends and gas station designs is important in recognizing obsolescence. For example, in recent years, the amount of new construction of two and three-bay service stations has dwindled considerably. The assessor may, therefore, wish to grant an allowance for obsolescence for properties of this type. This may take the form of a shorter economic life table which thereby produces faster depreciation for the property in question.

**Economic obsolescence or external depreciation** is generally created from conditions external to the property itself. Changes in an industry itself and changes in government legislation are just a few issues that can render a property at least partially obsolete through no fault of the property itself. Such events would all be classified as economic obsolescence.



## Evaluating Obsolescence

Functional obsolescence can usually be recognized as poor design and layout, poor or inferior construction, and the existence of excess operating costs.

## Quantifying Obsolescence

### Market Sales Analysis

All forms of depreciation and obsolescence are quantified in an open market sale of a property. Therefore, a study of gas station sales data in combination with analysis of their costs new will produce the typical total depreciation inherent in such properties.

### Functional Obsolescence

Functional obsolescence is the loss of value in a property caused by the design of the property itself. When the capacity of a property to perform the function for which it was intended declines, functional obsolescence begins. Functional obsolescence may be less tangible or visible than physical deterioration, but it may be more significant.

An element of functional obsolescence is *curable* when the cost to correct the deficiency is less than the economic benefit resulting therefrom. When the cost to correct the deficiency is greater than the resulting economic benefit, the element of functional obsolescence is considered *incurable*.

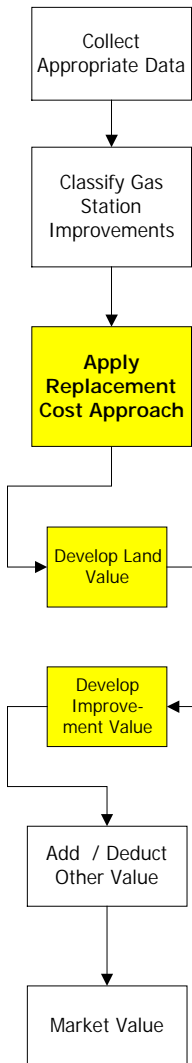
By employing a *replacement* cost analysis, the assessors can deal with many of the functional obsolescence factors arising as a result of layout and construction problems.

### Economic Obsolescence

Adverse factors that are external to the property being assessed cause economic obsolescence and a loss in value. These external factors usually affect more than one property in the area and cannot be controlled by an individual property owner.

A property may suffer from one or more forms of depreciation at a given time. Under certain circumstances, the source of the decrease in utility may be difficult to classify.

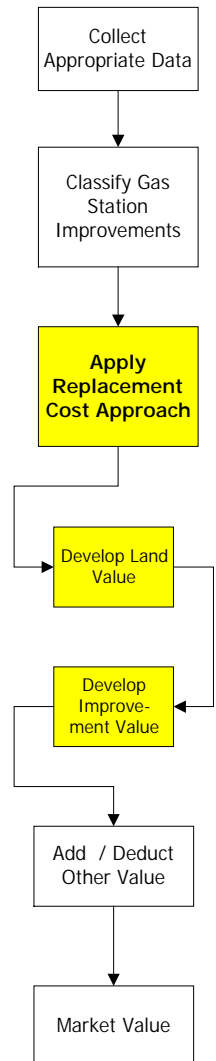
Classification of the forms of depreciation is only an aid to the assessor. Identifying the type of depreciation helps to recognize and consider depreciation in all its forms, but is not an end in itself. The assessor's goal is to determine the total loss in value attributable to all forms of depreciation.



Economic obsolescence is usually external to a property and has to be dealt with as a separate part of the valuation process. An example of economic obsolescence that may affect gas station properties would be changing road patterns around the property. For example, a gas station may enjoy four-way access of vehicle traffic. However, if a median is constructed that restricts vehicle turns, the property may then only have two-way access.

## Indicated Market Value

After evaluating the appropriate amount of depreciation to deduct from the costs new, the assessor produces the market value of the improvements. The market value of the land is added to this figure to arrive at the estimated market value of the property using the *cost approach*.



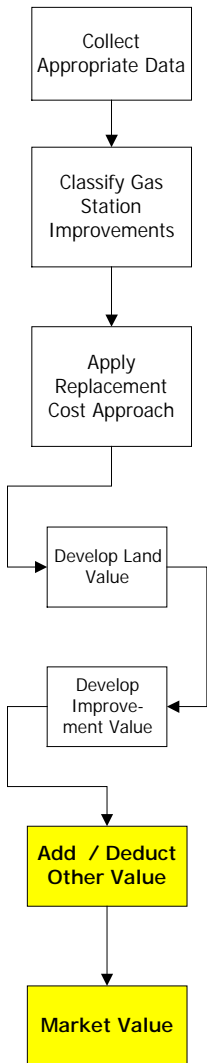
### 3.4 Adding / Deducting Other Components of Value

From time to time the value of a property is not entirely captured by the foregoing analysis and a lump-sum addition or deduction is required. For example, it may be desirable to value a fast food outlet or restaurant on the property using the *income approach*, and add this value at the end. Alternatively, the property may require a new drainage system to control flooding or fix another curable item. This amount can be noted and deducted from the value total as an “other value” item.

### 3.5 Final Value Conclusion

This guide recommends the *cost approach* to value gas stations. If it is determined that there are sufficient sales or adequate income and expense information to allow for a valuation based on either the *income approach* or the *comparable sales approach*, the assessor may wish to consider carrying out such alternative methods of valuation and then reconcile the separate estimates of value.

The cost value estimate should be reviewed. Is the estimate of depreciation reliable and accurate? Is the conclusion supported by market data?



## 4.0 *Validation of Results*

The strength of an assessment system rests on two tenets: its ability to produce appropriate market values, and its ability to treat similar properties fairly and consistently.

To accomplish these ends, the valuation process should reflect the views and methods used in the marketplace. The process should be applicable to all properties, but it should have enough flexibility to deal with the variations and market conditions encountered.

### Valuation Parameters

The proposed system relies on established and published costs, either *Marshall & Swift* or some other manual. If the assessor uses these manual costs as valuation parameters, the whole system will be applied fairly and consistently i.e., the results of any gas station analysis is validated within certain parameters.

### Check Against Sales Values

To ensure that the assessment values developed are in line with the market, the assessor should check them against any sales. Sales have inferences for the values of similar properties. A level of comfort can be developed about the assessment values on a dollar per hectolitre measure.

### Data Filters

Another way to ensure consistent and reliable results is to place data filters on the input. For example the rate per square foot for a gas station booth must fall between \$35 and \$60 per square foot.

## 5.0 *Example of Gas Station Valuation Analysis*

The following two forms illustrate an example of a gas station valuation employing the cost approach. The analysis is set up on a two-page spreadsheet (or worksheet). Enter values and pertinent data in the blank (white) cells. All shaded cells are either formulas or look-up cells and should not be over written.

### Form Gas1 – Gas Station Data Entry

The assessor enters the general descriptive data for the property, including address, and class and type of gas station. The data entered on this worksheet will be carried forward to the next form as required.

### Form Gas2 – Gas Station Cost Analysis

Since the form is set up to employ the calculator cost method found in the *Marshall & Swift Valuation Services Manual*, it does not actually “look-up” costing rates. Once the rates, factors, and depreciation amounts are entered, the form will calculate a cost value.

## Form Gas1 – Gas Station Data Entry

|                |                         |
|----------------|-------------------------|
| <b>Address</b> | <b>1010 23rd Street</b> |
| Company name   | Gas Plus Ltd.           |
| Municipality   | Drumheller              |
| Roll #         | 123554                  |
| Opened in:     | 1972                    |
| Renovated in:  | 1988                    |

|                    |                 |
|--------------------|-----------------|
| <b>Value Date:</b> | <b>1-Jan-97</b> |
| Measurements in:   | feet            |
| Gas Station/ booth | yes             |
| Retail structure:  | yes             |
| Car wash:          | no              |
| Other:             |                 |

| Structures     | Replacement Type | Area in sq. feet | Flr. Ht: feet | # Flrs. | Dimensions | Perimeter feet | Build Date | Building Type | Bldg Class | Const. Quality |
|----------------|------------------|------------------|---------------|---------|------------|----------------|------------|---------------|------------|----------------|
| Station/ Booth | Steel            | 72               | 10.0          | 1.0     | 6 x 12     | 36             | 1988       | Booth         | S          | Average        |
| Retail bldg.   |                  | 600              | 14.0          | 1.0     | 20 x 30    | 100            | 1972       | Store         | C          | Good           |
| Car wash       |                  |                  |               |         |            |                |            |               |            |                |
| Other          |                  |                  |               |         |            |                |            |               |            |                |
| <b>Total</b>   |                  | <b>672</b>       |               |         |            |                |            |               |            |                |

| Equipment      | Type            | Number | Capacity     | Condition | Age |
|----------------|-----------------|--------|--------------|-----------|-----|
| Gas Pumps 1    | Triple          | 4      |              |           |     |
| Gas Pumps 2    | Single          | 2      |              |           |     |
| Fuel Tanks     | Steel           | 5      | 124,000 ltr. |           |     |
| Air Compressor | < 5 hp          | 1      |              |           |     |
| Hoist          | None            |        |              |           |     |
| Other          | Fibreglass tank | 1      | 20,000 ltr.  |           |     |

| Yard           | Type           | Units       | Comments       |
|----------------|----------------|-------------|----------------|
| Paving         | asphalt        | 42,000 sf   | good condition |
| Canopy         | metal          | 3,520 sf    | good condition |
| Lighting       | mercury vapour | 10 fixtures | good condition |
| Signs          | lighted        | 2           | good condition |
| Posts or poles | regular        | 5           | avg            |
| Other Yard     |                |             |                |

| Land                   |        |
|------------------------|--------|
| Site area: square feet | 73,437 |
| Coverage Ratio         | 0.9%   |
| Value per square foot  | \$1.45 |

| Inspection Notes      |   |
|-----------------------|---|
| Inspection date       | Sept. 12, 1997  |
| Bldg. design          | Good. Appears modern and efficient - upgrades in 1988 |
| Heating/ cooling      | Heating and A/C in store and booth                    |
| Extra features        | Large paved apron & scale                             |
| Condition             | Good  |
| Annual volume of fuel | 32,000 hectolitres in 1996                            |
| Comment on use        | Busy at time of inspection                            |
| Comment on access     | Generally limited to south and west bound traffic     |
| Comment on location   | On busy corner  |

## Form Gas2 – Gas Station Cost Analysis

|              |                  |
|--------------|------------------|
| Address      | 1010 23rd Street |
| Municipality | Drumheller       |
| Roll #       | 123554           |

|                         |          |
|-------------------------|----------|
| Value Date              | 1-Jan-97 |
| Local Cost Multiplier   | 1.280    |
| Current Cost Multiplier | 0.970    |

### Replacement Cost Analysis

| Item           | Units in square feet | Base Rate | HVAC Addn | Sprkler Addn | Floor Addn | Total Rate | Area Mltpler | Height Mltpler | Final Rate | Costs New | Effective Age | Dpn Table | Dpn % | Costs New less Dpn |
|----------------|----------------------|-----------|-----------|--------------|------------|------------|--------------|----------------|------------|-----------|---------------|-----------|-------|--------------------|
| Station/ Booth | 72                   | \$30.96   | \$2.00    |              |            | \$32.96    | 0.859        | 1.181          | \$41.52    | \$3,000   | 1988          | MS30      | 18%   | \$2,460            |
| Retail bldg.   | 600                  | \$51.09   | \$3.00    |              |            | \$54.09    | 0.859        | 1.181          | \$68.13    | \$40,900  | 1966          | MS50      | 36%   | \$26,176           |
| Car wash       | 0                    | \$17.38   | \$2.00    |              |            | \$19.38    | 0.859        | 1.000          | \$20.67    | \$0       | 1976          | MS50      | 18%   | \$0                |
| 0              | 0                    |           |           |              |            | \$0.00     | 0.859        | 1.000          | \$0.00     | \$0       |               |           | 0%    | \$0                |

| Equipment       | Type            | Number  | Rate    |  |         |  |         |           |      |      |     |          |  |  |
|-----------------|-----------------|---------|---------|--|---------|--|---------|-----------|------|------|-----|----------|--|--|
| Gas Pumps 1     | Triple          | 4       | \$1,300 |  | \$1,300 |  | \$1,614 | \$6,460   | 1988 | MS25 | 25% | \$4,845  |  |  |
| Gas Pumps 2     | Single          | 2       | \$800   |  | \$800   |  | \$993   | \$1,990   | 1984 | MS25 | 40% | \$1,194  |  |  |
| Fuel Tanks      | Steel           | 124,000 | \$0.770 |  | \$0.770 |  | \$0.96  | \$118,550 | 1972 | MS30 | 69% | \$36,751 |  |  |
| Air Compressor  | < 5 hp          | 1       | \$720   |  | \$720   |  | \$894   | \$890     | 1988 | MS25 | 25% | \$668    |  |  |
| Hoist           | None            | 0       |         |  | \$0     |  | \$0     | \$0       |      |      | 0%  |          |  |  |
| Fibreglass tank | Fibreglass tank | 20,000  | \$0.820 |  | \$0.82  |  | \$1.0   | \$20,360  | 1988 | MS30 | 18% | \$16,695 |  |  |

| Yard           | Type           | Number | Rate    |  |         |  |         |          |      |      |     |          |  |
|----------------|----------------|--------|---------|--|---------|--|---------|----------|------|------|-----|----------|--|
| Paving         | asphalt        | 42,000 | \$1.80  |  | \$1.80  |  | \$2.23  | \$93,860 | 1988 | yard | 50% | \$46,930 |  |
| Canopy         | metal          | 3,520  | \$9.33  |  | \$9.33  |  | \$11.58 | \$40,780 | 1988 | MS30 | 18% | \$33,440 |  |
| Lighting       | mercury vapour | 10     | \$672   |  | \$672   |  | \$834   | \$8,340  | 1988 | yard | 50% | \$4,170  |  |
| Signs          | lighted        | 2      | \$1,200 |  | \$1,200 |  | \$1,490 | \$2,980  | 1988 | yard | 50% | \$1,490  |  |
| Posts or poles | regular        | 5      | \$133   |  | \$133   |  | \$165   | \$830    | 1972 | yard | 50% | \$415    |  |
| Other Yard     | 0              | 0      |         |  | \$0.0   |  | \$0.0   | \$0      |      |      | 0%  | \$0      |  |

|              |  |  |  |  |  |  |  |                  |  |  |  |              |                  |
|--------------|--|--|--|--|--|--|--|------------------|--|--|--|--------------|------------------|
| <b>Total</b> |  |  |  |  |  |  |  | <b>\$338,940</b> |  |  |  | <b>48.3%</b> | <b>\$175,233</b> |
|--------------|--|--|--|--|--|--|--|------------------|--|--|--|--------------|------------------|

| Obsolescence Note   |  |                               |                  |
|---|--|-------------------------------|------------------|
| There does not appear to be any abnormal depreciation or obsolescence |  | Less Obsolescence% (see note) | 0.0%             |
|   |  | Value of Improvements         | <b>\$175,233</b> |

| Land Value        |                   |
|-------------------|-------------------|
| Site Area         | 73,437            |
| Value/ sq.feet    | \$ 1.45           |
| <b>Land Value</b> | <b>\$ 106,484</b> |

| Value Ratio              |               |
|--------------------------|---------------|
| <b>\$ per hectolitre</b> | <b>\$8.80</b> |

| Value Summary       |                  |
|---------------------|------------------|
| Land Value          | \$106,484        |
| Improvement Value   | \$175,233        |
| Other:              | \$0              |
| <b>Market Value</b> | <b>\$281,700</b> |

