

Raising Your Commercial IQ

Development Analysis and Valuing Land

May 2019

Neil Osborne M.B.A.
DL. (604) 988-9964
nosborne@investitsoftware.com
Investit Software Inc.
Toll free 877-878-1828
North Vancouver BC
Canada V7R 1M1
investit@investitsoftware.com
www.investitpro.com
Copyright 2019 Neil Osborne
All rights reserved

Workshop manual

This manual is intended to be used in conjunction with the video “Development Analysis & Valuing Land” as a reference and for guided note taking and not as a standalone document.

It is highly recommended that you print the manual prior to watching the video and use the manual for note taking as you watch the video and for later reference.

Page numbers

The video continually displays the workshop manual page number allowing you match the workshop manual with the video.

Table of Contents

Objectives	1
Topics.....	1
Introduction to Development Analysis and Valuing Land	2
Development analysis versus the income approach.....	5
Development Analysis. The Residual or Back Door approach.....	8
Condominium Development Example	8
Sketch Plans	9
Typical Development Profits.....	10
Total Development Costs	10
Factors that influence the land value	11
Soils tests. Examples	12
Expandable clay.....	13
Techniques for dealing with expandable clay	14
Organic soils and peat moss. Examples.....	15
Sink Holes.....	16
Excavations. Impact of adjacent buildings on development costs.....	18
Site requiring piles and large columns. Example	23
Zoning & architectural design considerations	28
Calculating the Buildable Area & Number of Units. Example.....	28
Architectural, design and building code considerations.	29
Building Envelopes.....	29
Corner sites. Setbacks	32
Industrial land. Site coverage example.....	33
Example of the impact of the site width on land value	34
Difficulties of building on a narrow lot. Example	35
Concept of highest and most stupid use.....	38
Market and design considerations.....	40
Optimum Unit mix. Example	41
Using a "Time Line" to help construct the offer	44
Selecting an architect.....	44
Offer to Purchase versus an Option	45
The granting of rights	46
Subject clauses.....	47
Deposits and payments for options	47
Extensions	48
The right to waive a subject clauses.....	48
Assemblies.....	49
Creating the offer. Tips.....	49
Keeping the offer together.....	50
Development Analysis.....	52
The building blocks of development analysis. Unit Projects.....	55
Development Analysis Case Study. Condominium Development	56
Hard & Soft Costs	57
Condominium development analysis. Results	58
Profitability Measures.....	58
Land & Development Cost Measures	59
Financing Costs	62
Calculating the interest costs on a construction draw mortgage	62
Sensitivity Analysis.....	65
Development Risks. Under and oversupply	67
Realtors becoming developers	67
Development Analysis Case Study. Income Property Development	68

Building Blocks of Development Analysis. Income Property Development	68
Lease Up Period.	72
Income during the Lease Up Period	72
Stabilized Income & Expense Statement.....	73
Income Property. Development Profit.....	74
How much Equity is required by the Buyer and the Developer?	79
Sensitivity Analysis. Income Property Development	80
Summary. Sensitivity Analysis.....	81
Using sensitivity analysis.....	83
Should the developer keep the investment?	84
Analyzing “Mixed” developments	90
Two approaches to Development Analysis	91
Detailed monthly cash flow development analysis	91
Lender Requirements.....	94
Analyzing renovations.....	95
Land assembly and negotiation strategies. Case study	96
Identifying development potential. Example	101
Development Check List	104
Information Sources and Web Sites.....	107

Objectives

The overall objective of the seminar is to provide an understanding of:

1. how to carry out development analysis to determine land values and development profits for unit projects such as land subdivisions and condominium projects and income properties such as retail, office and industrial buildings.
2. the issues and difficulties associated with determining land value
3. to enable you to work more effectively with developers

Topics

1. Issues related to using simplistic approaches, such as \$ per Acre or Sq. Ft to value land
2. The backdoor or land residual approach to valuing land
3. Factors that affect land values. Examples are illustrated using photographs
 - Soil conditions
 - Architectural, design & zoning constraints
4. Development Analysis Case Study. Condominium development
5. Development Analysis Case Study. Retail center development
6. Sensitivity & Risk analysis. What numbers have the biggest impact on the development profit?
7. Analyzing a "Mixed" unit and income property development. Case study3
8. Income property development. Sell or hold analysis
9. Renovation analysis
10. Profitability analysis and ratios
11. Assessing the development risks
12. Quick Proforma approach versus detailed monthly cash flow development analysis
13. Construction loan requirements
14. Offer to Purchase versus Options. Pros & cons.
15. Tips for creating an offer
16. Keeping the offer together
17. Land assembly. Case studies
18. Analyzing sites with assembly potential

Introduction to Development Analysis and Valuing Land

How do you value this property?

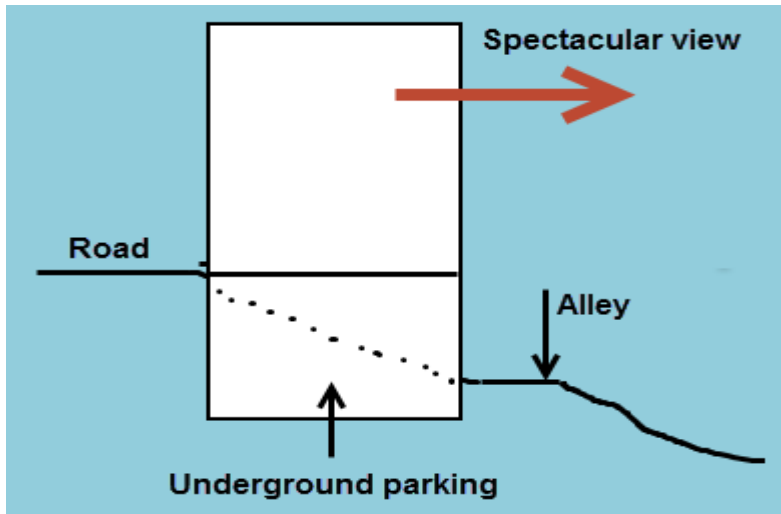


Two approaches to value

1. Income approach
2. Land residual or back door approach

One day these old buildings will be demolished and replaced with a high rise building.





Demolition Clause

When buying a commercial building which is going to be demolished it is important to check the leases for a **“Demolition”** or a similar clause which enables the developer to terminate the lease on the issuance of a specified permit or approval from City Hall such as:

Rezoning Permit
Development Permit
Building Permit etc.

Development analysis versus the income approach

While the property is operating as an income property, the value is determined by the development potential, not the income. The property is not at its “Highest and best use”

Sometimes it is hard to determine whether to use the “Development Analysis” or the “Income” approach to valuation.

TIPS

Ask the question: If the property was destroyed, what would replace it?

- A similar but new building. Use the Income approach
- A very different building. Use the Development analysis or land residual approach to value.

In this case, it would be replaced with a high rise building with retail on the ground floor and likely condominiums and perhaps some office space depending on the zoning regulations and demand for office space in the area.

Income approach examples



Development potential examples



Look at the property tax assessment value.

If the Cap Rate based on the asking price is very low, look at the property tax assessed value. As an example, if the Cap Rate for a shopping center is 2.00% based on the asking price and the current net operating income, then the value is likely based on the value as a development site not as an income property..

You may be able to confirm this by looking at the assessed value for property tax purposes.

Is redevelopment of the property possible?

In deciding whether to value the property using the income approach or the development analysis or land residual approach you need to check if it is possible to construct a new building on the site.

As an example, the property may not be wide enough to construct a building under the current zoning regulations or would require the acquisition of adjacent properties in order to obtain a site that is large enough to profitably develop.

Take a look at the properties on either side of the property that you are valuing. Is there assembly potential and potential for future development?

Following is an example of a building with no development potential.

Under normal circumstances the value of this old, obsolete rental apartment building would be influenced by the development potential. If the building was destroyed it would normally be replaced by a three or four story condominium project with underground parking similar to the property next door.

This site is very difficult to develop because it is a small corner site requiring setbacks from both streets. The site is not very wide and it would be difficult to create sufficient underground parking which would be required to meet the city's parking requirements.

The current use is non-conforming with insufficient parking. There is no assembly potential because the building next door is a relatively new four story condominium building with underground parking.

If the building was destroyed by a fire it could not be replaced with a similar building.

What if the zoning changed? The situation would change if the city rezoned the area to allow the development of hi rise condominium buildings then a developer could acquire the two buildings, demolish them and build a high rise condominium project.



Development Analysis. The Residual or Back Door approach

Following is an example of the Back Door or Land Residual Approach for valuing land where we work backwards to calculate the land value.

Condominium Development Example

Market Value. 30 units x \$350,000	\$10,500,000
Less: Development Costs	
Site clearing and preparation	
Construction	
Financing	
Professional fees	
City permits and fees	
Miscellaneous	6,575,000
Real estate fees	525,000
Developer's Profit	<u>1,900,000</u>
Land Value (Residual)	\$ 1,500,000

Sketch Plans

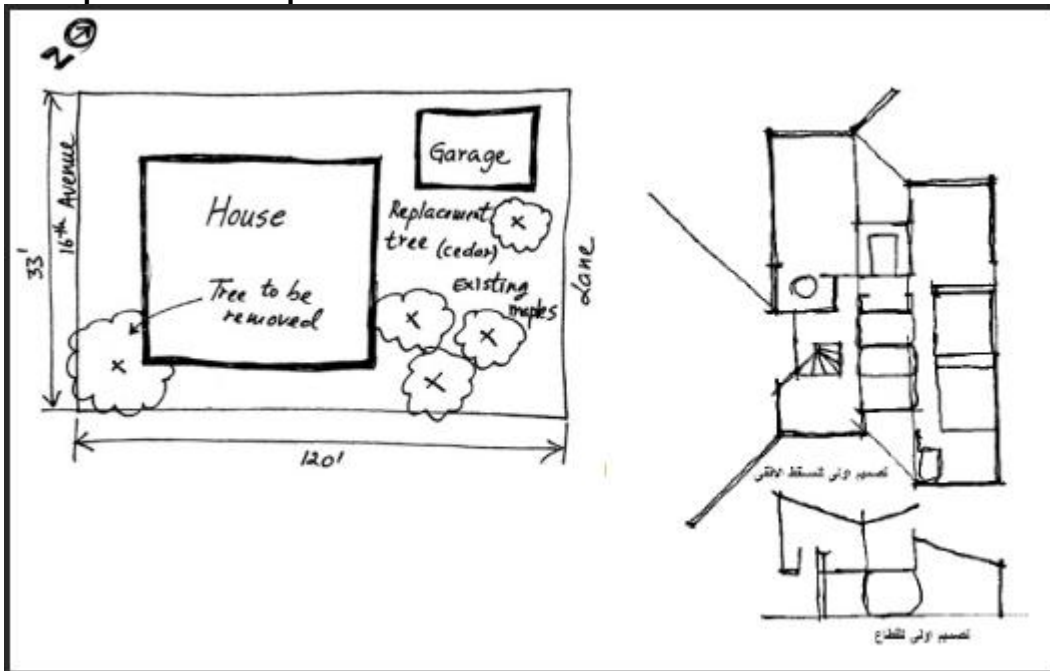
When carrying out development analysis a really important input is the size of the building, number of units, rentable area etc.

The more accurately this can be determined the better the estimate of the potential development profit and the land value.

A good starting point is to have an architect or designer develop sketch plans that will give you some idea of what can be built on the property.

Often an architect or designer will do sketch plans for free in anticipation of getting the design work if the development proceeds.

Examples of sketch plans



Typical Development Profits

25% of Total Development Costs depending on “Risk” and “Time.

A development profit of 25% would be for a medium risk, 2 year project.

The exception. Industrial 15%.

Total Development Costs

All costs ready to start selling or leasing which includes:

- Land and acquisition costs
- Site clearing and preparation
- Construction
- Financing costs
- Professional fees
- City permits and fees
- Miscellaneous
- Contingency allowance (An estimate to cover unknowns)

Factors that influence the land value

Determining the value of land is a difficult and uncertain process because of the many factors that can influence the land value. We will explore some of them.

Soil conditions can have a major impact on the excavation costs and the buildings structural cost, which can dramatically reduce the value of the land. Following are some examples showing how soil conditions and how adjacent buildings can influence excavation and construction costs and reduce the value of the land.

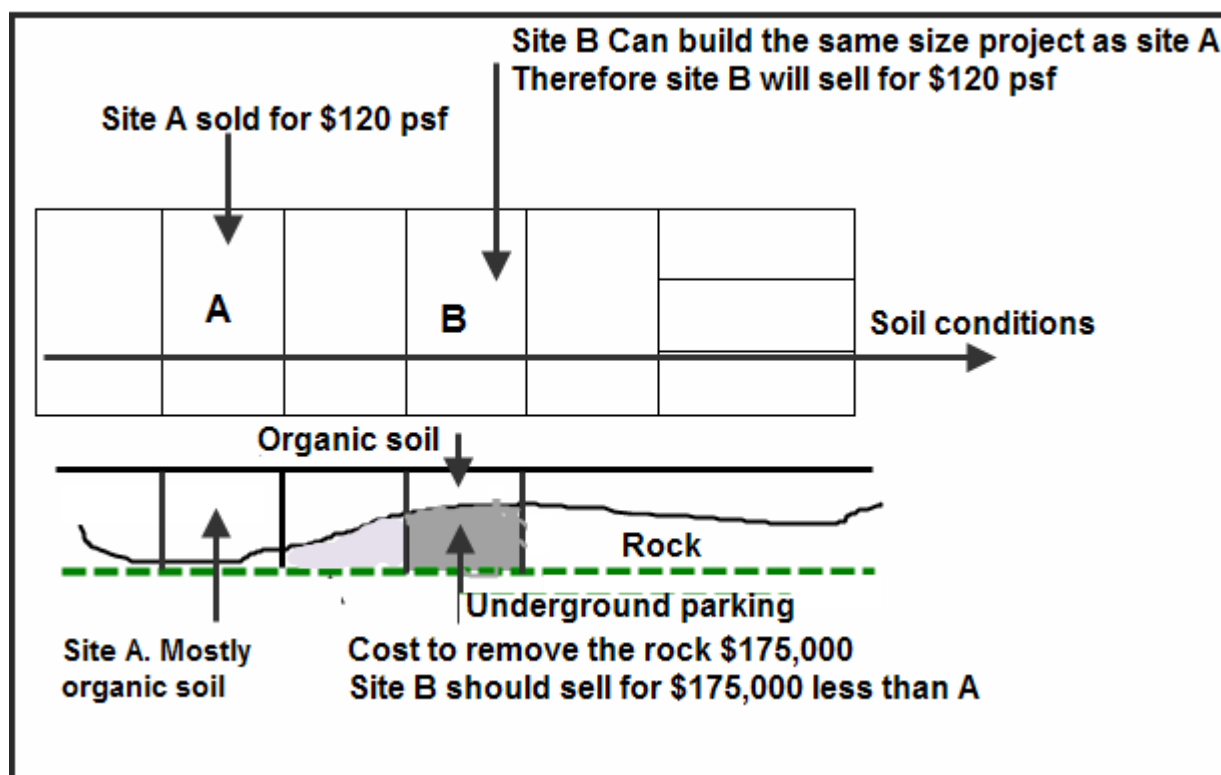
- Soil conditions
- Excavation and foundation cost
- Zoning and building regulations
- Location (Not being discussed)

Soil conditions depend on the area and vary widely. Some examples are:

- Rock & shale
- Expandable clay
- Collapsible soil and sand
- Organic or spongy soil
- Peat moss
- Sink holes
- Water
- Sites near water often require costly piles

At some point during the feasibility stage the developer will have a soils test done by a Geoscientist.

Example showing the danger of using simple comparable approaches such as \$ per Sq. Ft or Acre



Soils tests. Examples

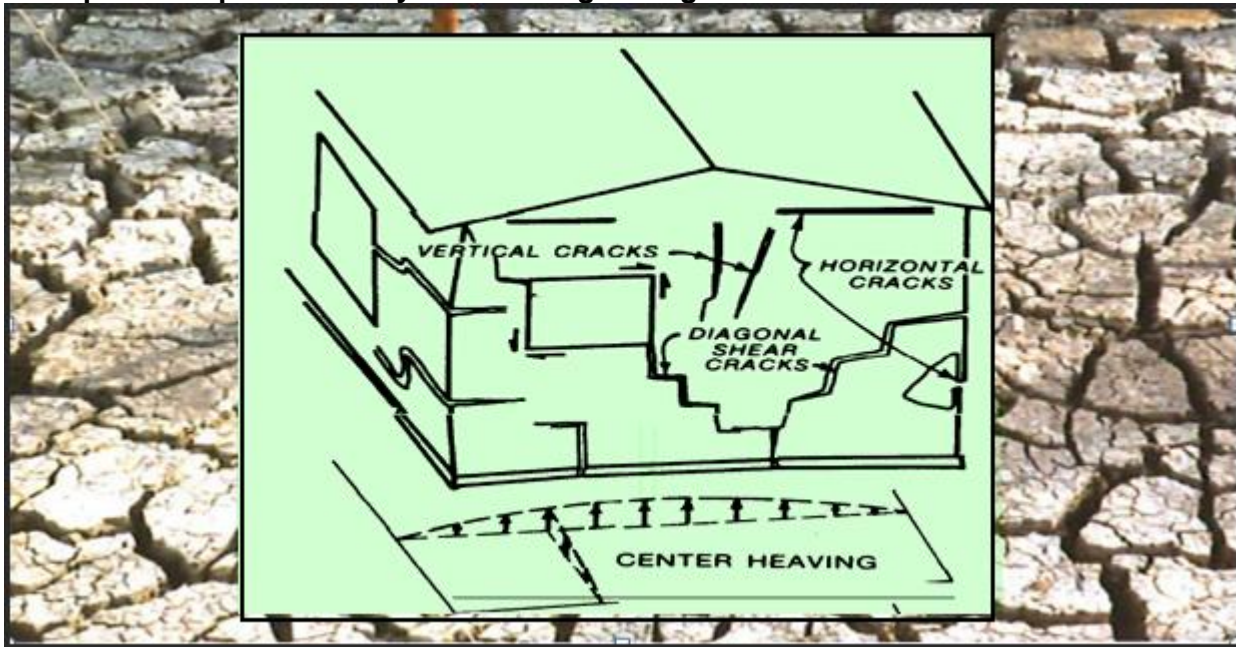


Expandable clay

Expandable clay is clay that expands when wet and shrinks when dry and can cause considerable building damage as shown in the photos below.

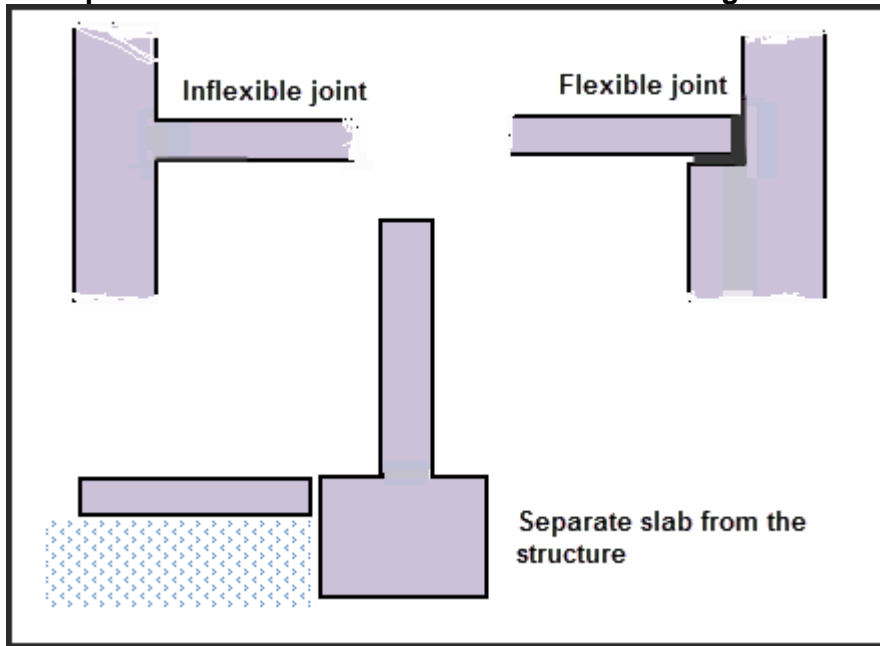
Expandable clay can be found in most areas of North America.

Examples of expandable clay and building damage



Techniques for dealing with expandable clay

Remove and replace the expandable soil with stable fill
Keep water away from the building
Slope the soil away from the building
Install a waterproof apron or moisture barrier around the building
Use pilings to support the structure
Design flexibility into the structure
Separate paved areas and slabs from the main structure

Example of flexible versus inflexible structural design

Organic soils and peat moss. Examples

Organic soils are unstable soils that consist of soil, and decayed organic material such as buried trees and branches and in some cases buried construction debris such as lumber and drywall scrapes etc.

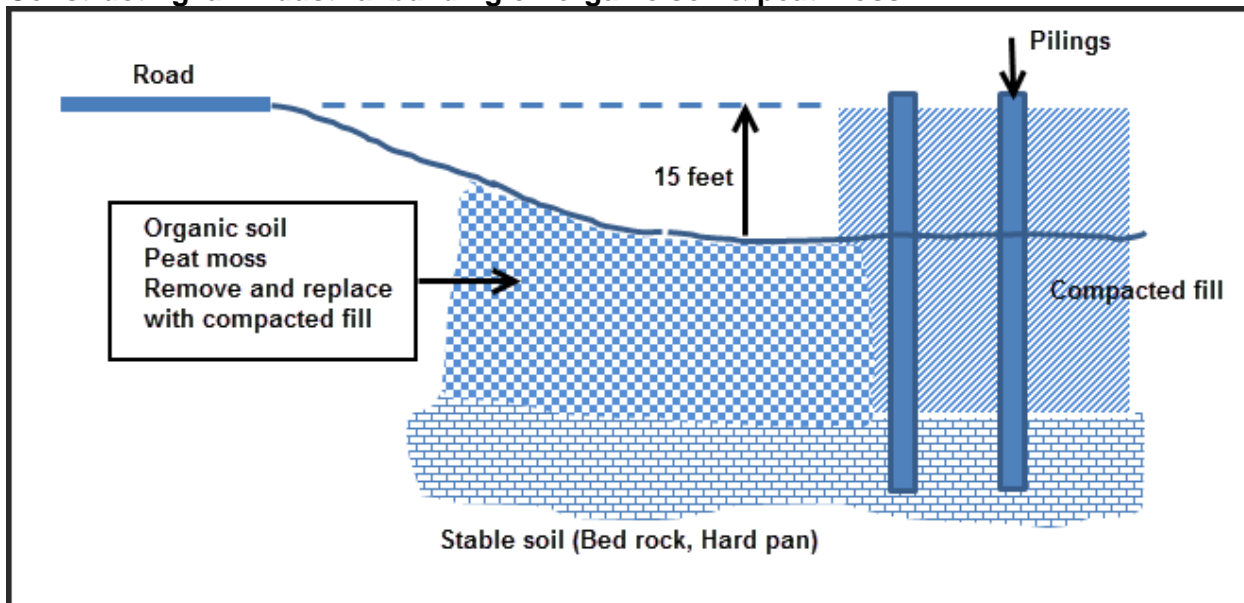
Buildings cannot be constructed on organics soils because the weight of the building would cause the building to settle unevenly causing damage to the building.

Organic material has to be removed and replaced with stable, compacted fill and pilings may be required to support the building which increases the construction cost and lowers the land value.

Examples of organic soils and buried materials and rubbish



Constructing an industrial building on organic soil & peat moss



Sink Holes

Sink holes are hidden cavities in the ground that occur naturally or are man-made and can range in size from small cavities to very large and dangerous cavities.

Sink holes can occur anywhere in North America and can be costly to deal with and lower land value.

Naturally occurring sink holes

Sink holes often occur in regions where there is carbonated rock or minerals in the soils that are removed over time by water which dissolves the minerals leaving hidden cavities.

A drought followed by heavy rains or freezing followed by thawing can create sink holes.

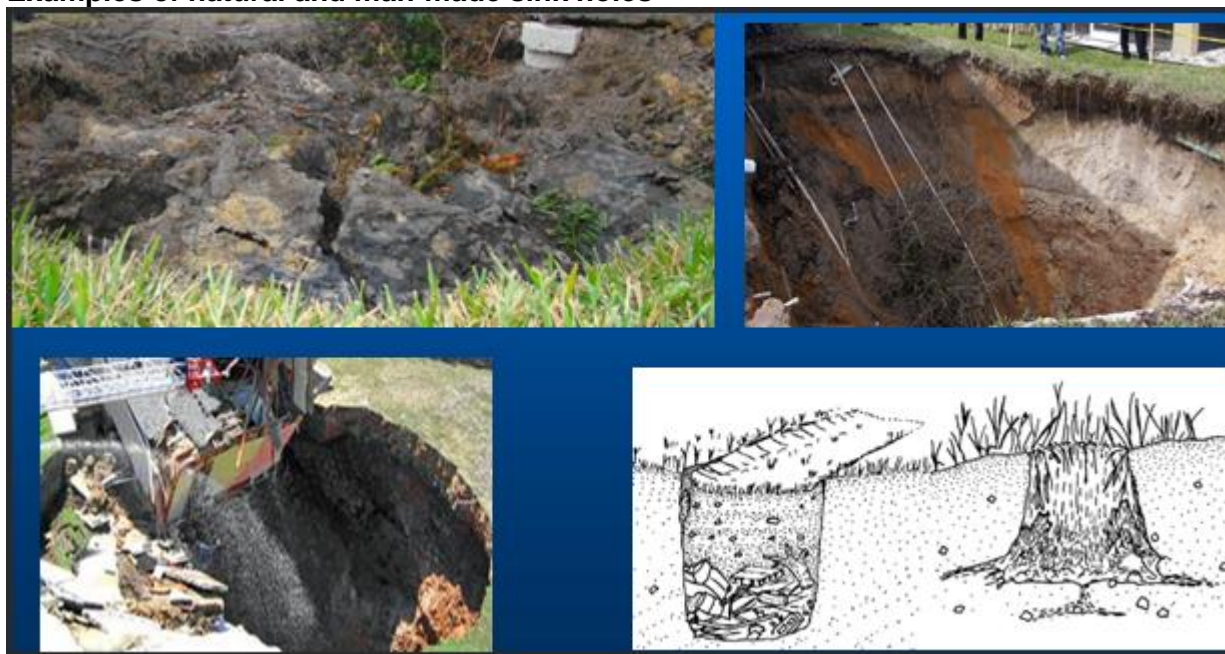
Man-made sink holes

Man-made changes to the natural water patterns through drainage and pumping systems and dams can create sink holes.

In the past it has been common practice to bury construction debris such as lumber and drywall and other rubbish on a site. A land owner may clear the land by removing trees or tree stumps and then burying the stumps and branches on the site along with other rubbish.

Over time the buried material decays and sink holes form which can be costly to deal with when the land is redeveloped.

Examples of natural and man-made sink holes



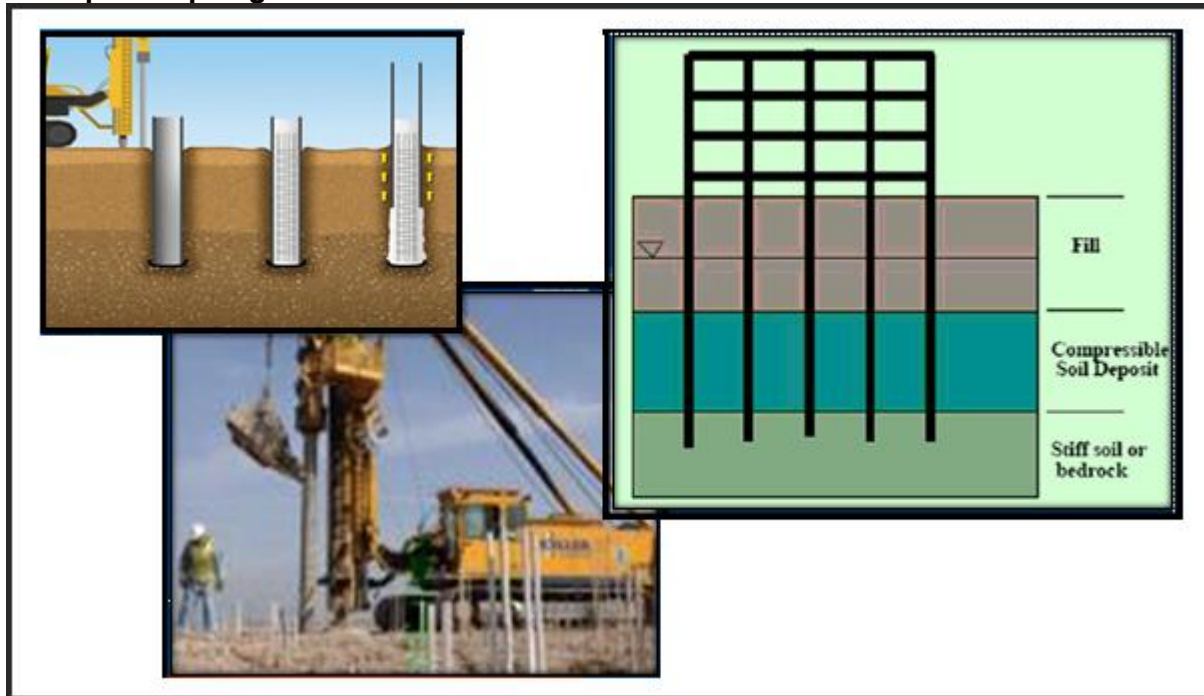
Pilings

A common approach when building on unstable land is to use pilings to support and anchor the building. There are a variety of approaches used.

One method is to drill down into the bedrock, insert a steel liner and then fill the hole with concrete and reinforcing steel.

Another is to drive wooden or steel piles into the ground and into the bedrock.

Examples of pilings



Excavations. Impact of adjacent buildings on development costs

The nearness of adjacent buildings can affect land values because of the increase in the excavation and foundation costs.

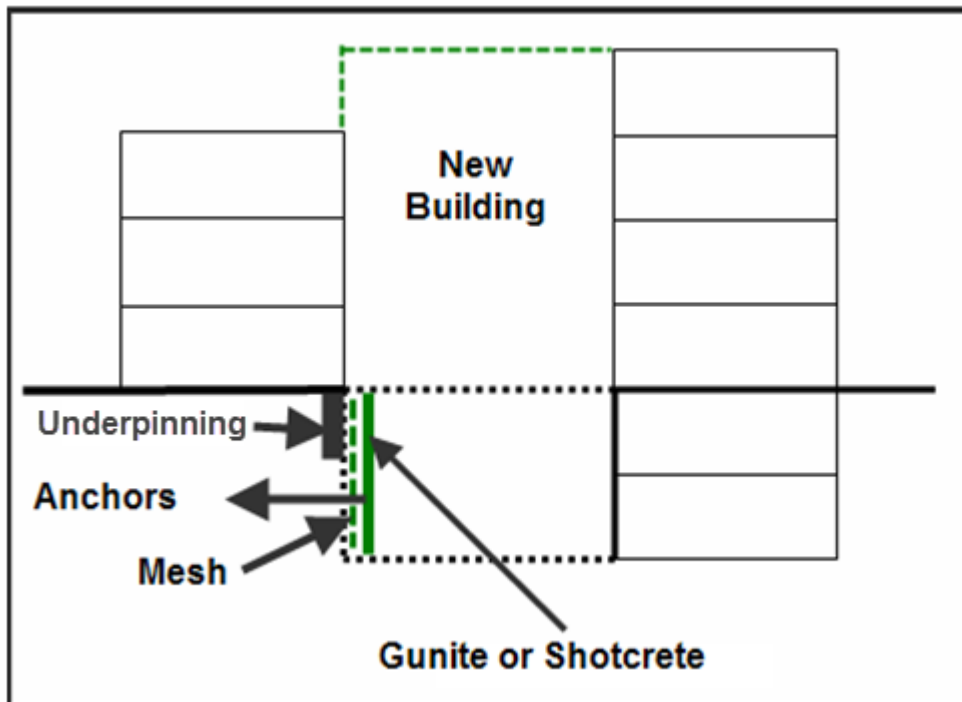
This example illustrates the high costs associated with protecting the building on the left while excavating the underground parking.

The building on the left is protected during the excavation phase by:

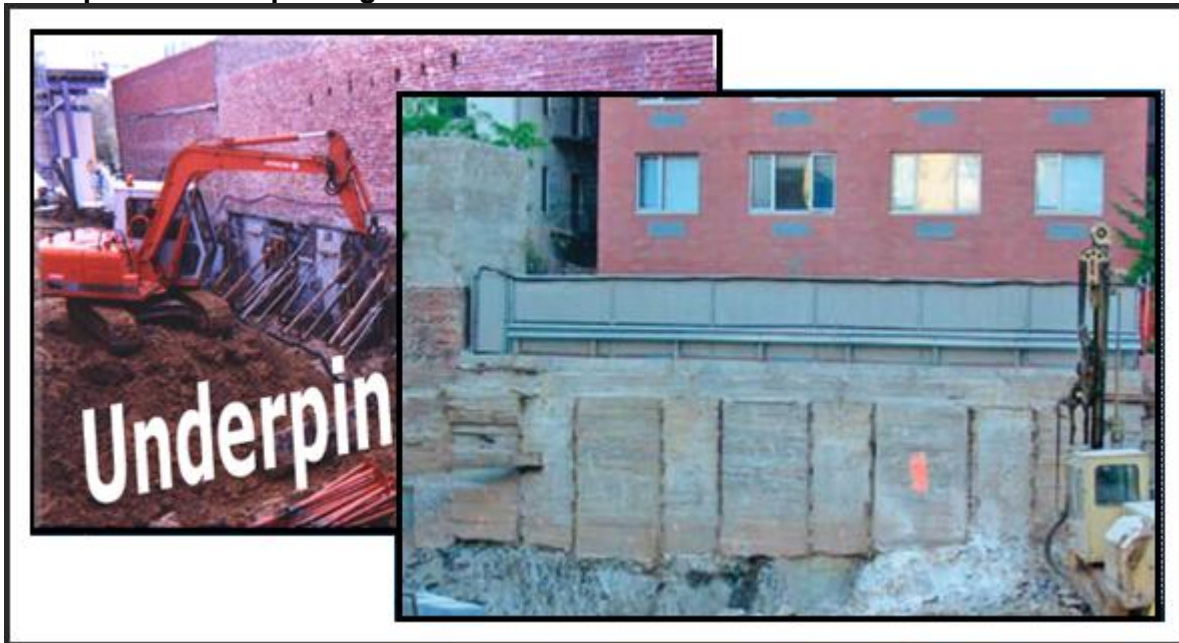
- Underpinning to support the building
- The soil is prevented from collapsing into the site by the installation of mesh which is then sprayed with a substance called “Gunite” or “Shotcrete” and then anchored. Shotcrete is a form of concrete mortar sprayed on using a high pressure spray system.

This is a costly process involving encroachment agreements with the neighboring property owners.

In contrast, the underground parking for the property on the right reduces the excavation costs as there is no need to underpin and apply the shotcreting.



Examples of Underpinning



Failure caused by inadequate underpinning



Shotcreting

Shotcrete refers to a process in which compressed air forces mortar or concrete through a hose and nozzle onto a surface at a high velocity and forms structural or non-structural components of buildings. The relatively dry mixture is consolidated by the force of impact and develops a compressive strength similar to normal- and high-strength concrete. Shotcrete projects also call for the same types of reinforcement specified for conventional concrete, including deformed bars, welded wire fabric, and reinforcing steel.

Example of shotcreting a wall



Protecting the structures adjacent to the site being excavated

When excavating in preparation for the underground parking, the walls of the excavation have to be prevented from collapsing into the hole and causing severe damage to neighboring land and buildings.

There are a number of construction methods used to prevent the side wall from collapsing. The most common method is shotcreting combined with anchors and underpinning to support the foundation of adjacent building.

The process is costly, can involve expensive legal encroachment agreements, increases the construction time and lowers the value of the land.

Example of shotcreting



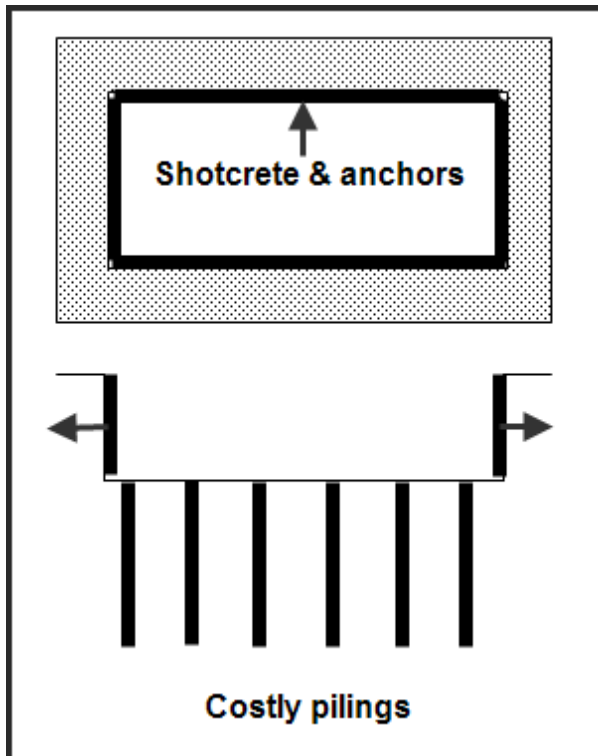
Foundations and piles. Example

The development

Professional offices on the first floor

Two floors of condominiums

The developer went broke likely because of the excavation and foundation costs. Evidently there were pockets of expandable clay and costly pilings were required to support the foundation and building.



The building



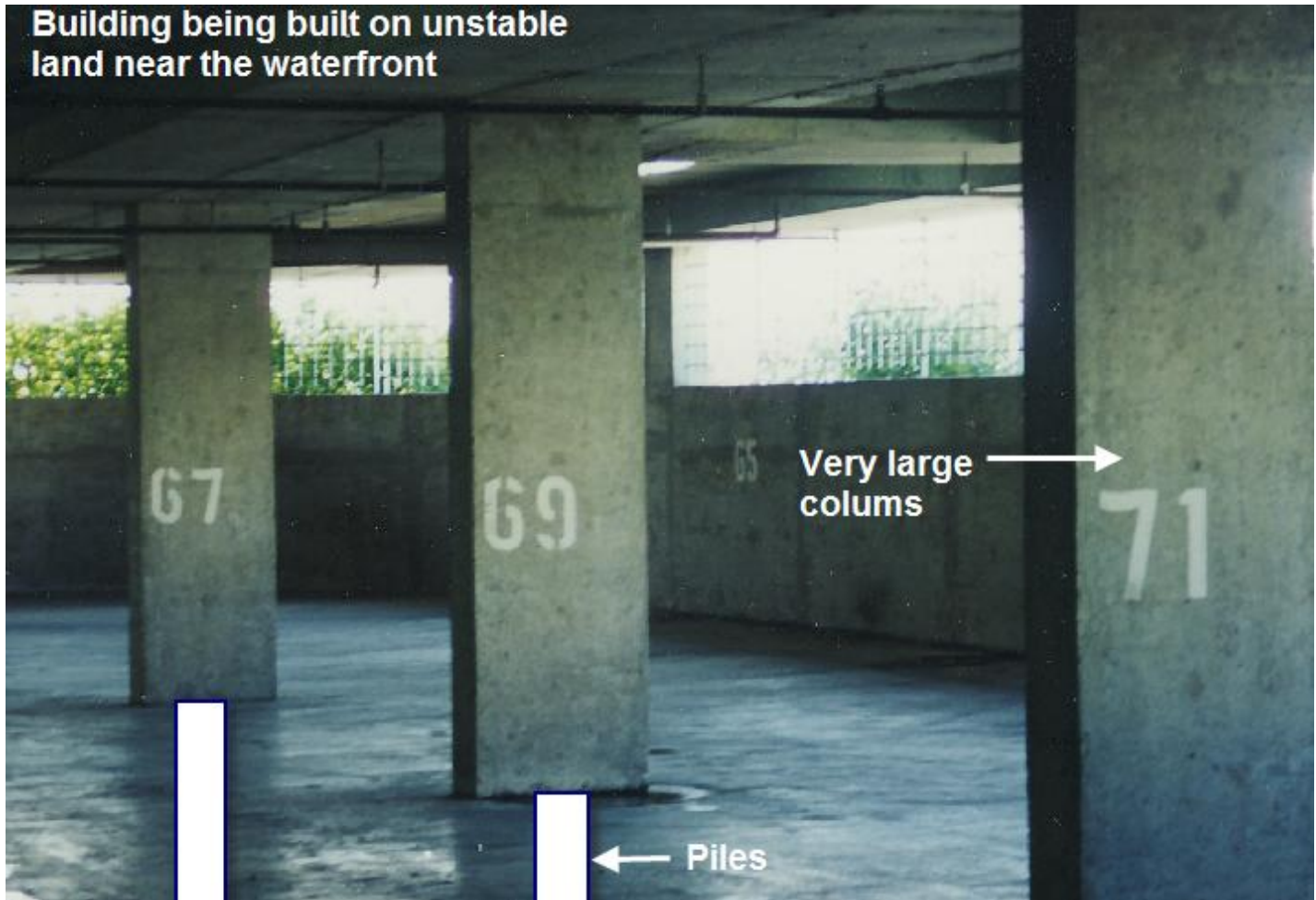
Site requiring piles and large columns. Example

This building is located near the waterfront where the land is very unstable.

Required extensive piling and large columns.

This site was so expensive to develop that the developer paid very little for the site.

The large columns reduce the number of parking spaces, which in turn reduces the buildable area and land value.



Site Preloading

If the land is soft and spongy and needs to be compacted, the site is pre-loaded with sand to compact the soil. This is common for sites near the ocean or waterways.

The sand may sit on the site for several years before being removed. A preloaded site is worth more than a non-preloaded site.

Preloading example



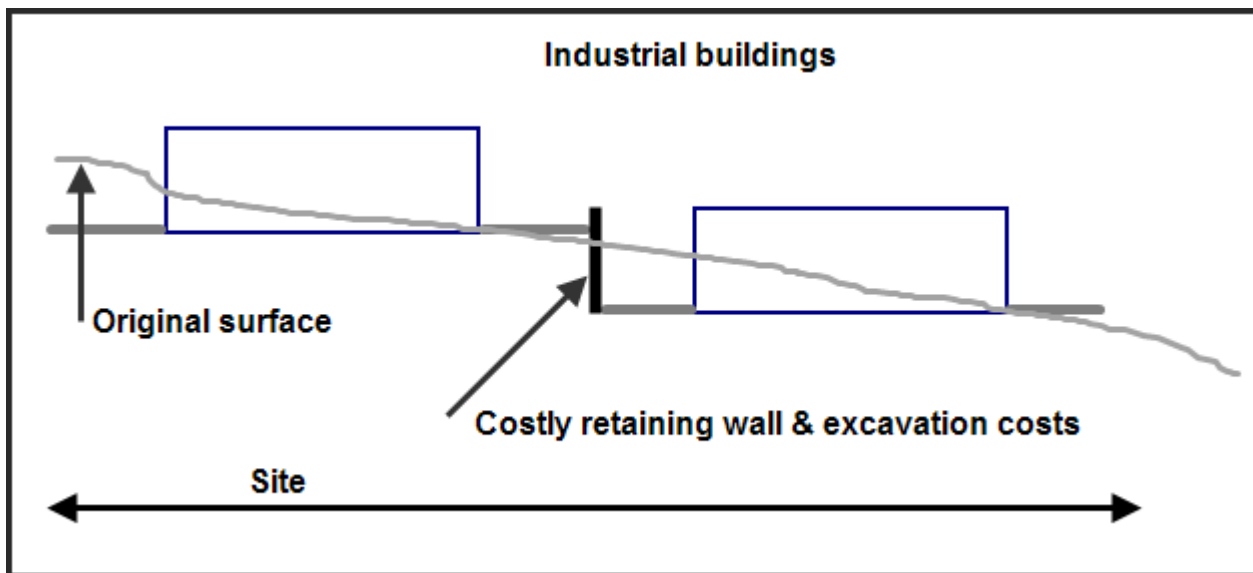
Dynamic compaction

Dynamic compaction increases the density of the soil by dropping a heavy weight at regular interval intervals over the site to compact the soil.



Retaining walls

To utilize a site it may be necessary to build costly retaining walls which lowers the land value.

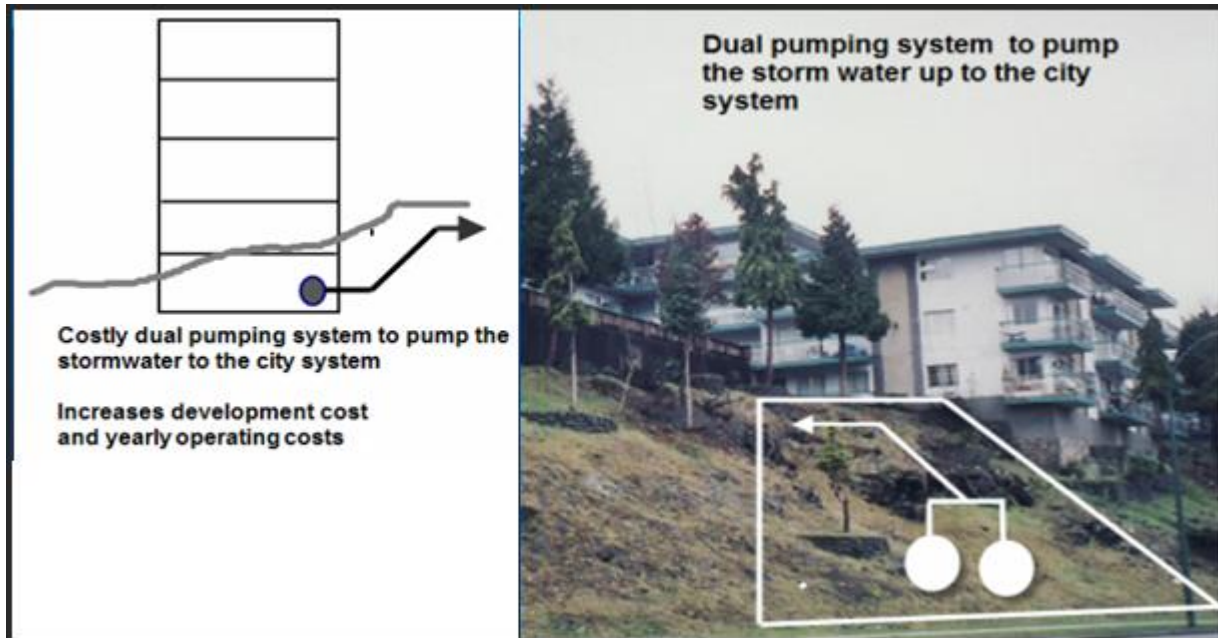


Retaining wall example



Equipment. Pumping systems

Certain sites may require special equipment, such as a pumping system to handle the storm water and pump the water to a higher elevation. The cost of the equipment and the increase in annual operating costs lowers the land value.



Retention ponds



If you don't get it right ???



To learn more about soil conditions

The following excellent books are available free on the internet.

Living with unstable ground

American Geological Institute

https://profile.usgs.gov/myscience/upload_folder/ci2011Aug0119050042954Unstable%20Ground%20Book%20final%20090407.pdf

Understanding soil risks and hazards

USA Department of Agriculture

<http://www.nature.nps.gov/geology/soils/Understanding%20Soil%20Risks%20and%20Hazards.pdf>

Zoning & architectural design considerations

There are a large number of architectural, design and building code regulations that reduce the buildable area, increase the construction cost and reduce the land value.

Calculating the Buildable Area & Number of Units. Example

A common but misleading approach to calculating the buildable area.

You have found a site that is zoned for condominiums, and wish to determine how many units can be built on the site.

Floor Area Ratio: 2.5 (specified in the zoning regulations)

Site Size: 125 feet x 120 feet

Objective is to build large one bedroom units for the first time home buyer market

Average Suite size	800 sq. feet
Common Area	<u>100</u> sq. feet per unit
Gross Area	900 sq. feet

Buildable Area: FAR x Site Area

$$= 2.5 \times 125 \times 120$$

$$= 37,500 \text{ Sq. Ft}$$

Number of one bedroom units:

$$= \frac{\text{Buildable area}}{\text{Gross area per unit}}$$

$$= \frac{37,500}{900} = 41 \text{ Units}$$

This is Nonsense

The calculation provides us the maximum buildable area

There are many factors that reduce the maximum buildable area such as:

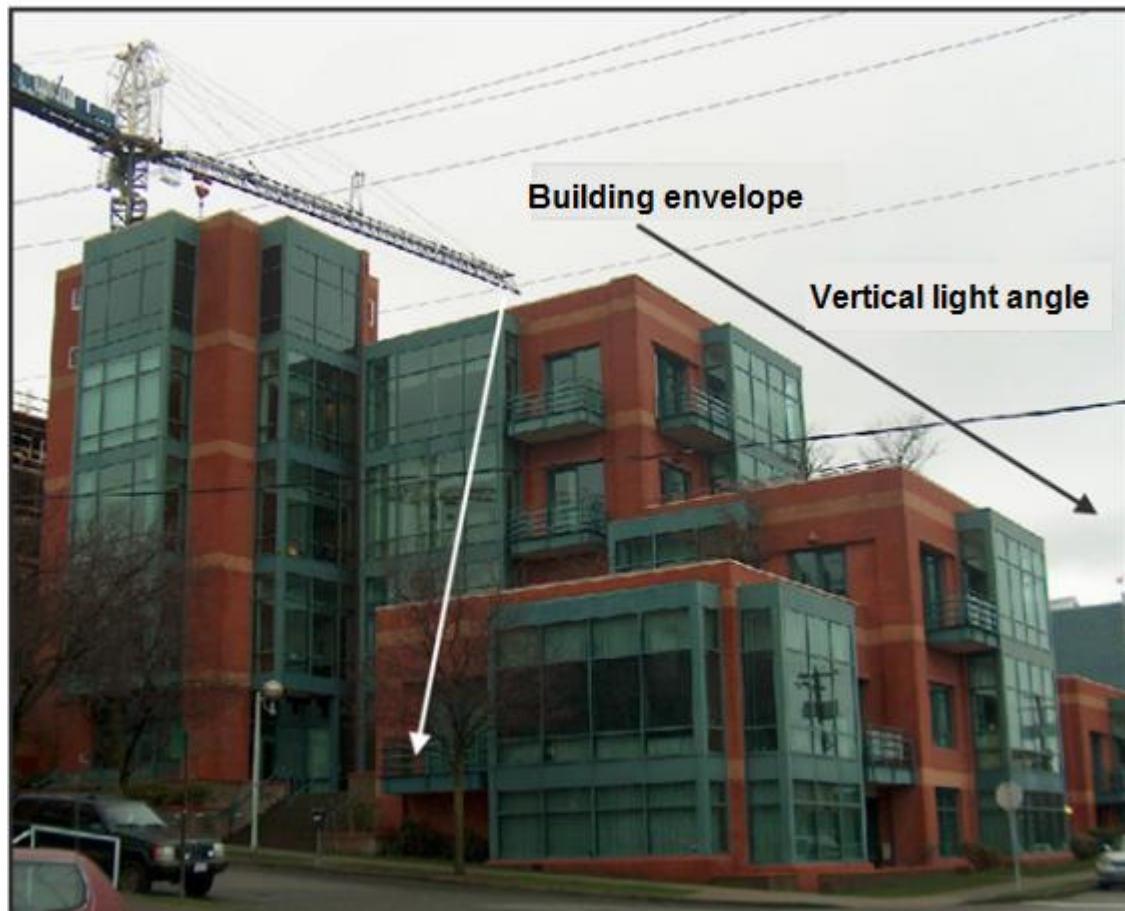
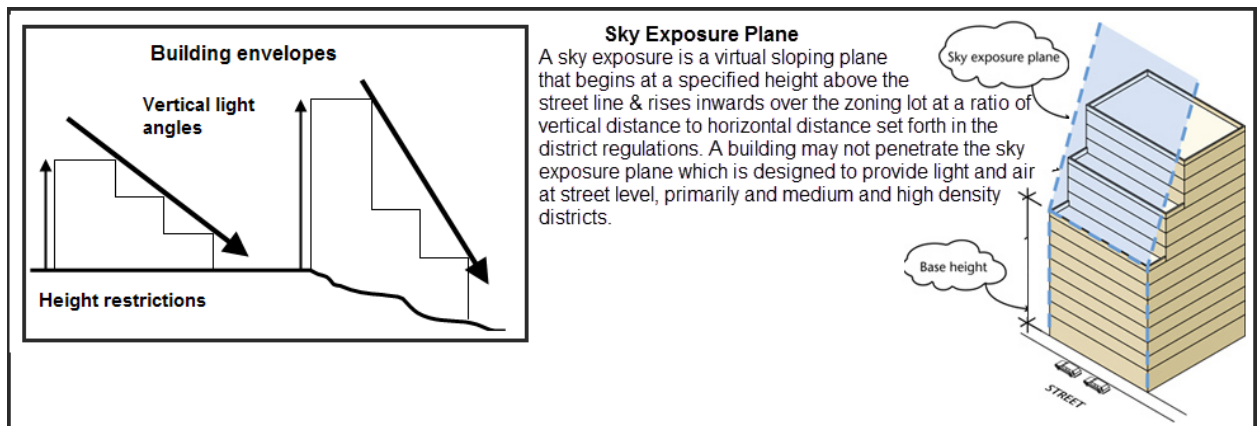
- Zoning and building regulations
- Design & market considerations

Architectural, design and building code considerations.

Building Envelopes

Vertical Light Angles and Height Restrictions (Sky Exposure Plane)

Allows sun into the street. Reduces buildable area and land value



Vertical Light Angle example



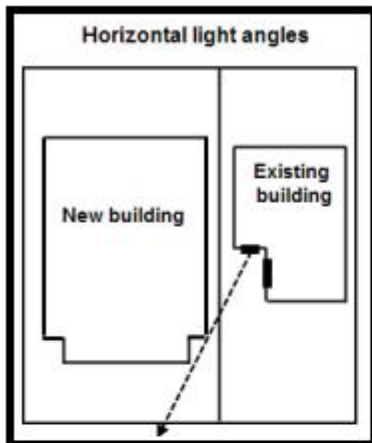
The Alamo

No building can cast a shadow on the Alamo. Nearby buildings are limited to 12 floors.



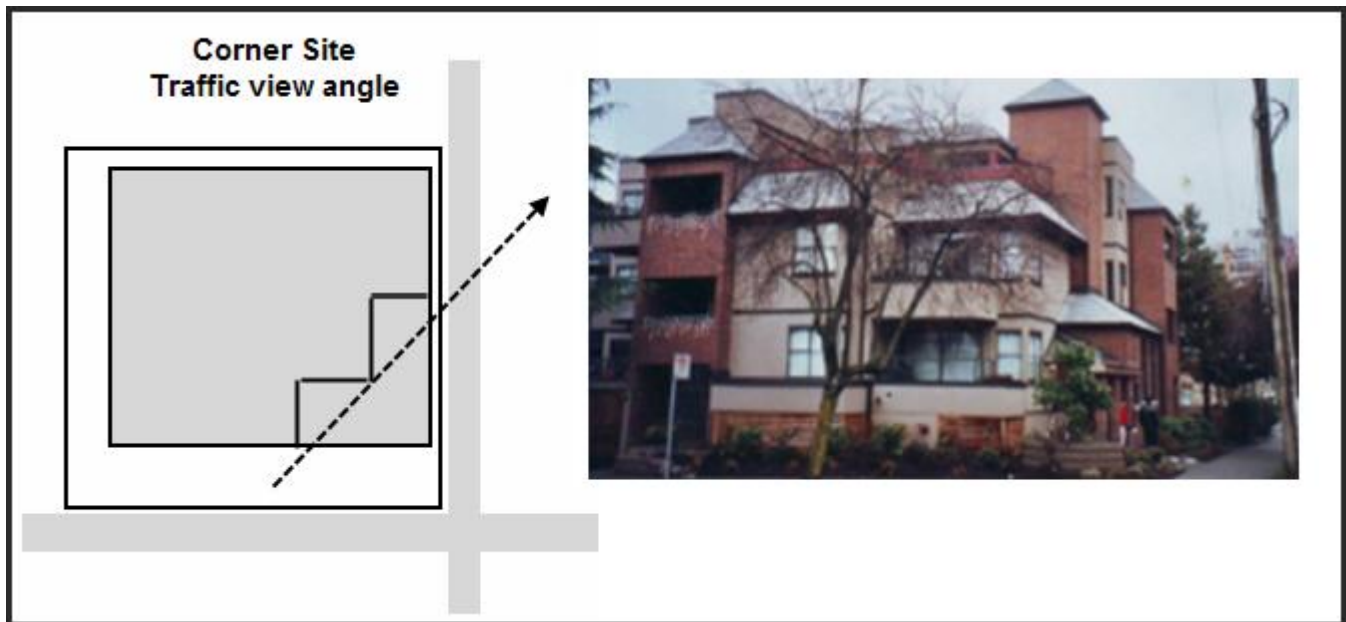
Horizontal light angles

Protects the view of neighboring properties. Reduces the buildable area.



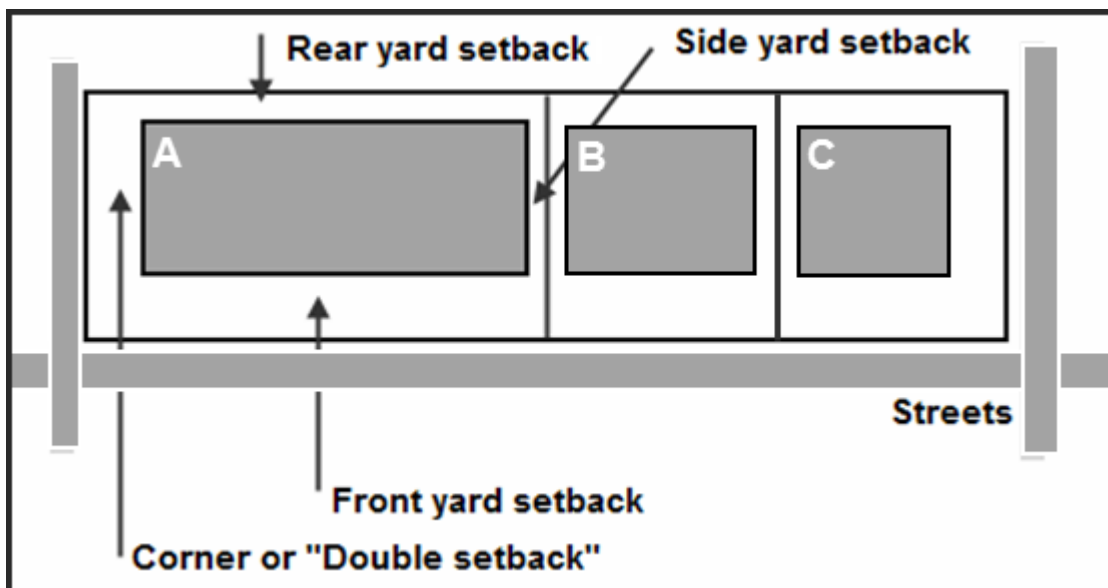
Corner sites. Traffic view angle

Used to provide better visibility on cross streets to hopefully prevent traffic accidents. Reduces the buildable area.



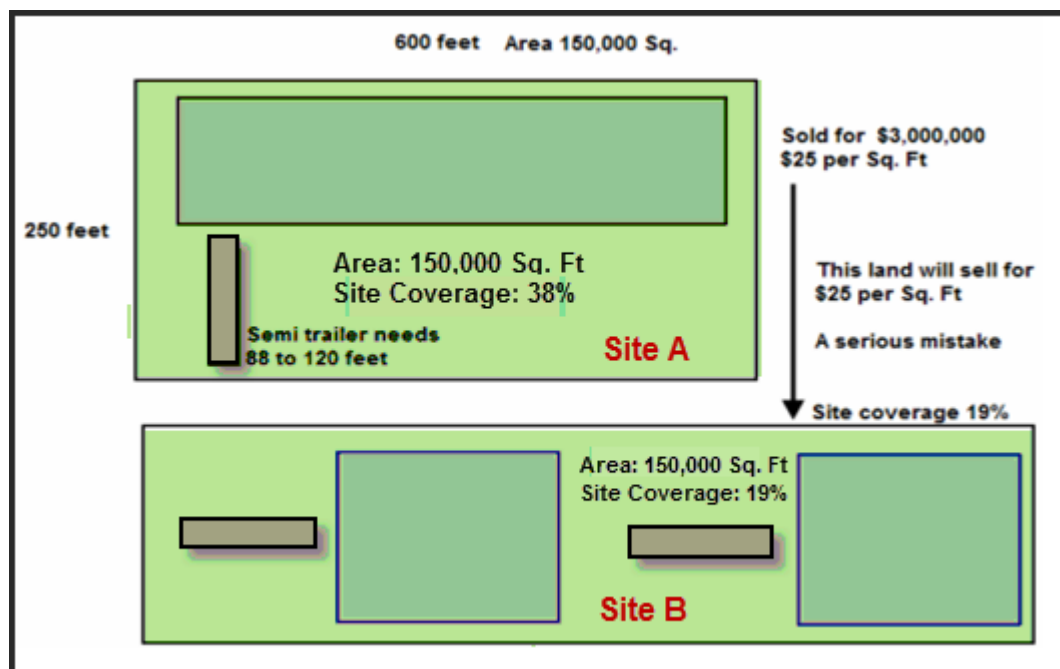
Corner sites. Setbacks

Corner sites often require a double setback for the side facing the street which reduces buildable area.



Industrial land. Site coverage example

The impact of the turning radius of semi-trailers on the building layout, site coverage and land value.



The long & narrow site will sell for a lot less than the top site because of the reduced site coverage and additional development costs. Beware of long, narrow sites, they are hard to develop.

There are additional costs involved in developing the bottom site:

- Two extra end walls
- Extra electrical room and boiler
- Additional underground wiring

This example points out the danger of using simplistic approaches like "\$ per Sq. Ft or Acre" to determine the land price and illustrates the importance of having architectural sketch plans done to determine what can be built on the site.

The layout issues are more complex than shown.

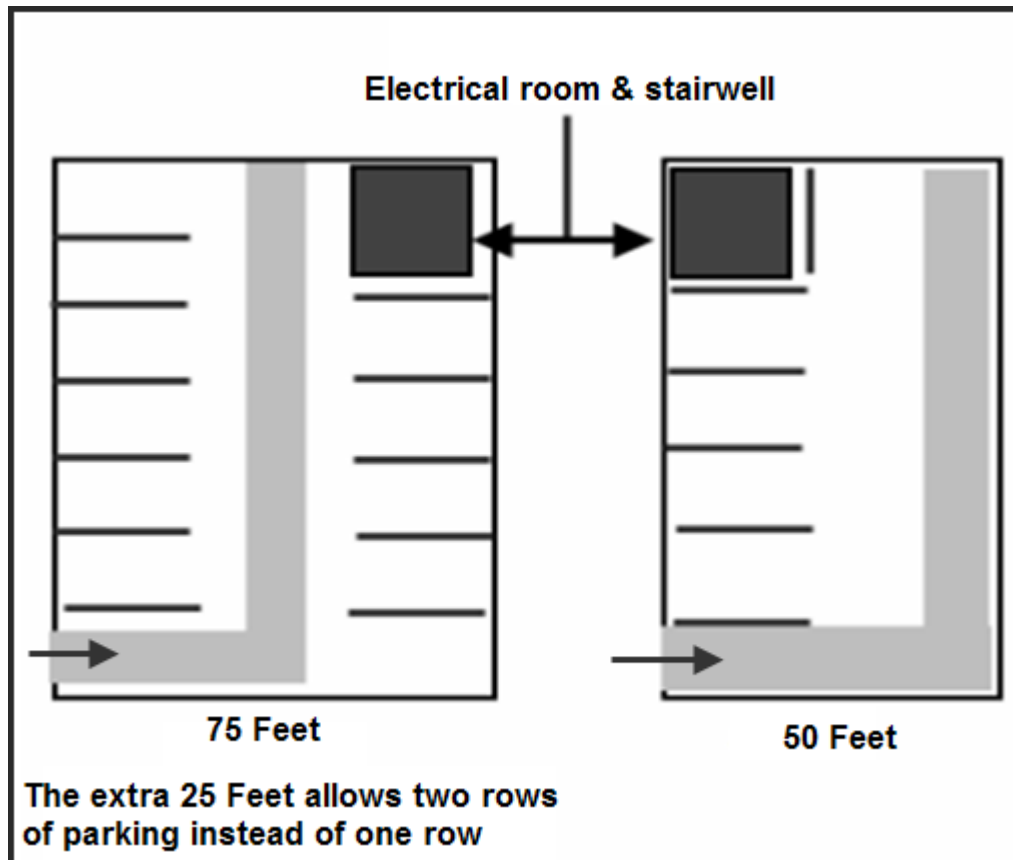
- Requires staff & visitor parking
- The layout of the buildings will be affected by the site access from the road
- Semi trailer drivers, when backing in, need to look at their driver's side mirror
- All of the above affect site coverage and land value

Example of the impact of the site width on land value

Condominium development with underground parking

There is a substantial difference between developing a:

50 foot wide site versus a 75 foot wide site



There are a lot of fixed costs that are independent of the size of the building which increase the value per Sq. Foot for larger sites when compared to smaller or narrow sites.

Some examples of cost savings are:

- Fixed costs that are independent of building size
 - One site superintendent & construction shack
 - Two stairwells
 - Common area
 - One elevator (depending on the size of the building)

- More efficient parking arrangements
- Economies of scale when buying appliances, carpeting etc.

Difficulties of building on a narrow lot. Example

Building on long narrow sites can be very challenging and creating the underground parking can be very costly per parking space.

This is an example of the challenges of building on a long narrow lot. The lot is approximately 45 feet deep.

There is the high cost of providing the ramp to the underground parking plus the cost of the underground parking for four cars which is hard to justify economically.

Generally it is hard to develop long narrow sites and make a profit unless the sale price per unit or in the case of commercial buildings, the lease rates are high and the cap rates low which offsets the high construction costs.

Example. Building on a long narrow lot



The example below is across the street from the above property.

The property is very difficult to develop economically and will likely remain an income property for many years to come because there is no assembly potential.

This could be a risky investment. If the building was destroyed by fire it's unlikely that the building can be replaced economically.

Example. Income property on a long narrow site with no development potential



Parking requirements and Parking Ratios

Varies city by city and by neighbourhood. Downtown area versus suburban areas

Low density versus high density districts

Type of use: Retail, office, industrial, medical, restaurants, banks

Market requirements

Based on the needs of the tenants

Example No. 1

City requirement for Medical Clinic: 3 cars per 1,000 Sq. Ft

Doctor's view point

Area: 700 to 1,000 Sq. Ft

Needs 1 car + staff 1 + 3 patients = 5 cars

The doctor will only rent if there a 5 spaces available

Example No. 2

City requirement for a restaurant: 4 cars per 1,000 Sq. Ft

Restaurant owner: 6 cars per 1,000 Sq. Ft

To handle peak hours

Otherwise the restaurant loses customers during peak hours because they can't find convenient parking.

	Houston	Toronto Varies by neighbourhood
Office	2.5 cars per 1,000 Sq. Ft	0.97 to 2 cars per 1,000 Sq. Ft
Retail	4 to 5 cars per 1,000 Sq. Ft Furniture stores: 2	0.9 to 7 cars per 1,000 Sq. Ft
Medical Clinics	2.5 cars per 1,000 Sq. Ft	3 to 5 cars per 1,000 Sq. Ft
Restaurants	8 cars per 1,000 Sq. Ft Includes deck areas	2 to 10 cars per 1,000 Sq. Ft
Banks	4 cars per 1,000 Sq. Ft	4 cars per 1,000 Sq. Ft
Condo. 1 Bedroom	1.33 cars per unit	0.7 cars per unit
Condo. 2 Bedroom	1.66 cars per unit	1.2 cars per unit
Industrial	2.5 cars per 1,000 sq. Ft of office + 1 car per 1,000 sq. Ft of warehouse	0.92 to 2.8 cars per 1,000 Sq. Ft

Houston parking regulations. Source:

http://www.houstontx.gov/planning/DevelopRegs/docs_pdfs/parking_req.pdf

Related requirements

Loading bays

Access to garbage containers

Handicap parking

Bicycle storage

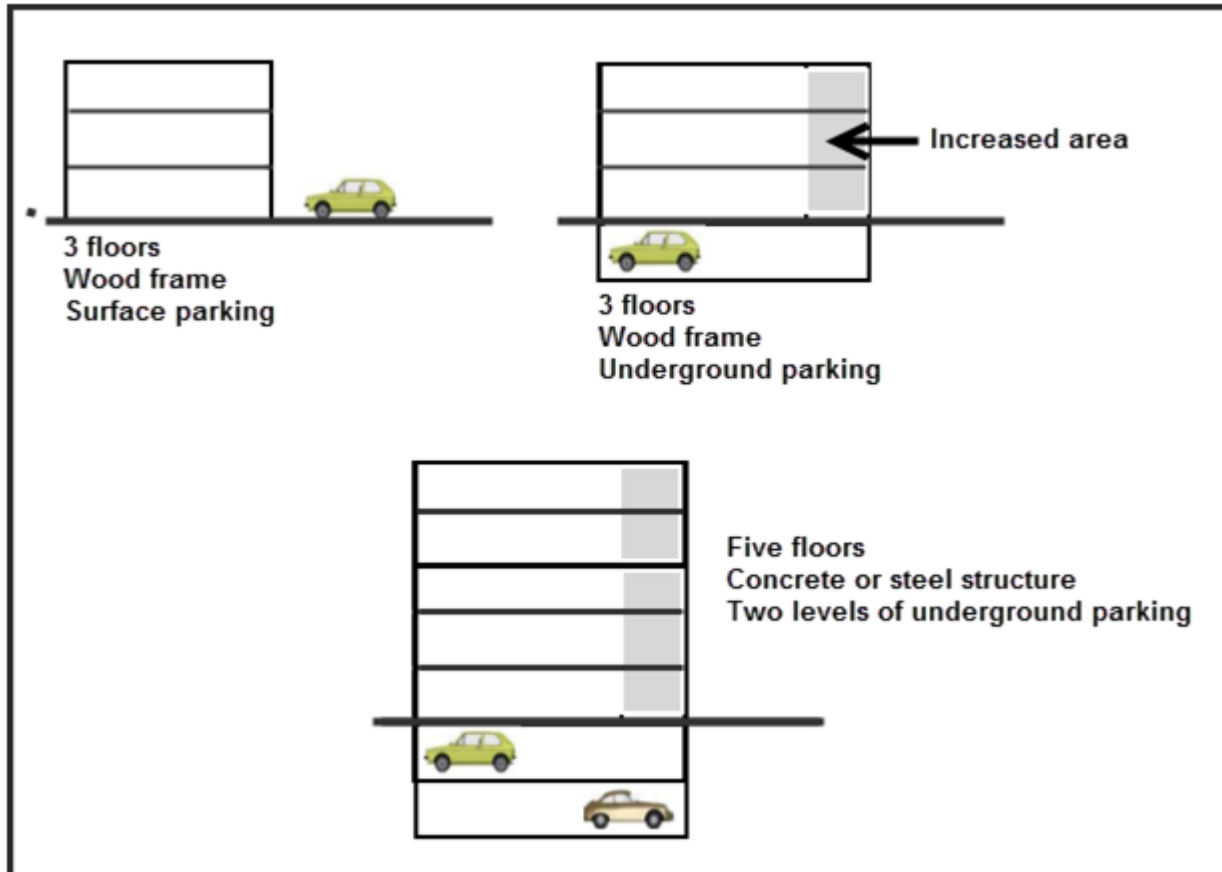
Storage lockers

Surface or underground parking. Case study

Developers often face the choice of whether to develop a small building with surface parking or build a much larger building by providing underground parking.

The decision can be made by carrying out development analysis to determine the potential development profit for each alternative taking into account the supply and demand situation and the potential development risks associated with each option.

Case study. Development options



Final choice. Three story wood frame building with surface parking



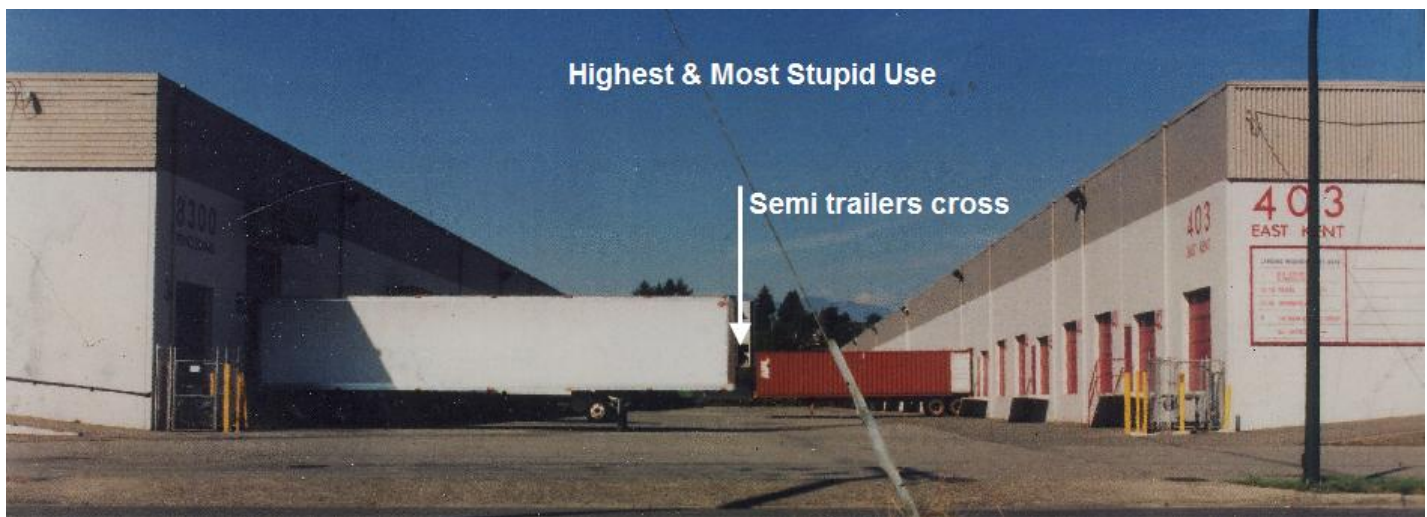
Concept of highest and most stupid use

Some developers believe the bigger the building you put on the site, the more valuable the property.

This property is likely to have:

- Lower rents
- Higher turnover and vacancies
- Hard to finance
- Will sell for a lower price

when compared to similar industrial buildings with better semi-trailer access



I walk onto a dock, and I say architects receive five years of schooling to get a degree and they don't spend five minutes on a loading dock. I realize that there are factors involved in it that are beyond the architect's control—financial considerations, the expense of doing the job right-but I swear that if the architect had to back this tractor and trailer into the dock, it would have never been arranged this way.

Highest & Most Stupid use. Example



Market and design considerations

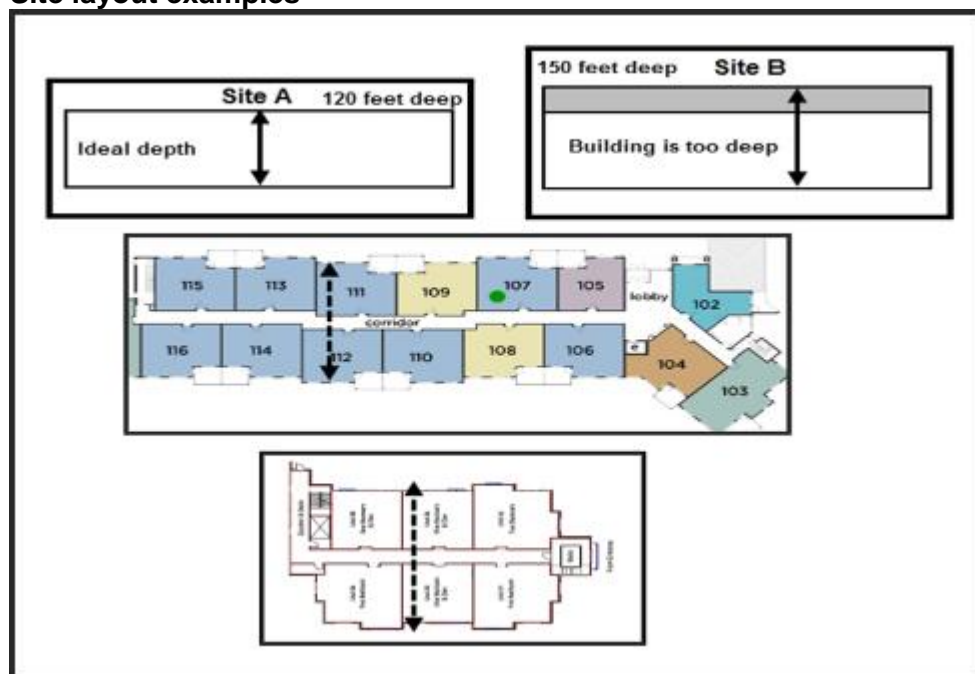
Each site has an ideal building layout in terms of the ideal depth for the intended use. If the building is too deep the space becomes too long and narrow or too large and difficult to occupy. Long narrow condominiums are difficult to live in and furnish. Commercial space that is too large or too narrow for the intended use is difficult to use efficiently and often results in wasted space.

In the example below Site A is 120 feet deep with a building designed on the site which has an ideal depth for the intended use. Site B is 150 feet deep which is 30 feet deeper than Site A. This theoretically means that you can build a larger building on the site but should you? Increasing the depth by 30 feet may result in condominium units that are too long and narrow and difficult to occupy or commercial space that is too deep and difficult to use efficiently.

As an example, retailers don't like long narrow retail spaces because it is difficult to monitor for theft at the back of the store and the store doesn't have a comfortable feel because of the tunnel effect of long narrow spaces.

The best way to establish the ideal layout for the intended use is to have an architect carry out sketch plans for the site.

Site layout examples



Optimum Unit mix. Example

The developer feels that the market demand is for medium size one bedroom units and instructs the architect to design the building with all one bedroom units.

Because of building constraints the architect may not be able to provide all one bedroom units.

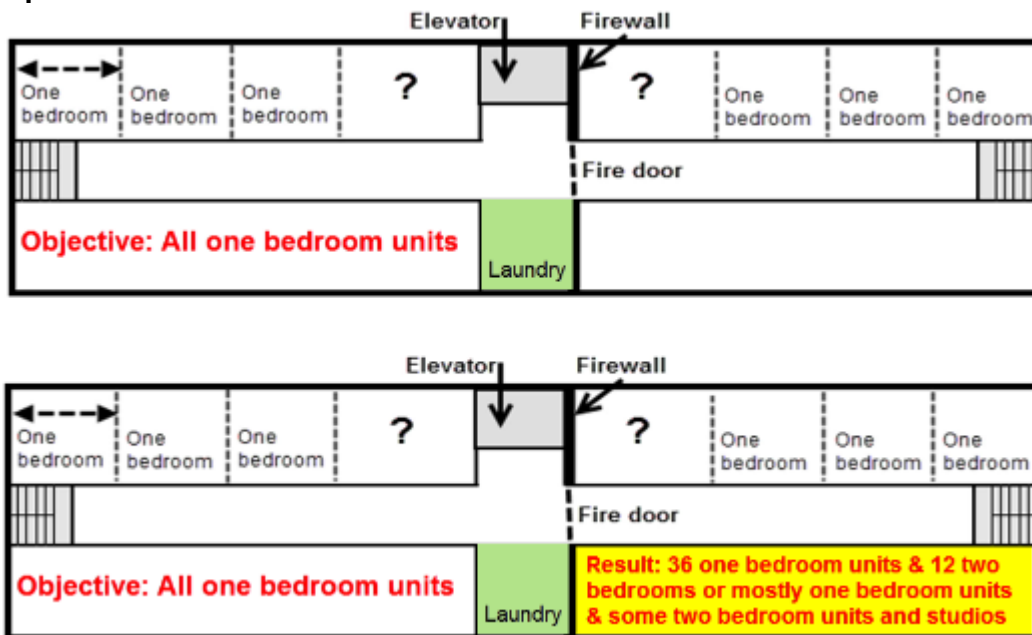
Somewhere in the middle of the building is the elevator, the fire wall and metal fire door which is installed to restrict a fire to one section of the building.

In the simple example the architect is able to create three “one bedroom units” on the left hand side of the building but ends up with a larger unit adjacent to the elevator. The same applies to the units to the right of the fire wall.

If the building is three floors the end result is 36 one bedroom units and 12 two bedroom units.

Deciding on the best unit mix is a trial and error process where the architect develops a number of layouts using various unit mixes and the developer selects the best option from a marketing or sales perspective.

Optimum unit mix



Other zoning and design factors that reduce buildable area.

- Green spaces
- Distance from creeks or streams
- Retention pond or catchment basin for handling heavy rain
- Building occupying a large area may have to be split into several buildings
- Protecting trees

The cost of a tree?

25 Ft x 25 Ft x 3 floors x \$27 psf per year rent = \$675,000 loss of value
7.50% Cap Rate

Lost Area: 1,875 Sq. Ft

Lost rent: \$50,625 per year



Making an offer. Some Tips

Make the offer subject to a soils test and feasibility study.

Advise your client to have sketch plans done. If you want to sell land get to know some architects or designers. They will often do sketch plans for free.

If there is a building on the site make sure that all the leases are either:

- 1) On a month to month basis or
- 2) Each lease contains an enforceable demolition clause

TIP: This works very well. In the event that the subject clauses are not removed, the plans, scale model, soils test, appraisal becomes the property of the seller.

TIP: How to handle future uncertainties such as 'How many units' will be approved by the city

At the start there are "unknowns" that in the future will become "known"

Use the "**formula approach**" to establish the final price and handle uncertainties.

The price is \$2,400,000 plus \$60,000 for every unit approved over 30 units

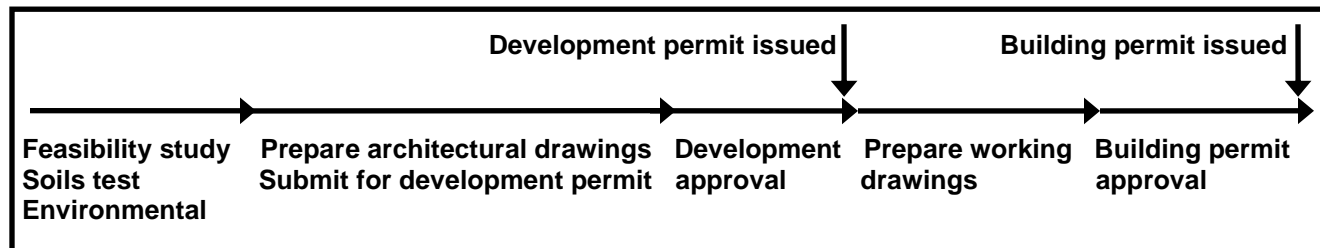
The city approves 35 units

Final price is $\$2,400,000 + 5 \text{ units} \times \$60,000 = \$2,700,000$

Using a “Time Line” to help construct the offer

To help you develop the offer use a development time line to establish the subject removal dates.

Following is a simple example of a development approval time line.



1. Make sure you allow plenty of time for the city approval processes
2. To ensure you have a legitimate developer, not a flipper, put the onus on the developer to perform activities that are under the control of the developer, to be completed within a specified time period

Example:

The developer must submit for the Building Permit within four months of receiving the “Development Permit”

Selecting an architect

Choosing the right architect for the development is a very important decision for the developer.

The architect should be:

- Familiar with the city and the type of development
- Practical
- Respected by the city

Offer to Purchase versus an Option

Offer to buy.

If the terms of the offer are met the buyer has to purchase the property for the specified price

Outright purchase

Purchase with “subject to” or “contingency clauses” based on certain event(s) occurring

Example: Subject to obtaining a development permit for a minimum of 25,000 Sq. Ft by <date>

Options

Provides the developer with exclusive rights to buy or not buy the property for the specified price by the specified date. The owner loses control of the property during the option period.

During the option period the seller cannot sell the property.

The option gives the developer control over the property in order to carry out a feasibility study, obtain a building permit, line up financing or a joint venture partner or find a buyer or sell the option.

An option is easier to write than an offer with a multitude of subject clauses.

For the developer it's simpler than an ‘offer to purchase’ and provides a more flexibility.

The option can be executed at any time.

An option is a useful approach if the developer is working on a speculative deal.

Owner	Developer
OPTION	
Simple contract. Easy and quick to construct	
Loses control over the property for the option period	Maintains control over the property
Doesn't obligate the developer to carry out work such as applying for a development permit, building permit, rezoning	Can decide what to do & when Do nothing, apply for a development permit etc.
Doesn't know what's going on	Can sell at any time
May get more cash than with an offer The owner may be wary of an option and only accept an offer to purchase	Simple, provides a lot of freedom and choices plus the option to buy at any time within the option period
Keep the option period short?	Ideal for flipping the property

Owner	Developer
OFFER TO PURCHASE	
More complex and difficult to construct than an option	
Obligates the developer to carry out work such as applying for a development permit, building permit, rezoning by certain dates	Has to meet the terms of the "subject to" clauses and spend the effort and money or the deal collapses
If the developer fails to satisfy the subject clause the owner regains control over the property	The owner may be wary of an option May be easier to negotiate with the owner because of the obligations it places on the developer to perform
Seller is more aware of what the developer is doing	
If the developer is tying up the property to flip the property the owner will find out faster than with an option	

The granting of rights

The property owner may have to grant the developer certain temporary rights such as access to the property to carry out soils test or an environmental study.

The developer may have to provide remedies for any damage to the property which occurs during the soils tests and inspections.

Obtain permission from the owner to apply for a rezoning, development or building permit. Approval by the owner may be required by the city before the city will process a development or rezoning application.

Subject clauses

Typical sequential “subject to” clauses are:

- Feasibility study
- Soils test
- Environmental clearance
- Rezoning, development permit, building permit
- Obtaining a permit for a specified building size
- Approval by outside agencies if required

...obtaining the specified approval by a certain date

Deposits and payments for options

There are many ways to structure the deposits such as:

- \$1 for two month option
- \$200,000 for six month option
- \$10,000 per month for the option period
- \$10,000 for the first 3 months and then \$20,000 per month until the end of the option period

The deposit can be applied or not applied to the purchase price

Educational resources

http://www.trebcommercial.com/forms_clauses/clauses/pdf/offerclauses.pdf

Interesting article on the legal issues related to subject clauses

Extensions

What if the developer, despite best efforts, can't remove the subject to clause and needs more time?

Best to build the extension clauses into the offer to purchase or option

As an example "The subject to a rezoning permit can be extended for another 3 months upon payment of \$25,000" which is non-refundable

The right to waive a subject clauses

There are a number of legal issues and potential litigations with the right of either party to waive a "subject to" clause such as:

"Subject to a development permit being issued by the city by <date>"

The right to waive a subject clause, if appropriate, needs to be built into the offer to avoid legal challenges if one party wants to get out of the deal or consummate the deal.

Example

What if the subject to a development permit being issued by the city by <date> is not satisfied by the specified date...and the value of the property has gone up a lot?

The developer wants to waive this subject and buy the property even though the event hasn't occurred.

The seller wants to escape from the deal and sell at the higher price. Maybe there is a backup offer?

The right to waive a subject clause, if appropriate, needs to be built into the offer.

Educational resources

An Interesting article on the legal issues related to the waiving of a "subject to" clause

https://secure.sauder.ubc.ca/re_creditprogram/course_resources/public/112/content/notes_article.html

Assemblies

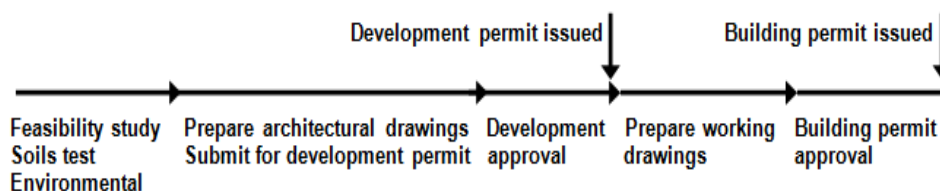
When assembling a site the developer has to be able to assemble enough sites in a row in order to create a viable development and will make the offers contingent upon obtaining neighboring properties.

Site assembly example



Creating the offer. Tips

- Become familiar with the city approval processes, the submission process and the work to be completed and times involved.
- There will be inevitable delays and setbacks that need to be taken into account when developing an offer
- Keep the number of “subject to” clauses to a minimum
- Make sure you allow plenty of time for the city approval processes
- Develop a time line that lays out the work to be done and the permit application process



- Put the onus on the developer to perform activities that are under his control within a specified time period. Example:
- The developer must submit for the “Building Permit” within four months of receiving the “Development Permit”
- Consider whether to use an “Offer” or an “Option”
- Effective subject clauses can be difficult to construct and enforce. Consider using a lawyer.
- The right to “waive” a subject clause needs to be specified into the offer

Keeping the offer together

Offers on development sites tend to have the following characteristics:

- A long time frame
- Number of sequential subject clauses or options
- Subject clauses create uncertainty and anxiety for the seller
- Seller's don't like flippers

Seller's don't like flippers.

Consider an anti-flipping clause or a clause where the seller shares a percentage in the flipper's profit.

Potential price changes

Sometimes the land price is adjusted as the developer learns more about the costs building costs or the city reduces the size of the building.

Example:

The soils test found an unexpected soils problem which will increase the construction cost by \$200,000
The developer wants to reduce the price by \$200,000 or will collapse the deal

Introduction to the marketing of services

Characteristics of services. Can't test drive a realtor, lawyer or a mechanic

Products. Turn tangibles into intangibles

Coke. Fun, friends

Services. Turn intangibles into tangibles

Prudential Insurance: The rock

Merrill Lynch: The bull

Practice evidence marketing

Show tangible evidence of performance

Key strategy:

Keep the seller informed on a regular basis with regular progress reports because there can be long periods of time between subject removal dates

Provide regular progress reports in writing

Let the seller know in writing about key events such as "The developer submitted for a development on <date>"

Evidence marketing may help to protect your commission in the case the client doesn't want to pay the real estate fee.

Keep the seller involved and informed. Some suggestions>

Give them a copy of the architectural drawings

Show them the scale model or send them a photograph of the scale model

Send them copies of the city permits as they are issued

Name the development after the family

When putting an offer together explain the costs that are being incurred by the developer

The costs can be extensive

E.g. Scale model \$20,000

Architectural and engineering fees: 5% to 12% of the construction costs

Show the seller other projects completed by the developer

The idea is to reassure the seller that the developer is serious and not just tying up the property to flip.

Keeping the seller informed on a regular basis may make it easier to get an extension if this becomes necessary because of an unexpected delay in the development approval process..

Text books on the Marketing of Services

Excellent book on the marketing of Services

Service Marketing

Christopher Lovelock & Jochen Wirtz

Prentice Hall

Software Support tool. CLIENTLOOK a CRM program www.clientlook.com

"Think about all the relationships you're trying to build and the activities you complete every day. That's a lot to manage when you need to keep track of everything you do. ClientLook integrates and organizes everything in one place so your team and clients can always be informed. Suddenly everyone is spending more time being productive and less time trying to catch up."

Development Analysis

Purpose

1. To determine the land value and potential development profit
2. Determine how much equity is required
3. Is it worth taking a listing? Will the property sell?
4. To show developers to get their interest in the property
5. Interest joint venture partner or obtain financing
6. Cash flow planning, budgeting & project monitoring
7. Explore different layouts and designs
E.g. The best unit mix for a condominium project

Types of developments

1. Unit developments. Develop and sell off in pieces Land subdivisions, condominium development
2. Income property developments
Build, lease up and sell or keep
Office, retail, industrial & rental apartments etc.
3. Mixed development . Unit development + Income property development
Condos (sell) + Retail strip (Build, lease up, sell or keep)
4. Major renovations

The two approaches to development analysis

1. Quick Proforma. Approximates the interest cost. Used to quickly assess the site.
Called the “sniff test” or “back of the envelope” approach
2. Detailed Monthly Cash Flow Analysis.
Provides accurate interest costs
Determines the maximum equity required upfront
Used for submissions to lender, JV partners

QUICK PROFORMA DEVELOPMENT ANALYSIS		Development Profit Arcadia Place 60 Condominium Project	March 04, 2013 Developer Pro Quick Proforma Condominium Development
			% of Revenue
SALES REVENUE			
One Bedrooms	\$ 520,000 per Unit x 15 Units	\$ 7,800,000	22.56%
Two Bedrooms	\$ 570,000 per Unit x 34 Units	19,380,000	56.06%
Three Bedrooms	\$ 610,000 per Unit x 9 Units	5,490,000	15.88%
Penthouse	\$ 950,000 per Unit x 2 Units	1,900,000	5.50%
	Total Sales Revenue	34,570,000	100.00%
LAND & DEVELOPMENT COSTS			
Land Costs		5,018,000	14.52%
Site Preparation		185,000	0.54%
Construction		14,225,000	41.15%
Professional Fees		1,207,800	3.49%
City Fees		1,895,000	5.48%
Miscellaneous		25,000	0.07%
	Land & Development Costs	22,555,800	65.25%
Interest Costs		617,666	1.79%
Contingency Allowance		1,853,877	5.36%
	Total Development Costs	25,027,343	72.40%
	GROSS DEVELOPMENT PROFIT	9,542,657	27.60%
SELLING EXPENSES			
Real Estate Commissions		1,728,500	5.00%
Marketing & Advertising		27,000	0.08%
Legal Fees	2.00% of the Sale Price	691,400	2.00%
	Total Selling Expenses	2,446,900	7.08%
Less: Interest during the Sale Period		359,314	1.04%
	DEVELOPMENT PROFIT	6,736,443	
	% of Total Development Costs	26.92%	
	% of Sale Revenue	19.49%	
	Return on Equity	96.23%	
	Average Profit per Unit	112,274	
	Land to Building Cost Ratio	28.61%	
	Land to Total Development Cost Ratio	20.05%	

DETAILED MONTHLY CASH FLOW DEVELOPMENT ANALYSIS		Cash Flow Monthly Arcadia Place 20 Unit Condominium Project										March 11, 2013 Investor Pro Development Condominium		
		Year 1 Jan	Year 1 Feb	Year 1 Mar	Year 1 Apr	Year 1 May	Year 1 Jun	Year 1 Jul	Year 1 Aug	Year 1 Sep	Year 1 Oct	Year 1 Nov	Year 1 Dec	Yearly Total
Sales Revenue														
One Bedrooms	-	-	-	-	-	-	-	-	-	-	-	-	600,000	600,000
Two Bedrooms	-	-	-	-	-	-	-	-	-	-	-	-	2,720,000	2,720,000
	-	-	-	-	-	-	-	-	-	-	-	-	3,320,000	3,320,000
DEVELOPMENT COSTS														
Land Costs														
Land	1,200,000	-	-	-	-	-	-	-	-	-	-	-	-	1,200,000
	1,200,000	-	-	-	-	-	-	-	-	-	-	-	-	1,200,000
Development														
Site Preparation	50,000	20,000	-	-	-	-	-	-	-	-	-	-	-	70,000
Construction	-	-	300,000	500,000	400,000	450,000	300,000	350,000	435,000	490,000	480,000	-	-	3,705,000
Prof. Fees	155,000	40,000	20,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	-	-	-	271,000
City Fees	235,000	-	-	-	-	35,000	-	-	-	-	-	-	-	270,000
Marketing	-	-	-	-	-	-	-	-	-	10,000	10,000	10,000	-	30,000
Contingencies	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	-	-	44,000
	444,000	64,000	324,000	512,000	412,000	497,000	312,000	362,000	447,000	512,000	494,000	10,000	-	4,390,000
Interest Costs														
Land Loan	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	-	48,000
Construction Loan	938	1,250	2,688	4,938	6,875	10,063	11,563	13,563	15,875	18,500	18,500	18,500	-	123,250
	4,938	5,250	6,688	8,938	10,875	14,063	15,563	17,563	19,875	22,500	22,500	22,500	-	171,250
Total Development Costs	1,648,938	69,250	330,688	520,938	422,875	511,063	327,563	379,563	466,875	534,500	516,500	32,500	-	5,761,250
Financing														
Land Loan														
Borrow. Inflow (+)	600,000	-	-	-	-	-	-	-	-	-	-	-	-	600,000
Repay. Outflow (-)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction Loan														
Borrow. Inflow (+)	150,000	50,000	230,000	360,000	310,000	510,000	240,000	320,000	370,000	420,000	-	-	-	2,960,000
Repay. Outflow (-)	-	-	-	-	-	-	-	-	-	-	-	(2,300,000)	-	(2,300,000)
Cash Flow	(898,938)	(19,250)	(100,688)	(160,938)	(112,875)	(1,063)	(87,563)	(59,563)	(96,875)	(114,500)	(516,500)	987,500	-	(1,181,250)
Cumulative Cash Flow	(898,938)	(918,188)	(1,018,875)	(1,179,813)	(1,292,688)	(1,293,750)	(1,381,313)	(1,440,875)	(1,537,750)	(1,652,250)	(2,168,750)	(1,181,250)	-	-
Equity Contribution	898,938	19,250	100,688	160,938	112,875	1,063	87,563	59,563	96,875	114,500	516,500	-	-	2,168,750

Case studies

We will analyze a:

1. Condominium development
2. Income property development & whether to sell or keep the project
3. Mixed use development

Objectives:

1. To determine the land value that provides the desired financial return
2. Carry out sensitivity analysis

The building blocks of development analysis. Unit Projects

In order to analyze a unit development such as a land subdivision or a condominium development we break the inputs down in to the following categories to help us structure the analysis which we call the “Building blocks of development analysis”

The building blocks of development analysis for “Unit developments”

Development Analysis Case Study. Condominium Development

Arcadia Place. 60 unit condominium example

Building Area 65,000 Sq. Ft

Total No. of Units: 60

Underground parking: 75

Land Area: 22,750 Sq. Ft. Frontage: 175 Ft

Land Costs

Land: \$7,000,000

Legal Fees: \$10,000

Appraisal: \$8,000

Site Preparation Costs

Site Clearing: \$25,000

Site Servicing Costs: \$150,000

Miscellaneous Site Costs: \$10,000

Construction Costs

Building: \$190.00 per Sq. Ft of building area

Underground Parking: \$25,000 per parking space. Parking spaces 75

Professional Fees

Architectural & Engineering: 8.00% of Construction & Site Prep Costs

Geo-Scientists: \$20,000

Mortgage Brokerage Fees: \$35,000

City Fees

Application Fees: \$5,000 per Unit

Connection Fees: \$3,000 per Unit

Inspection Fees: \$2,500 per Unit

Development Cost Charges: \$20,000 per Unit

Property Taxes: \$65,000 over the development period

Miscellaneous

Miscellaneous Costs \$25,000

Contingency Allowance

8.00% of Land, Dev. & Financing Costs

Construction Financing

Equity: \$5,000,000

Interest Rate: 8.00%

Development Time

Pre-Construction Period: 7 Months

Construction Time: 14 Months

Sales Period: 8 Months

Sales

One Bedrooms: \$520,000 per Unit. 15 units

Two Bedrooms: \$570,000 per Unit. 34 units

Three Bedrooms: \$610,000 per Unit. 9 units

Penthouse \$950,000 per Unit. 2 units

Selling Expenses Folder

Real Estate Commission: 5.00% of Sale Price

Selling Expenses

Marketing & Advertising: \$27,000

Legal Fees: 2.00% of Sale Price

Hard & Soft Costs**Hard costs**

Land

Construction, landscaping, equipment

Leasehold improvements

Soft costs

All fees. Architects & engineers, geo-scientists

Appraisals, legal fees, real estate fees

City fees and charges, property taxes, insurance

Interest costs, mortgage brokerage fees

Question

How much should be paid for the land to achieve a development profit of 25% of "Total Development Costs"?

Property	Client	Land & Dev. Costs		Construction Financing	Sales Revenue	Selling Expenses
Land Cost	Site Prep.	Construction	Prof. Fees	City Permits	Misc.	Contingency

Condominium development analysis. Results

Development Profit Report

Development Profit			March 06, 2013
Arcadia Place			Developer Pro
60 Condominium Project			Video Condominium Development \$7M Land
			% of Revenue
SALES REVENUE			
One Bedrooms	\$ 520,000 per Unit x 15 Units	\$ 7,800,000	22.56%
Two Bedrooms	\$ 570,000 per Unit x 34 Units	19,380,000	56.06%
Three Bedrooms	\$ 610,000 per Unit x 9 Units	5,490,000	15.88%
Penthouse	\$ 950,000 per Unit x 2 Units	1,900,000	5.50%
	Total Sales Revenue	34,570,000	100.00%
LAND & DEVELOPMENT COSTS			
Land Costs		7,018,000	20.30%
Site Preparation		185,000	0.54%
Construction		14,225,000	41.15%
Professional Fees		1,207,800	3.49%
City Fees		1,895,000	5.48%
Miscellaneous		25,000	0.07%
	Land & Development Costs	24,555,800	71.03%
Interest Costs		1,177,666	3.41%
Contingency Allowance		2,058,677	5.96%
	Total Development Costs	27,792,143	80.39%
	GROSS DEVELOPMENT PROFIT	6,777,857	19.61%
SELLING EXPENSES			
Real Estate Commissions		1,728,500	5.00%
Marketing & Advertising		27,000	0.08%
Legal Fees	2.00% of the Sale Price	691,400	2.00%
	Total Selling Expenses	2,446,900	7.08%
Less: Interest during the Sale Period		539,708	1.56%
	DEVELOPMENT PROFIT	3,791,249	
	% of Total Development Costs	13.64%	
	% of Sale Revenue	10.97%	
	Return on Equity	75.82%	
	Average Profit per Unit	63,187	
	Land to Building Cost Ratio	40.02%	
	Land to Total Development Cost Ratio	25.25%	

Profitability Measures

Profitability measures that are commonly used to evaluate a development are;

1. **% of Total Development Costs.** Typically 25% for a medium risk development taking several years and 15% for industrial developments.
2. **% of Sale Revenue.** Not widely used because it is very hard to predict the sales revenue or market value which is several years away. It's much easier to predict the "Total Development Cost" than the sales revenue or future market value.
3. **Return on Equity.** Developer will often look for a Return on Equity greater than 100% which means they want to more than double their equity or investment in the development.

Land & Development Cost Measures

The following measures are used to check if the building and development cost estimates are realistic for the city and the location?

1. Land to Building Cost Ratio
2. Land to Development Cost Ratio

These ratios depend on the city and the location. In areas where the land prices are very high the land to Building cost and Development Cost Ratios will be high and they will be much lower in areas where the land costs are low. Developers familiar with the type of development and location usually have a good feel for the value of the ratios and they use them to check the accuracy of the development analysis.

A high ratio requires a high sale price or high rents and a low cap rate to offset the high land cost

Goal Seeking. Case study

How much would you pay for the land to get a development profit of 25.00% of "Total Development Cost"


Answer: \$5,009,651

If you wanted to double your money (100% Return on Equity) pay no more than \$6,061,733 for the land.

Calculate the Total Land Cost for		
Desired Profit		Total Land Cost
% of Total Development Cost	25.00%	\$ 5,009,651
% of Sale Price	15.00%	\$ 5,914,982
Return on Equity	100.00%	\$ 6,061,733

Buttons: Done, Export to PDF, Export to Excel, Print, Help

Revised Development Profit Report. Land at \$5,000,000 instead of \$7,000,000

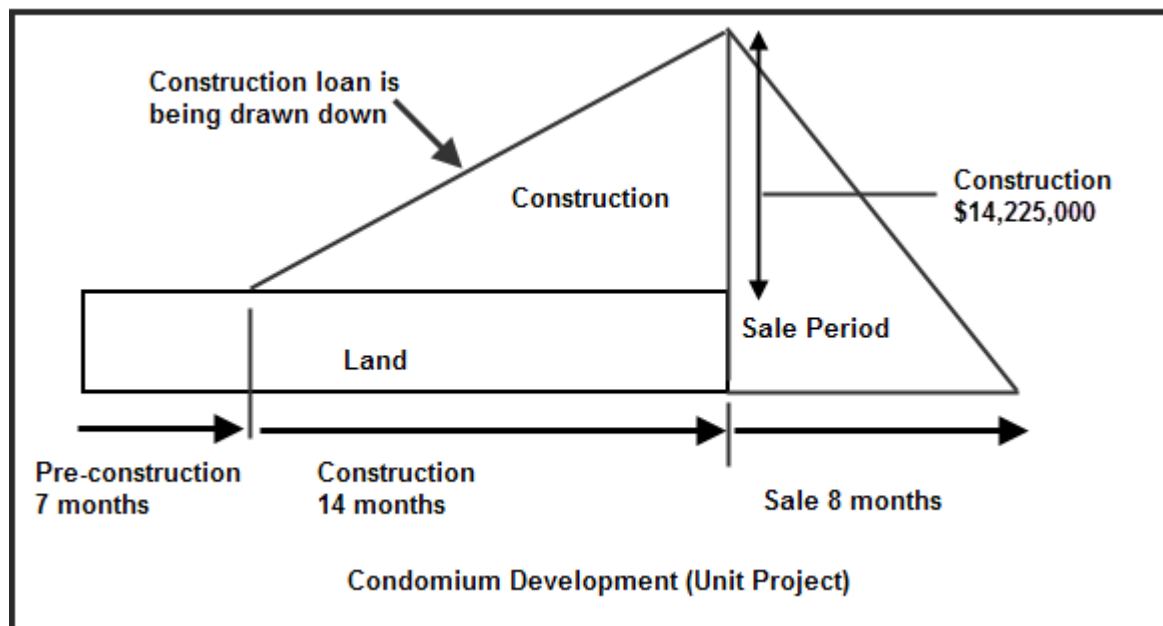
Development Profit		March 06, 2013	
Arcadia Place		Developer Pro	
60 Condominium Project		Video Condominium Development \$5M Land	
			% of Revenue
SALES REVENUE			
One Bedrooms	\$ 520,000 per Unit x 15 Units	\$ 7,800,000	22.56%
Two Bedrooms	\$ 570,000 per Unit x 34 Units	19,380,000	56.06%
Three Bedrooms	\$ 610,000 per Unit x 9 Units	5,490,000	15.88%
Penthouse	\$ 950,000 per Unit x 2 Units	1,900,000	5.50%
	Total Sales Revenue	34,570,000	100.00%
LAND & DEVELOPMENT COSTS			
Land Costs		5,018,000	14.52%
Site Preparation		185,000	0.54%
Construction		14,225,000	41.15%
Professional Fees		1,207,800	3.49%
City Fees		1,895,000	5.48%
Miscellaneous		25,000	0.07%
	Land & Development Costs	22,555,800	65.25%
Interest Costs		897,666	2.60%
Contingency Allowance		1,876,277	5.43%
	Total Development Costs	25,329,743	73.27%
	GROSS DEVELOPMENT PROFIT	9,240,257	26.73%
SELLING EXPENSES			
Real Estate Commissions		1,728,500	5.00%
Marketing & Advertising		27,000	0.08%
Legal Fees	2.00% of the Sale Price	691,400	2.00%
	Total Selling Expenses	2,446,900	7.08%
Less: Interest during the Sale Period		474,044	1.37%
	DEVELOPMENT PROFIT	6,319,313	
	% of Total Development Costs	24.95%	
	% of Sale Revenue	18.28%	
	Return on Equity	126.39%	
	Average Profit per Unit	105,322	
	Land to Building Cost Ratio	28.61%	
	Land to Total Development Cost Ratio	19.81%	

Total Development Costs

Total Development Costs		March 06, 2013			
Arcadia Place		Developer Pro			
60 Condominium Project		Video Condominium Development \$5M Land			
		Hard Costs	Soft Costs	Total	
Land Costs					
Land		5,000,000	-	5,000,000	19.74%
Legal Fees		-	10,000	10,000	0.04%
Appraisal		-	8,000	8,000	0.03%
		5,000,000	18,000	5,018,000	19.81%
Site Preparation					
Site Clearing		25,000	-	25,000	0.10%
Site Servicing Costs		150,000	-	150,000	0.59%
Miscellaneous Site Costs		10,000	-	10,000	0.04%
		185,000	-	185,000	0.73%
Construction					
Building	\$ 190.00 per Sq. Ft x 65,000 Sq. Ft	12,350,000	-	12,350,000	48.76%
Parking	\$ 25,000 per Parking Space x 75 Parking Spaces	1,875,000	-	1,875,000	7.40%
		14,225,000	-	14,225,000	56.16%
Professional Fees					
Architectural & Engineering	8.00% of Construction & Site Prep. Costs	-	1,152,800	1,152,800	4.55%
Geo-Scientists		-	20,000	20,000	0.08%
Mortgage Brokerage Fees		-	35,000	35,000	0.14%
		-	1,207,800	1,207,800	4.77%
City Fees					
Application Fees	\$ 5,000.00 per Unit x 60 Units	-	300,000	300,000	1.18%
Connection Fees	\$ 3,000.00 per Unit x 60 Units	-	180,000	180,000	0.71%
Inspection Fees	\$ 2,500.00 per Unit x 60 Units	-	150,000	150,000	0.59%
Impact Fees	\$ 20,000.00 per Unit x 60 Units	-	1,200,000	1,200,000	4.74%
Property Taxes		-	65,000	65,000	0.26%
		-	1,895,000	1,895,000	7.48%
Miscellaneous					
Miscellaneous costs		25,000	-	25,000	0.10%
		25,000	-	25,000	0.10%
LAND & DEVELOPMENT COSTS		19,435,000	3,120,800	22,555,800	
Financing Interest Costs					
Construction Loan		-	897,666	897,666	3.54%
Contingency Allowance	8.00% of Land, Development & Financing Costs	-	1,876,277	1,876,277	7.41%
TOTAL DEVELOPMENT COST		19,435,000	5,894,743	25,329,743	
% of Total Development Cost		76.73%	23.27%	100.00%	
Cost Per Unit		323,916.67	98,245.72	422,162.38	
Cost per Sq. Ft of Building		299.00	90.69	389.69	
Land to Building Cost Ratio		28.61%			
Land to Total Development Cost Ratio		19.81%			

Financing Costs

Calculating the interest costs on a construction draw mortgage



Example: Interest cost on the construction costs

Construction Costs: \$14,225,000

Construction Period: 14 months

Interest Rate: 8.00%

Interest Adjustment Factor: 0.5

$$\begin{aligned} \text{Interest cost on the construction} &= \$14,225,000 \times 14 \text{ months} \times 8.00\% \times 1/12 \times 0.5 \text{ (Financing Adjustment Factor)} \\ &= \$663,833 \end{aligned}$$

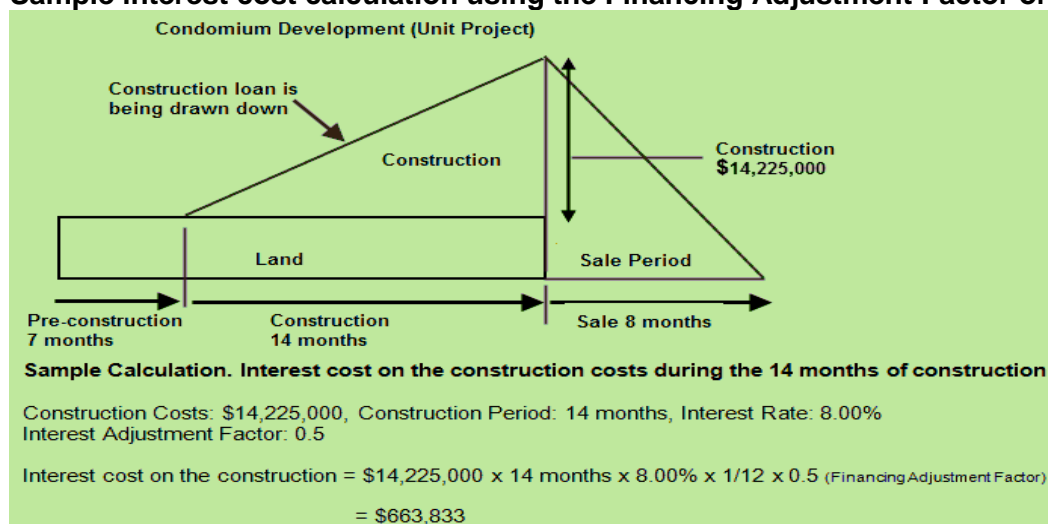
Financing Adjustment Factors

Calculating the total interest costs is tricky because the construction loan is a “Draw mortgage” and drawn down in stages. If the construction cost is \$14,225,000 the lender advances funds as the construction proceeds based on the cost to complete as ascertained by an independent professional.

In order to adjust the interest costs we use “Financing Adjustments Factors” to modify the interest calculations because the loan is drawn down in stages.

In this example the “Financing Adjustment Factor” for the construction portion of the loan is “0.5”.

Sample interest cost calculation using the Financing Adjustment Factor of 0.5



Typical Financing Adjustment Factors

CONSTRUCTION FINANCING																			
Equity Amount <input type="text" value="\$ 5,000,000"/>																			
Financing Construction Loan. Interest Rate <input type="text" value="8.000%"/>																			
Financing Adjustment Factors Equity Adjustment <input type="text" value="1.00"/>																			
Construction Loan <table border="1"> <thead> <tr> <th>Description</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>Land Costs</td> <td>1.00</td> </tr> <tr> <td>Site Preparation</td> <td>0.75</td> </tr> <tr> <td>Construction</td> <td>0.50</td> </tr> <tr> <td>Professional Fees</td> <td>0.75</td> </tr> <tr> <td>City Fees</td> <td>0.75</td> </tr> <tr> <td>Miscellaneous</td> <td>0.50</td> </tr> <tr> <td>Selling Expenses</td> <td>0.50</td> </tr> <tr> <td>Sales Period</td> <td>0.50</td> </tr> </tbody> </table>		Description	Amount	Land Costs	1.00	Site Preparation	0.75	Construction	0.50	Professional Fees	0.75	City Fees	0.75	Miscellaneous	0.50	Selling Expenses	0.50	Sales Period	0.50
Description	Amount																		
Land Costs	1.00																		
Site Preparation	0.75																		
Construction	0.50																		
Professional Fees	0.75																		
City Fees	0.75																		
Miscellaneous	0.50																		
Selling Expenses	0.50																		
Sales Period	0.50																		
Development Time (in Months) Pre-Construction Period <input type="text" value="7"/> Construction Time <input type="text" value="14"/> Sales Period <input type="text" value="8"/>																			

Interest Cost Calculations for the case study

Shows how the interest is calculated using the "Financing Adjustment Factors"

Finance Interest Calculations		March 14, 2013
Arcadia Place		Developer Pro
60 Condominium Project		Webinar Investit Tuorial \$5M Land
	Interest Cost Calculation	Interest Cost
INTEREST COSTS DURING PRE-CONSTRUCTION & CONSTRUCTION PERIOD		
Construction Loan		
<i>Assuming 100% Financing using Construction Loan</i>		
Land Costs	$\$5,018,000 \times 21 \text{ mo.} \times 8.000\% \times 1/12 \times 1.00$	\$ 702,520
Site Preparation	$\$185,000 \times 14 \text{ mo.} \times 8.000\% \times 1/12 \times 0.75$	12,950
Construction	$\$14,225,000 \times 14 \text{ mo.} \times 8.000\% \times 1/12 \times 0.50$	663,833
Professional Fees	$\$1,207,800 \times 14 \text{ mo.} \times 8.000\% \times 1/12 \times 0.75$	84,546
City Fees	$\$1,895,000 \times 14 \text{ mo.} \times 8.000\% \times 1/12 \times 0.75$	132,650
Miscellaneous	$\$25,000 \times 14 \text{ mo.} \times 8.000\% \times 1/12 \times 0.50$	1,167
		<u>1,597,666</u>
<i>Adjusting for interest not paid on Developer's Equity</i>		
Equity	$(\$5,000,000 \times 21 \text{ mo.} \times 8.000\% \times 1/12 \times 1.00)$	<u>(700,000)</u>
		897,666
INTEREST COSTS DURING THE SALES PERIOD		
Construction Loan		
<i>Assuming 100% Financing using Construction Loan</i>		
Total Development Costs	$\$25,329,743 \times 8 \text{ mo.} \times 8.000\% \times 1/12 \times 0.50$	675,460
Real Estate Commissions & Selling Expenses	$\$2,446,900 \times 8 \text{ mo.} \times 8.000\% \times 1/12 \times 0.50$	65,251
		<u>740,711</u>
<i>Adjusting for interest not paid on Developer's Equity</i>		
Equity	$(\$5,000,000 \times 8 \text{ mo.} \times 8.000\% \times 1/12 \times 1.00)$	<u>(266,667)</u>
		474,044
		<u>1,371,710</u>

Sensitivity Analysis

Which numbers have the biggest impact on the development profit?

....or what numbers really count?

Tell us what numbers to focus on when carrying out a development analysis.

The approach.

Vary one number by 10% to see what it does to the development profit

E.g. Vary the construction cost by 10%

Only vary one number at a time

Keep all the other numbers the same

Main inputs.

Land

Construction plus Site Preparation Costs

Professional Fees

City Fees

Construction Loan, Interest Rate, Time periods

Sale Price

Real Estate Commission & Selling Expenses

We will vary the following variables by 10%:

Interest Rate. From 8.00% to 8.80%

Sales Period. From 8 to 12 months

Construction Cost. From \$190 to \$209 per Sq. Ft

Land Price. From \$5,000,000 to \$5,500,000

Sale Price. Increase \$ per Unit by 10%

Change in the development profit using % of Total Development Cost

Interest Rate. From 24.95% to 24.27% (-2.73%)

Sales period. From 24.95% to 24.01% (-3.77%)

Construction Cost. From 24.95% to 17.77% (-28.78%)

Land Price. From 24.95% to 21.92% (-12.14%)

Sale Price. From 24.95% to 37.62% (+50.78%)

Unit Projects. Condominium developments and land subdivisions. The inputs that have the biggest impact of the development profit are:

1. Sale Price
 - Price per Unit or Lots
 - Number of Units or Lots
2. Construction cost
3. Land cost

“You make your money in the buy”

The sale price has a large impact on the development profit but it's hard to predict the sale price because it's several years or more away. It's hard to estimate what the economy, interest rates, competition, and absorption rates will be like when the development is ready to be sold or leased. Developers have to be careful not to pay too much for the land. “They make their money in the buy”.

Well-funded developers land bank by buying land when the prices are reasonable or low and not distorted by an overheated market and hold onto the land and develop when the timing is right. Smaller developers don't have the financial resources to land bank and generally have to buy the land and develop immediately and have to be careful not to pay too much for the land.

If a developer pays too much for the land and develops immediately they have to hope the sale price increases by the time the product is brought to the market.

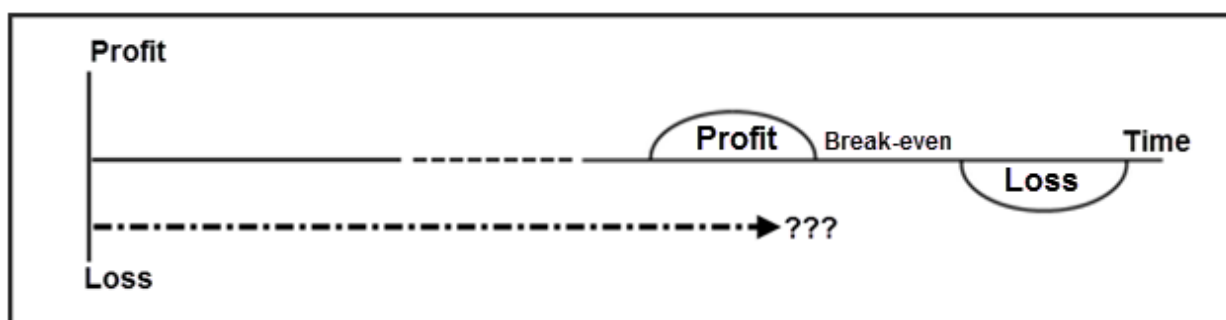
There is a tendency for developers to follow each other and bid up the price of the land and overtime generate an oversupply of product resulting in falling prices and unprofitable development.

Timing and Development risks

Being a successful developer takes a lot of knowledge and skill, good timing and a great deal of luck.

When a project is started you can't predict accurately when the project will be brought to the market. There can be delays in the approval process, construction delays, strikes, bad weather resulting in a much later completion date than expected. On the other hand, everything goes very smoothly and the project is completed sooner than estimated. A great deal of the success depends on when the development hits the market.

Let's look at this conceptual using the following timeline which depicts possible outcomes.



- 1/3 of the time the development is profitable
- 1/3 of the time the development will breakeven
- 1/3 of the time the development loses money

When you start a project it's a bit like rolling the dice as to where you will end up on the timeline.

If the developer is really lucky or is very skilled at bringing a project to the market at the right time they may make a lot of money.

If things don't go quite right the project ends up breaking even.

If the development hits the market when the economy has crashed, there is an oversupply of competing products, falling prices and extremely long sales periods, then the developer can lose a lot of money.

Development Risks. Under and oversupply

The development industry tends to continually cycle between under supply and over supply of condominium, office, retail, industrial, rental apartment, hotel and motel developments.

Developers sometimes are like sheep, they tend to follow the crowd, resulting in oversupply, falling prices, long sale periods and unprofitable developments. In addition, some developers continue to develop because they are developers and development is what drives them and they develop when they should be sitting on the side lines waiting for the oversupply to subside.

The under and over supply cycle. Case study

About four year after the crash in 2008 a few developers sensed there would be a large demand for rental apartment buildings as home owners lost their homes and had to rent and vacancy rates for the existing apartment buildings declined dramatically and rents started to increase.

The first projects were financially successful. Other developers noticed this and jumped into the market and built rental apartment buildings. The demand for dimensional lumber from Canada increased and lumber prices escalated and construction costs start to increase. Land owners became aware of the demand for land and developers bid up the land prices as they competed against each other for sites.

Eventually there will be an oversupply of new rental apartment buildings, vacancies will increase and rent will decline and many developers who jumped in late in the cycle will lose money.

Oversupply is very common in the condominium market where from time to time there is a serious oversupply of new condominium units resulting in falling prices and unprofitable developments. As long as the land is available it is relatively easy to bring new condominium units and rental apartment buildings on to the market.

Oversupply situation is less likely to occur in locations where there is little land available and there is a long and difficult city approval process which severely restricts the supply and prevents an oversupply from developing.

Realtors becoming developers

There is a temptation for realtors who work with developers to want to be involved in development when they see a developer making a lot of money.

Successful development is a full time, hard job that takes a lot of skill and expertise and there is the potential for a lot of things to go wrong.

A developer has to juggle a lot of balls. Dealing with city officials, architects and engineers, contractors and sub trades, lawyers, arranging financing and construction draws, developing and implementing marketing strategies, engaging realtors etc.

Real estate development is a full time job with the potential for a lot of things to go wrong if not tightly managed. Real estate development is a full time job.

Either be a realtor or a developer, but not both. Running a development project on a part time basis is courting a disaster.

Development Analysis Case Study. Income Property Development

The two types of development projects:

1. **Development and sale of units.**
Condominium developments, land subdivisions
2. **Income properties**
Build, lease up and sell or hold as a long term investment

The analysis of unit projects has been covered. This section focuses on the development analysis of income properties such as office, retail, industrial and rental apartments.

Building Blocks of Development Analysis. Income Property Development

In order to analyze an income property development we break the inputs down in to the following categories or building blocks to help us structure the analysis.

The building blocks of development analysis for “Income property developments”



Development Analysis Case Study. Income Property Development

21,000 Sq. Ft Retail Center

Property Name: Sterling Plaza
 Building Area: 22,500 Sq. Ft
 Gross Leasable Area: 21,000 Sq. Ft
 Land Area: 80,000 Sq. Ft
 Frontage: 300 Ft

Land Cost

Land: \$1,200,000
 Legal Fees: \$12,000
 Appraisal Fees: \$8,000

Site Preparation sub folder

Site Clearing: \$15,000
 Site Servicing Costs: \$85,000
 Miscellaneous Site Costs: \$12,000

Construction

Building \$88.00 per Sq. Ft of building area
 Parking & Landscaping: \$150,000
 Leasehold Improvement Allow. \$30.00 per Unit of Total Gross Leasable Area

Professional Fees

Architectural & Engineering fees: 7.00% of Construction and Site Prep. Costs
 Engineering: 4.00% of Construction and Site Prep. Costs
 Mortgage Brokerage Fees: \$65,000

City Fees

Permits & Fees: \$47,000
 Impact Fees: \$95,000
 Property Taxes \$75,000

Miscellaneous sub folder

Miscellaneous Costs: \$25,000

Contingency Allowance

7.00% of Land, Development & Financing Costs

Construction Financing Folder

Equity: \$700,000

Interest Rate: 8.00%

Development Time

Pre-Construction Period: 5 Months

Construction Time: 9 Months

Lease-up Period: 6

Sales Period: 7 Months

Selling Expenses

Real Estate Commission: 5.00% of Sale Price

Selling Expenses

Marketing & Advertising: \$30,000. For leasing the space & selling the building

Legal Fees: \$25,000. Execution of the leases & selling the building

Leasing Fees

Leasing Fee: \$75,000

Income & Expense Statement during the lease up period

Need to take into account pre-leasing arrangements, free rent granted during the lease up period.

Lease-up Period: 6 months

Rental Income during the six month lease up period: \$181,000

Recoverable Expenses (TIM's) during the six month lease up period: \$67,000

Operating Expenses during the six month lease up period

Taxes: \$85,000

Insurance: \$16,000

Maintenance: \$8,000

Property Management: \$15,000

Stabilized Income & Expense Statement

Rental Income \$27.00 per Unit of Total Gross Leasable Area per Yr.

Recoverable Expenses (TIM's) \$10.00 per Unit of Total Gross Leasable Area per Yr.

Vacancy Allowance: 5.00%

Operating Expenses

Taxes \$145,000

Insurance \$18,000

Maintenance \$2.00 per Unit of Total Gross Leasable Area per Yr

Property Management 5.00% of Effective Gross Income

Permanent Financing

Loan/Value Ratio: 75.00%

Debt Service Ratio: 1.25

Nominal Annual Interest Rate: 6.750%

Amortization Period (Years): 25

Sale

Sale Price: Based on a 7.50% Cap Rate and the stabilized Net Operating Income

Project Info.	Land & Dev. Costs	Construction Financing	Selling Expenses	→ Income & Expenses	→ Permanent Financing	Sale
Land Costs	Site Preparation	Construction	Professional Fees	City Fees	Miscellaneous	Contingency

Costs					
Description	Entry Choice	Qty	Costs Hard Soft		Amount
Land	Amount	—	<input checked="" type="radio"/>	<input type="radio"/>	\$ 1,200,000
Legal Fees	Amount	—	<input type="radio"/>	<input checked="" type="radio"/>	\$ 12,000
Appraisal Fees	Amount	—	<input type="radio"/>	<input checked="" type="radio"/>	\$ 8,000

Costs are broken down between Hard and Soft Costs ↑

The development analysis for an income property is more complex than unit development projects because:

1. The Income & expenses have to be estimated for the lease up period
2. Once the building is substantially leased the stabilized Income & Expense Statement has to be developed

In addition we have to calculate:

1. The long term financing or permanent loan that replaces the construction loan
2. The equity required by the buyer
3. Equity required by the developers if they decide to keep the project

Questions to answer

1. How much to pay for the land to get a development profit of 25% of Total Development Costs
2. How much equity does the buyer need? and is it realistic?
3. If the developer keeps the development as a long term investment how much equity do they need
4. Should they sell the development or hold as a long term investment?

Lease Up Period.

During the lease up period, revenue is generated as tenants move in and start paying rent. However, the landlord will be paying the taxes, insurance and maintenance of the vacant space. We have to estimate the rental income and the operating expenses occurring during the lease up period plus the interest being paid for the construction loan.

Lenders will often require a percentage of the building to be pre-leased before advancing funds.

Income during the Lease Up Period

Example of the estimated income & expenses during the lease up period of 6 months

Income & Expenses during the Lease Up Period		Stabilized Income & Expense Statement	
Lease Up Period <input type="text" value="6"/> Months			
Income			
Description	Amount		
Rental Income	\$ 181,000		
Recoverable Expenses (TIM's)	\$ 67,000		
<div> <input type="button" value="Add"/> <input type="button" value="Insert"/> <input type="button" value="Delete"/> </div>			
Operating Expenses			
Description	Amount		
Taxes	\$ 85,000		
Insurance	\$ 16,000		
Maintenance	\$ 8,000		
Property Management	\$ 15,000		

Stabilized Income & Expense Statement

Sale Period

Is the period from when the building is substantially leased and reaches the stabilized income until the building is sold.

Stabilized Income

The income generated when the building is fully or substantially leased with little or no vacancy.

Example of the stabilized income and expense projection

Income & Expenses during the Lease Up Period		→ Stabilized Income & Expense Statement		
Income				
Tenancy Description	Income Entry Choice	Qty	Amount	Vac. and Bad Debt Allow.
Rental Income	\$ per Unit of Total Gross Leasable Area per Yr	21,000	\$ 27.00	5.00%
Recoverable Expenses (TIM's)	\$ per Unit of Total Gross Leasable Area per Yr	21,000	\$ 10.00	5.00%
<div> <input type="button" value="Add"/> <input type="button" value="Insert"/> <input type="button" value="Delete"/> </div>				
Operating Expenses				
Expenses Paid for by the Landlord	Expense Entry Choice	Qty	Amount	
Taxes	Amount	—	\$ 145,000	
Insurance	Amount	—	\$ 18,000	
Maintenance	\$ per Unit of Total Gross Leasable Area per Yr	21,000	\$ 2.00	
Property Management	% of Effective Gross Income	—	5.00%	

Income Property. Development Profit

Development Profit			March 24, 2013
Sterling Plaza			Developer Pro
21,000 Sq. Ft Retail Center			Video Retail Center
			% of Revenue
SALE PRICE	7.50% Cap Rate & NOI of \$ 496,242	\$ 6,616,560	
LAND & DEVELOPMENT COSTS			
Land Costs		1,220,000	18.44%
Site Preparation		112,000	1.69%
Construction		2,760,000	41.71%
Professional Fees		380,920	5.76%
City Fees		217,000	3.28%
Miscellaneous		25,000	0.38%
	Land & Development Costs	4,714,920	71.26%
Interest Costs		164,030	2.48%
Contingency Allowance		341,527	5.16%
	Total Development Costs	5,220,477	78.90%
	GROSS DEVELOPMENT PROFIT	1,396,083	21.10%
SELLING EXPENSES			
Real Estate Commissions		330,828	5.00%
Marketing & Advertising		30,000	0.45%
Legal fees		25,000	0.38%
Leasing Fees		75,000	1.13%
	Total Selling Expenses	460,828	6.96%
	DEVELOPMENT PROFIT (Before Operating Income & Expenses)	935,255	
	% of Total Development Costs	17.92%	
	% of Sale Revenue	14.14%	
	Return on Equity	133.61%	
OPERATING INCOME & EXPENSES during lease up and sales period			
Net Operating Income, Lease Up period of 6 months		124,000	1.87%
Net Operating Income, Sales period of 7 months		289,475	4.38%
		413,475	6.25%
Less: Interest costs during Lease up & Sale Period		376,639	5.69%
	OVERALL DEVELOPMENT PROFIT	972,081	
	% of Total Development Costs	18.62%	
	% of Sale Revenue	14.63%	
	Return on Equity	138.87%	

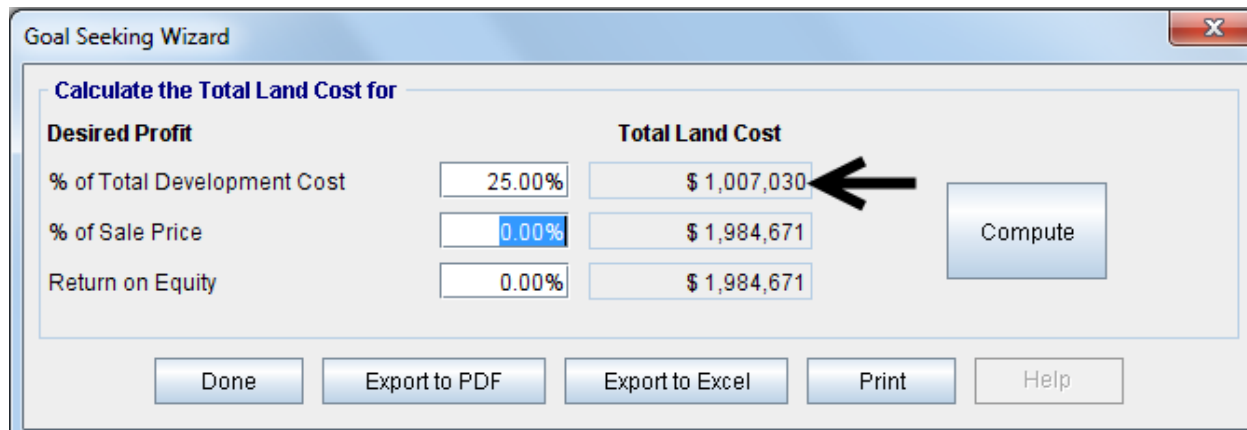
← Too low
Should be at
least 25%

Goal Seeking

How much should we pay for the land to get a development profit of 25% of Total Development Costs?

Asking Price: \$1,200,000

Answer: \$1,000,000



The image shows a 'Goal Seeking Wizard' dialog box. It has a title bar with a close button (X). The main area is titled 'Calculate the Total Land Cost for'. Below this, there are two columns: 'Desired Profit' and 'Total Land Cost'. The 'Desired Profit' column has three rows: '% of Total Development Cost' with a value of '25.00%', '% of Sale Price' with a value of '0.00%', and 'Return on Equity' with a value of '0.00%'. The 'Total Land Cost' column has three rows: '\$ 1,007,030', '\$ 1,984,671', and '\$ 1,984,671'. A black arrow points to the first row of the 'Total Land Cost' column. To the right of these columns is a 'Compute' button. At the bottom of the dialog box are five buttons: 'Done', 'Export to PDF', 'Export to Excel', 'Print', and 'Help'.

Calculate the Total Land Cost for	
Desired Profit	Total Land Cost
% of Total Development Cost	\$ 1,007,030
% of Sale Price	\$ 1,984,671
Return on Equity	\$ 1,984,671

Buttons: Done, Export to PDF, Export to Excel, Print, Help

Land has been changed to \$1,000,000 from the asking price of \$1,200,000

Development profit is now 24.59%

Development Profit			March 24, 2013
Sterling Plaza			Developer Pro
21,000 Sq. Ft Retail Center			Video Retail Center
			% of Revenue
SALE PRICE	7.50 % Cap Rate & NOI of \$ 496,242	\$ 6,616,560	
LAND & DEVELOPMENT COSTS			
Land Costs		1,020,000	15.42%
Site Preparation		112,000	1.69%
Construction		2,760,000	41.71%
Professional Fees		380,920	5.76%
City Fees		217,000	3.28%
Miscellaneous		25,000	0.38%
	Land & Development Costs	4,514,920	68.24%
Interest Costs		146,363	2.20%
Contingency Allowance		326,220	4.93%
	Total Development Costs	4,986,503	75.36%
	GROSS DEVELOPMENT PROFIT	1,630,057	24.64%
SELLING EXPENSES			
Real Estate Commissions		330,828	5.00%
Marketing & Advertising		30,000	0.45%
Legal fees		25,000	0.38%
Leasing Fees		75,000	1.13%
	Total Selling Expenses	460,828	6.96%
	DEVELOPMENT PROFIT (Before Operating Income & Expenses)	1,169,229	
	% of Total Development Costs	23.45%	
	% of Sale Revenue	17.67%	
	Return on Equity	167.03%	
OPERATING INCOME & EXPENSES during lease up and sales period			
Net Operating Income. Lease Up period of 6 months		124,000	1.87%
Net Operating Income. Sales period of 7 months		289,475	4.38%
		413,475	6.25%
Less: Interest costs during Lease up & Sale Period		356,361	5.39%
	OVERALL DEVELOPMENT PROFIT	1,226,343	
	% of Total Development Costs	24.59%	
	% of Sale Revenue	18.53%	
	Return on Equity	175.19%	

← OK

Rental Income & Expenses

Sterling Plaza

21,000 Sq. Ft Retail Center

RENTAL INCOME & EXPENSES DURING LEASE UP PERIOD

	Lease Up Period 6 months
Rental Income during Lease Up period	
Rental Income	\$ 181,000
Recoverable Expenses (TIMs)	67,000
	<u>248,000</u>
Operating Expenses during Lease Up Period	
Taxes	85,000
Insurance	16,000
Maintenance	8,000
Property Management	15,000
	<u>124,000</u>
Net Operating Income during Lease Up Period	124,000

RENTAL INCOME & EXPENSES DURING SALES PERIOD

	Stabilized Income 12 Months	Sale Period 7 Months
Potential Gross Income	\$ 777,000	\$ 453,250
Less: Vacancy & Credit Loss	38,850	22,663
Effective Gross Income	<u>738,150</u>	<u>430,588</u>
Operating Expenses	241,908	141,113
Net Operating Income during the Sale Period	<u>496,242</u>	<u>289,475</u>

SUMMARY

	Net Operating Income
Lease up Period: 6 months	124,000
Sales Period: 7 months	289,475
Total	<u>413,475</u>

Stabilized Income & Expense Statement

The stabilized income & expense occurs when the building is substantially leased and operating normally with possibly a small amount of vacancy occurring from time to time.

Stabilized Income & Expense Statement

Income & Expense Statement			
STABILIZED ANNUAL INCOME & EXPENSE			
			12 Months
POTENTIAL GROSS INCOME			
Rental Income	\$ 27.00 per Sq. Ft per Yr x 21,000 Sq. Ft	\$	567,000
Recoverable Expenses (TIMs)	\$ 10.00 per Sq. Ft per Yr x 21,000 Sq. Ft		210,000
			<u>777,000</u>
Less: Vacancy & Credit Loss			
Rental Income	5.00% x \$ 567,000		28,350
Recoverable Expenses (TIMs)	5.00% x \$ 210,000		10,500
			<u>38,850</u>
Effective Gross Income			738,150
OPERATING EXPENSES			
Taxes	\$ 145,000 per Yr		145,000
Insurance	\$ 18,000 per Yr		18,000
Maintenance	\$ 2.00 per Sq. Ft per Yr x 21,000 Sq. Ft		42,000
Property Management	5.00% of EGI of \$ 738,150		36,908
			<u>241,908</u>
Net Operating Income			496,242

How much Equity is required by the Buyer and the Developer?

A test for the viability of the development is:

1. How much equity does the buyer need, and is this realistic?
2. If the developer kept the project, how much equity is required?

To answer these questions, we need to calculate the long term financing that will replace the construction loan using:

1. The stabilized Net Operating Income
2. Loan to Value Ratio: 75%
3. Debt Service: 1.25

Determining the long term financing and equity

1. Calculate the loan amount based on the Loan to Value Ratio of 75%: \$4,962,420
2. Calculate the loan amount based on the Debt Service Ratio of 1.25: \$4,788,283
3. Select the lowest loan amount: \$4,788,283

Long Term Financing Sterling Plaza 21,000 Sq. Ft Retail Center		
LONG TERM FINANCING		
Nominal Annual Interest Rate	6.75%	
Amortization Period	25 Years	
Payment Frequency	Monthly (End of Period)	
Compounding Frequency	Monthly	
Loan to Value Ratio	75.00%	
Debt Service Ratio	1.25	
NET OPERATING INCOME	\$ 496,242	
LOAN AMOUNTS & MONTHLY PAYMENTS		
	Loan Amount	Monthly Payment
Loan to Value Ratio: 75.00%	\$ 4,962,420	\$ 34,286
Debt Service Ratio: 1.25	\$ 4,788,283	\$ 33,083
		* Loan Amount
EQUITY REQUIRED BY THE BUYER		
Market Value (Purchase Price)	\$	6,616,560
Less: Long Term Financing		4,788,283
Buyer's Equity		1,828,277
% of Market Value		27.63%
EQUITY REQUIRED BY THE DEVELOPER		
Total Development Cost		4,968,500
Plus: Leasing fees		75,000
Financing costs during the lease-up period		170,480
Operating Costs during the lease-up period		124,000
Less: Income during the lease-up period		(240,000)
		5,107,980
Less: Long Term Financing		4,788,283
Developer's Equity		319,700
% of Market Value		4.83%

Answers: How much equity does the buyer need, and is this realistic? 27.63%. Probably realistic.
If the developer kept the project, how much equity is required? 4.83%

Sensitivity Analysis. Income Property Development

In the **condominium development** case study we discovered the most important inputs that impacted the development profit were:

1. Sale Price
 - Price per Unit or Lots
 - Number of Units or Lots
2. Construction cost
3. Land cost

What happens to the development profit for the retail center if we change the Cap Rate by 10% from 7.50% to 8.25%?

Cap Rate	Sale Price	Development Profit (% of Total Development Cost)
7.50%	\$6,616,560	24.59%
8.25%	\$6,015,055	13.15%

Changing the Cap Rate by 10% from 7.50% to 8.25% drops the development profit to 13.15% from 24.59% which is a 47% drop in the development profit which is very significant.

For **Income Properties** the most important inputs are:

1. Sale Price
 - Rent Rate
 - Cap Rate
 - Rentable Area

$$\text{Sale Price} = \frac{\text{Rent Rate} \times \text{Rentable Area}}{\text{Cap Rate}}$$

2. Construction costs
3. Land cost

Summary. Sensitivity Analysis

Following are the results of the sensitivity analysis carried out on the two case studies presented in the video.

	Development Profit % of Total Development Cost	% Change	% change in the land price to get a 25% profit
CONDOMINIUM DEVELOPMENT			
No change	25%		
Increase sale price by 10%	38%	52%	40%
Decrease sale price by 10%	12%	<52%>	<40%>
Increase construction costs by 10%	18%	<28%>	<24%>
Drop land price by 10%	28%	13%	N/A
Increase land price by 10%	22%	<13%>	N/A
Increase sales time from 8 to 16 months	23%	<8%.>	<6%>
Increase the interest costs by 10%	23%	<6%>	<4%>
INCOME PROPERTY DEVELOPMENT			
No change	25%		
Reduce the rentable area by 10%	9%	<65%>	<48%>
Decrease the rent by 10%	10%	<56%>	<43%>
Increase the Cap Rate by 10%	11%	<47%>	<36%>
Increase construction costs by 10%	18%	<26%>	<20%>
Increase land price by 10%	22%	<12%>	N/A
Increase the lease up period from 6 to 12 months	22%	<12%>	<10%>
Increase the interest costs by 10%	23%	<8%>	<3%>

What numbers really count?

Unit Projects. Condominium developments and land subdivisions

1. Sale Price
 - Price per Unit or Lots
 - Number of Units or Lots
2. Construction cost
3. Land cost

Income Properties. Office buildings, warehouses and retail

1. Sale Price
 - Rent Rate
 - Cap Rate
 - Rentable Area

$$\text{Sale Price} = \frac{\text{Rent Rate} \times \text{Rentable Area}}{\text{Cap Rate}}$$

2. Construction costs
3. Land cost

Using sensitivity analysis

1) When analyzing a development opportunity

- Exploring different scenarios
- What if analysis
- Optimistic, medium and pessimistic projections

2) Focus on the numbers that count and have the largest impact on the development profit

- Sale Price
- Construction costs
- Land cost

How was the number of lots, units or rentable area determined?

The naïve approach. Condominium example

Area Land: 14,400 Sq. Ft

Floor Area: Ratio: 1.5

Building Area: $1.5 \times 14,400 = 21,600$ Sq. Ft

Average Unit size One Bedroom: 800 Sq. Ft (Incl. common areas)

Number of Units: $21,600/800 = 27$ units

For a variety of reasons it is unlikely that 26 one bedroom units can be built on the land. City regulations such as setbacks, height restrictions, parking requirements and a host of other factors will reduce the buildable area and the number of units.

The best approach is to have architectural sketch plans prepared in order to get some idea of what can be built on the property.

If the property has been rezoned, or has a development or building permit you know exactly what can be built on the property which improves the accuracy of the development analysis.

Should the developer keep the investment?

With an income property development the developer has the choice of selling the leased building or holding as a long term investment.

The steps for deciding whether to sell the development are:

1. Carryout development analysis and calculate the development profit
2. Calculate the total development cost until the end of the lease up period. This is the developer's investment if they keep the property
3. Carry out long term investment analysis and calculate the Internal Rate of return (IRR). The investment is the development costs to the end of the lease up period
4. Based on the internal Rate of Return (IRR) decide whether to hold or sell the completed development

Case Study

We will use the 21,000 Sq. Ft retail center development as an example of how to decide between selling the completed development or holding as a long term investment

First we determine the total development costs to the end of the lease up period which is when the permanent or long term financing is likely to be put in place

On the next page is the calculation of total development costs to the end of the lease up period.

Development cost to the end of the lease up period

The development cost until the end of the lease up period is \$5,107,983 which becomes the developer's investment if the development is kept as a long term investment.

Long Term Financing

Sterling Plaza

21,000 Sq. Ft Retail Center

April 18, 2013

Developer Pro

Video Retail Center Land \$1M

LONG TERM FINANCING	
Nominal Annual Interest Rate	6.75%
Amortization Period	25 Years
Payment Frequency	Monthly (End of Period)
Compounding Frequency	Monthly
Loan to Value Ratio	75.00%
Debt Service Ratio	1.25
 NET OPERATING INCOME	 \$ 498,242
 LOAN AMOUNTS & MONTHLY PAYMENTS	
	<div>Loan Amount</div> <div>Monthly Payment</div>
Loan to Value Ratio: 75.00%	\$ 4,962,420 \$ 34,266
Debt Service Ratio: 1.25	\$ 4,788,283 \$ 33,083 * Loan Amount
 EQUITY REQUIRED BY THE BUYER	
Market Value (Purchase Price)	\$ 6,616,560
Less: Long Term Financing	4,788,283
Buyer's Equity	1,828,277
% of Market Value	27.63%
 EQUITY REQUIRED BY THE DEVELOPER	
Total Development Cost	4,986,503
Plus: Leasing fees	75,000
Financing costs during the lease-up period	170,480
Operating Costs during the lease-up period	124,000
Less: Income during the lease-up period	(248,000)
	5,107,983
Less: Long Term Financing	4,788,283
Developer's Equity	319,700
% of Market Value	4.83%

Development Costs to the end of the lease up period

Developer's investment if the development is kept as a long term investment

Developer's Equity

21,000 Sq. Ft Retail Center Development. Investment Analysis

Investment: \$5,107,983 (Development cost until the end of the lease up period)

Desired Return: 13%

Analysis Period: 10 years

Rentable Area: 21,000 Sq. Ft

Revenue

Lease: \$27.00 per Sq. Ft per year for 5 years then increased by 3.00% compounding for 5 years

Recoverable Expenses (TIMs): \$10 per Sq. Ft per year increasing at 3.00% per year compounding

Operating Expenses

Taxes: \$145,000 per year increasing at 3.00% compounding per year

Insurance: \$18,000 per year increasing at 4.00% compounding per year

Maintenance: \$2.00 per Sq. Ft year increasing at 3.00% compounding per year

Property Management: 5.00% of Effective Gross Income (EGI)

Financing

First Mortgage: \$4,788,283

Interest Rate: 6.75%

Amortization: 25 years

Sale

Real Estate fee: 5.00% of the sale price

Selling Expenses: 1.00% of the sale price


Legal Fees: 2.00% of the sale Price

Sale Price: based on a 8.00% Cap Rate using the Net Operating Income for the year following the sale

Net Cash Flow Report, Before Tax

Net Cash Flow for IRR & NPV Calculations (Before Tax)						
Sterling Plaza						
21,000 Sq. Ft Retail Center						
Year	Investment	Financing		Operating Cash Flow	Sale Proceeds	Net Cash Flow
		Borrow	Paid Back	(Before Tax)	(Before Tax)	(Before Tax)
	\$ (5,107,983)	\$ 4,788,283	-	-	-	\$ (319,700)
Year 1 Jan-Year 1 Dec	-	-	-	99,249	-	99,249
Year 2 Jan-Year 2 Dec	-	-	-	98,605	-	98,605
Year 3 Jan-Year 3 Dec	-	-	-	97,990	-	97,990
Year 4 Jan-Year 4 Dec	-	-	-	97,192	-	97,192
Year 5 Jan-Year 5 Dec	-	-	-	96,623	-	96,623
Year 6 Jan-Year 6 Dec	-	-	-	177,164	-	177,164
Year 7 Jan-Year 7 Dec	-	-	-	176,409	-	176,409
Year 8 Jan-Year 8 Dec	-	-	-	175,656	-	175,656
Year 9 Jan-Year 9 Dec	-	-	-	174,902	-	174,902
Year 10 Jan-Year 10 Dec	-	-	(3,738,552)	173,928	6,554,228	2,989,604
					Total	\$ 3,863,893
Financial Returns (Before Tax) with Financing						
Internal Rate of Return (IRR)	43.59%					
Net Present Value (NPV) at 13.00%	\$ 1,190,396					
Modified Internal Rate of Return (MIRR)	29.66%					
Short Term Financing Rate (Before Tax)	6.000%					
Short Term Reinvestment Rate (Before Tax)	2.000%					

Net Cash Flow Report. After Tax

Net Cash Flow for IRR & NPV Calculations (After Tax)						
Sterling Plaza						
21,000 Sq. Ft Retail Center						
Year	Investment	Financing		Operating Cash Flow (After Tax)	Sale Proceeds (After Tax)	Net Cash Flow (After Tax)
		Borrow	Paid Back			
	\$ (5,107,983)	\$ 4,788,283	-	-	-	\$ (319,700)
Year 1 Jan-Year 1 Dec	-	-	-	73,191	-	73,191
Year 2 Jan-Year 2 Dec	-	-	-	72,466	-	72,466
Year 3 Jan-Year 3 Dec	-	-	-	70,083	-	70,083
Year 4 Jan-Year 4 Dec	-	-	-	67,442	-	67,442
Year 5 Jan-Year 5 Dec	-	-	-	64,802	-	64,802
Year 6 Jan-Year 6 Dec	-	-	-	114,726	-	114,726
Year 7 Jan-Year 7 Dec	-	-	-	111,638	-	111,638
Year 8 Jan-Year 8 Dec	-	-	-	108,371	-	108,371
Year 9 Jan-Year 9 Dec	-	-	-	104,910	-	104,910
Year 10 Jan-Year 10 Dec	-	-	(3,738,552)	99,550	6,076,171	2,437,169
					Total	\$ 2,905,097
Financial Returns (After Tax) with Financing						
Internal Rate of Return (IRR)	35.58%					
Net Present Value (NPV) at 8.45%	\$ 1,280,174					
Modified Internal Rate of Return (MIRR)	26.19%					
Short Term Financing Rate (After Tax)	3.900%					
Short Term Reinvestment Rate (After Tax)	1.300%					

The developer's Options

- 1) Sell the fully leased development

Development Profit	\$1,226,343
Income Tax (35%)	<u>429,220</u>
Fund available to invest	\$ 797,123

- 2) Hold as a long term investment for 10 years

Internal Rate of Return (Before tax) 43.59%
 Internal Rate of Return (After tax) 35.58%

The investment from the Buyer's perspective

Purchase Price: \$6,616,500

Cap Rate: 7.50%

If the buyer's desired return (IRR) is 13.00% before tax they should try and drop the price by \$310,941 in order to achieve a 13.00% return (IRR) before tax.

Net Cash Flow report. Hold as a long term investment

Net Cash Flow for IRR & NPV Calculations (Before Tax)						
Sterling Plaza						
21,000 Sq. Ft Retail Center						
Year	Investment	Financing		Operating Cash Flow	Sale Proceeds	Net Cash Flow
		Borrow	Paid Back	(Before Tax)	(Before Tax)	(Before Tax)
	\$ (6,616,500)	\$ 4,788,283	-	-	-	\$ (1,828,217)
Year 1 Jan-Year 1 Dec	-	-	-	105,062	-	105,062
Year 2 Jan-Year 2 Dec	-	-	-	104,418	-	104,418
Year 3 Jan-Year 3 Dec	-	-	-	103,803	-	103,803
Year 4 Jan-Year 4 Dec	-	-	-	103,005	-	103,005
Year 5 Jan-Year 5 Dec	-	-	-	102,436	-	102,436
Year 6 Jan-Year 6 Dec	-	-	-	182,977	-	182,977
Year 7 Jan-Year 7 Dec	-	-	-	182,222	-	182,222
Year 8 Jan-Year 8 Dec	-	-	-	181,469	-	181,469
Year 9 Jan-Year 9 Dec	-	-	-	180,715	-	180,715
Year 10 Jan-Year 10 Dec	-	-	(3,821,254)	179,741	6,554,228	2,912,715
					Total	\$ 2,330,604
Financial Returns (Before Tax) with Financing						
Internal Rate of Return (IRR)	10.35%					
Net Present Value (NPV) at 13.00%	(\$ 310,941)					
Modified Internal Rate of Return (MIRR)	8.86%					
Short Term Financing Rate (Before Tax)	6.000%					
Short Term Reinvestment Rate (Before Tax)	2.000%					

To get the desired 13.00% before tax the price has to be dropped by \$310,941

Summary. Sell or hold as a long term investment

Sale Price: \$6,616,500 Cap Rate: 7.50%
Development Profit: \$1,226,343 (25% of Total Development costs)
Development profit after 35% income tax: \$797,123
Hold as an investment for 10 years
Internal Rate of Return: 35.58% Equity: 4.83% of the sale price

The development is profitable and provides a profit of \$1,226,343 which is 25% of total development costs.

If the developer holds the property as a long term investment for 10 years the Internal rate of Return (IRR) is 35.58% before tax.

Analyzing “Mixed” developments

Mixed developments consist of a combination of “Unit” and “Income Property” developments

Example. The land is used to develop a **combined condominium development and retail center.**

Analyzing a “mixed” development comprising a “Unit” development and “Income Property” development is tricky because we are mixing up the sale of units with income and expenses generated during the lease up and sales period for the income property which is valued using the cap rate approach.

Approach

- 1) Split the land cost between the “Unit” development and the “Income Property” development
- 2) Analyze each development separately
- 3) Add the two analysis together to get the combined development profit

Example

A mixed development consisting of a condominium development and the development of retail center

Consolidated Report						
	Video Condominium Development \$5M Land		Video Retail Center Land \$1M	Combined Total		
SALE	\$	34,570,000	\$	6,616,560	\$	41,186,560
LAND & DEVELOPMENT COSTS						
Land Costs		5,018,000		1,020,000		6,038,000
Site Preparation		185,000		112,000		297,000
Construction		14,225,000		2,760,000		16,985,000
Professional Fees		1,207,800		380,920		1,588,720
City Fees		1,895,000		217,000		2,112,000
Miscellaneous		25,000		25,000		50,000
	Land & Development Costs	22,555,800		4,514,920		27,070,720
Interest Cost		897,666		145,363		1,043,029
Contingency Allowance		1,876,277		326,220		2,202,497
	Total Development Costs	25,329,743		4,986,503		30,316,246
GROSS DEVELOPMENT PROFIT		9,240,257		1,630,057		10,870,314
Less: Real Estate Commissions & Selling Expenses		2,446,900		385,828		2,832,728
Leasing Fees		-		75,000		75,000
DEVELOPMENT PROFIT (Before Income & Expenses)		6,319,313		1,169,229		7,962,586
% of Total Development Costs		24.95%		23.45%		26.27%
% of Sale Revenue		18.28%		17.67%		19.33%
Return on Equity		126.39%		167.03%		139.69%
Income during lease up & sales period		-		413,475		413,475
Less: Interest Costs during lease up & sales period		474,044		356,361		830,405
OVERALL DEVELOPMENT PROFIT		6,319,313		1,226,343		7,545,656
% of Total Development Costs		24.95%		24.59%		24.89%
% of Sale Revenue		18.28%		18.53%		18.32%
Return on Equity		126.39%		175.19%		132.38%
Land to Building Cost Ratio		28.61%		29.19%		28.71%
Land to Total Development Cost Ratio		19.81%		20.46%		19.92%

Two approaches to Development Analysis

1. **Quick Proforma** approach has been illustrated above for a condominium development and an income property development.

The Quick Proforma approach makes an approximate estimate of the interest costs

The Quick Proforma approach is used to quickly assess if the development makes any sense and to calculate the land value

2. **Detailed monthly cash flow analysis**

Lays out cash inflows and outflows

- Provides a more accurate estimate of interest costs
- Allows you to determine the maximum equity required at the start of the project
- Used to arrange financing or to show equity participation partners

Detailed monthly cash flow development analysis

Using the detailed cash flow approach to analyzing a development we develop the cost schedule on a monthly basis as shown in the example below where we describe cost, the amount and when the cost is paid.

As an example, site clearing costs \$20,000 in year 1 Jan and \$20,000 in February.

Project Info.		Investor		Investment		Development Expenses			
Development Expenses									
Description	Entry Choice	Qty	Expense Type	Year 1 Jan...	Year 1 Feb...	Year 1 Mar...	Year 1 Apr...	Year 1 May...	Year 1 Jun...
Site Clearing	Amount	—	Site Preparation	\$ 20,000	\$ 20,000	\$ 0	\$ 0	\$ 0	
Site Servicing	Amount	—	Site Preparation	\$ 30,000	\$ 0	\$ 0	\$ 0	\$ 0	
Construction costs	Amount	—	Construction	\$ 0	\$ 0	\$ 300,000	\$ 400,000	\$ 400,000	\$ 450,000
Parking	Amount	—	Construction	\$ 0	\$ 0	\$ 0	\$ 100,000	\$ 0	
Landscaping	Amount	—	Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	
Arch & Eng Fees	Amount	—	Prof. Fees	\$ 80,000	\$ 40,000	\$ 20,000	\$ 8,000	\$ 8,000	\$ 8,000
Geo-scientists	Amount	—	Prof. Fees	\$ 15,000	\$ 0	\$ 0	\$ 0	\$ 0	
Mortgage Brokerage Fees	Amount	—	Prof. Fees	\$ 60,000	\$ 0	\$ 0	\$ 0	\$ 0	
City Permits & Fees	Amount	—	City Fees	\$ 35,000	\$ 0	\$ 0	\$ 0	\$ 0	
Development Cost Charges	Amount	—	City Fees	\$ 200,000	\$ 0	\$ 0	\$ 0		
Property Taxes	Amount	—	City Fees	\$ 0	\$ 0	\$ 0	\$ 0		
Contingency Allowance	Amount	—	Contingencies	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000		
Advertising	Amount	—	Marketing	\$ 0	\$ 0	\$ 0	\$ 0		
Real Estate Fees	Amount	—	Marketing	\$ 0	\$ 0	\$ 0	\$ 0		

Detailed Monthly Cash Flow

The detailed monthly cash flow reports shows all the inflows and outflows over the life of the development including the creation and repayment of financing and the draw mortgage and associated interest costs.

Cash Flow Monthly Arcadia Place 20 Unit Condominium Project													October 02, 2007 Investor Pro Development Condominium
	Year 1 Jan	Year 1 Feb	Year 1 Mar	Year 1 Apr	Year 1 May	Year 1 Jun	Year 1 Jul	Year 1 Aug	Year 1 Sep	Year 1 Oct	Year 1 Nov	Year 1 Dec	Yearly Total
Sales Revenue													
One Bedrooms	-	-	-	-	-	-	-	-	-	-	-	600,000	600,000
Two Bedrooms	-	-	-	-	-	-	-	-	-	-	-	2,720,000	2,720,000
	-	-	-	-	-	-	-	-	-	-	-	3,320,000	3,320,000
DEVELOPMENT COSTS													
Land Costs													
Land	1,200,000	-	-	-	-	-	-	-	-	-	-	-	1,200,000
	1,200,000	-	-	-	-	-	-	-	-	-	-	-	1,200,000
Development													
Site Preparation	50,000	20,000	-	-	-	-	-	-	-	-	-	-	70,000
Construction	-	-	300,000	500,000	400,000	450,000	300,000	350,000	435,000	490,000	480,000	-	3,705,000
Prof. Fees	155,000	40,000	20,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	-	-	271,000
City Fees	235,000	-	-	-	-	35,000	-	-	-	-	-	-	270,000
Marketing	-	-	-	-	-	-	-	-	-	10,000	10,000	10,000	30,000
Contingencies	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	-	44,000
	444,000	64,000	324,000	512,000	412,000	497,000	312,000	362,000	447,000	512,000	494,000	10,000	4,390,000
Interest Costs													
Land Loan	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Construction Loan	938	1,250	2,688	4,938	6,875	10,063	11,563	13,563	15,875	18,500	18,500	18,500	123,250
	4,938	5,250	6,688	8,938	10,875	14,063	15,563	17,563	19,875	22,500	22,500	22,500	171,250
Total Development Costs	1,648,938	69,250	330,688	520,938	422,875	511,063	327,563	379,563	466,875	534,500	516,500	32,500	5,761,250
Financing													
Land Loan													
Borrow Inflow(+)	600,000	-	-	-	-	-	-	-	-	-	-	-	600,000
Repay. Outflow(-)	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction Loan													
Borrow Inflow(+)	150,000	50,000	230,000	360,000	310,000	510,000	240,000	320,000	370,000	420,000	-	-	2,980,000
Repay. Outflow(-)	-	-	-	-	-	-	-	-	-	-	-	(2,300,000)	(2,300,000)
	150,000	50,000	230,000	360,000	310,000	510,000	240,000	320,000	370,000	420,000	-	-	2,980,000
Cash Flow	(898,938)	(19,250)	(100,688)	(160,938)	(112,875)	(1,063)	(87,563)	(59,563)	(96,875)	(114,500)	(516,500)	987,500	(1,181,250)
Cumulative Cash Flow	(898,938)	(918,188)	(1,018,875)	(1,179,813)	(1,292,688)	(1,293,750)	(1,381,313)	(1,440,875)	(1,537,750)	(1,652,250)	(2,168,750)	(1,181,250)	-
Equity Contribution	898,938	19,250	100,688	160,938	112,875	1,063	87,563	59,563	96,875	114,500	516,500	-	2,168,750
Account Balance	-	-	-	-	-	-	-	-	-	-	-	987,500	-

Development Profit report

Development Profit		April 22, 2013
Arcadia Place		Investor Pro
20 Unit Condominium Project		Development Condominium
SALES REVENUE		
One Bedrooms		
One Bedroom Units	\$	1,950,000
		<u>1,950,000</u>
Two Bedrooms		
Two Bedroom Units		5,480,000
		<u>5,480,000</u>
	Sale Revenue	7,430,000
DEVELOPMENT COSTS		
Investment.		
Land		1,200,000
		<u>1,200,000</u>
Site Preparation		
Site Clearing		40,000
Site Servicing		30,000
		<u>70,000</u>
Construction		
Construction costs		3,535,000
Parking		130,000
Landscaping		40,000
		<u>3,705,000</u>
Prof. Fees		
Arch & Eng Fees		196,000
Geo-scientists		15,000
Mortgage Brokerage Fees		60,000
		<u>271,000</u>
City Fees		
City Permits & Fees		35,000
Development Cost Charges		200,000
Property Taxes		35,000
		<u>270,000</u>
Marketing		
Advertising		50,000
Real Estate Fees		100,000
		<u>150,000</u>
Contingencies		
Contingency Allowance		44,000
		<u>44,000</u>
Financing Interest Costs		
Land Loan		52,000
Construction Loan		127,375
		<u>179,375</u>
	Total Development Costs	5,889,375
	DEVELOPMENT PROFIT	1,540,625
	% of Total Development Costs	26.16%
	% of Sale Revenue	20.74%
	Maximum Equity	2,168,750
	Return on Equity	71.04%
	Average Profit per Unit	77,031

Summary. Development analysis

Two approaches to development analysis

1. Quick Proforma Approach
2. Detailed monthly cash flow approach

Quick Proforma approach

Used to quickly evaluate a development opportunity

Precedes the detailed monthly cash flow approach

Used as a screening tool

Is the property worth further investigation?

Realtor. Should I take the listing? Will it sell?

Developer. How much should I pay for the land?

Cons

Approximates the interest costs

Hard to get an accurate estimate of the equity needed

Detailed Monthly Cash Flow Analysis

Takes a lot of work to find & enter the data

Used for:

Forecasting, budgeting & cash flow planning

Accurate calculation of the interest costs

Determining the maximum equity required

For arranging financing

Generating interest from joint venture partners

Structuring partnerships & joint venture agreements

Lender Requirements

Before releasing funds the lenders may specify that certain requirements have to be met such as:

Condominium and land subdivisions

Meet the pre-sale requirements. E.g. 50% pre-sales

Income property developments

Meet the pre-leasing requirements. E.g. 65% pre-leased at a minimum rate of \$18 per Sq. Ft per year

The developer puts in the required equity before the lender advances any funds.

Analyzing renovations

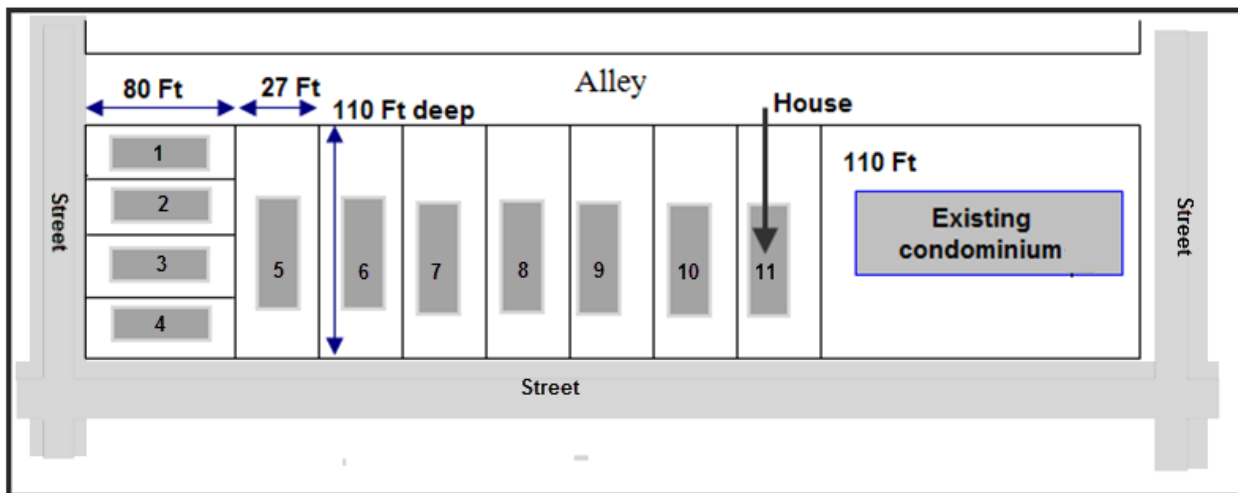
Development analysis is used to analyze renovations such as:

1. converting a rental apartment building to a condominium and selling off the units
2. buying an income property, terminating some or all of the tenants, refurbishing the building and re-leasing at higher rent rates

Use development analysis to determine how much to pay for the property and the potential development profit.

The “Land Cost” is replaced with the purchase price of the “Land and Building”.

Land assembly and negotiation strategies. Case study



Exercise:

There are eleven houses that have the potential to be assembled by a developer to build a condominium project. Each home is worth \$350,000.

You can afford to buy one of the homes for \$350,000 and rent it out and hopefully some time in the future sell it to a developer and make lots of money.

Zoning is Multi-family and can't be changed

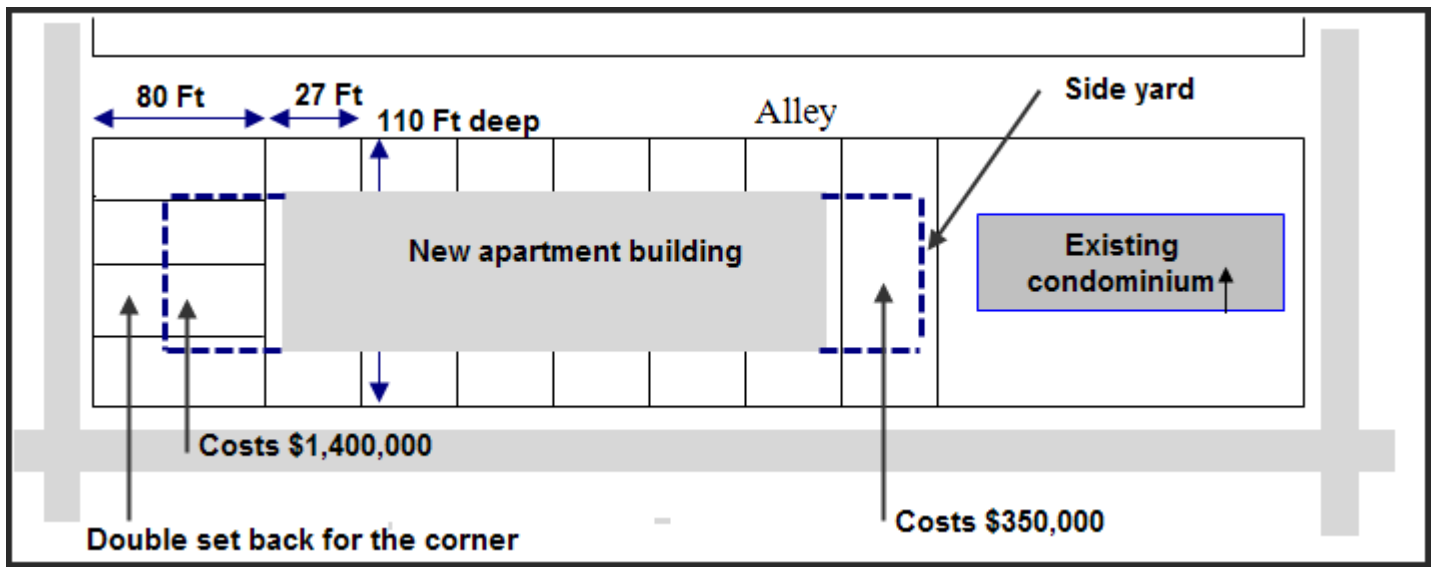
Which house would you buy to make the most money?

Answer: _____

The Houses. There are 11 houses



Considerations



Your Answer _____

Almost impossible to develop economically without the middle houses

The four end houses were not acquired by the developer. Why?

1. Corner has a double set back which reduces the buildable area
2. Have to acquire four houses for $4 \times \$350,000 = \$1,400,000$ to gain a relatively small amount of buildable area.
3. The house on the right is very valuable as we get full site coverage. For \$350,000 we get a valuable increase in the size of the building. In contrast, if we buy the four end houses for \$1,400,000 we get about the same increase in the building area as buying the house on the right for \$350,000
4. The highest and best use for the four end houses is as single family homes

The single house on the right was not acquired. Why?

The old gentleman wanted to remain there for the rest of his life

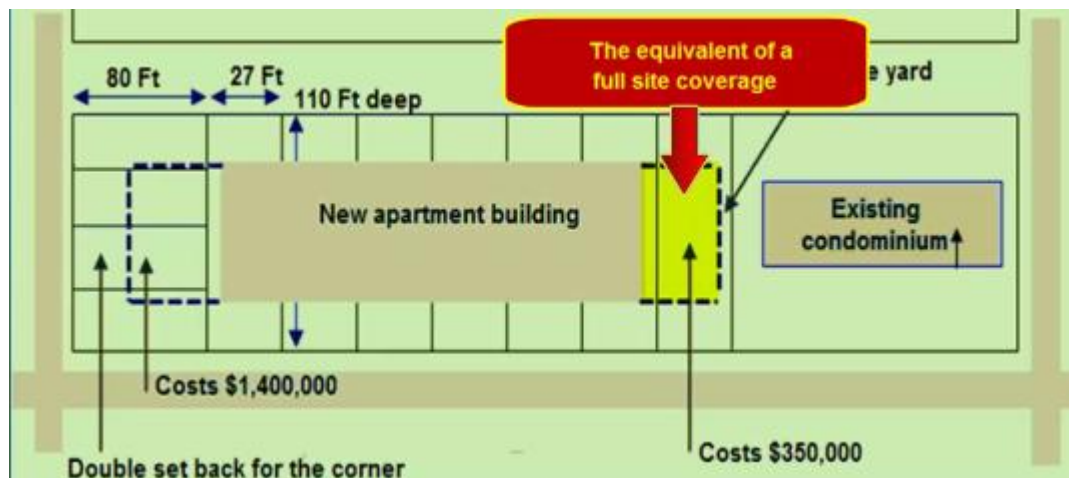
Four end houses

The highest and best use is as single family homes even though the zoning is multi-family



Last house on the right hand side

Unfortunately the elderly gentleman who lived in this house didn't want to sell.



This lot is a very valuable addition to the development because:

1. Adding this end lot provides a full site coverage because the side yard setback has already been provided
2. The larger the building the lower the fixed costs per square foot of building. Fixed costs are construction costs that are more or less independent of the building size such as:
 - Two end walls
 - Underground ramp
 - Electrical room
3. Economies of scale. The larger the building the better. The cost of appliances, plumbing fixtures, carpeting etc., decline as the volume increases.

Unfortunately the house on the right hand end of the development was not available.

House on the right hand side of the assembly



Options explored. Summary

The following development options were analyzed:

1. Acquire all 11 houses and build a rental apartment building with underground parking
2. Exclude the four end houses from the development
3. Exclude the four end houses plus the house on the right hand end that was not available

Architectural sketch plans were developed for each option followed by a development analysis to determine the development profit.

The analysis concluded that it didn't make economic sense to but the four end houses because of the high cost of four houses for a small increase in the buildable area.

Removing the four houses significantly increased the development profit.

The best option was to buy all the houses except the four end houses including the last house on the right hand side. Including this house increased the development profits. Unfortunately the end house was not available and remains there today locked in between the development and the existing condominium building as shown in the photograph below.

Identifying development potential. Example

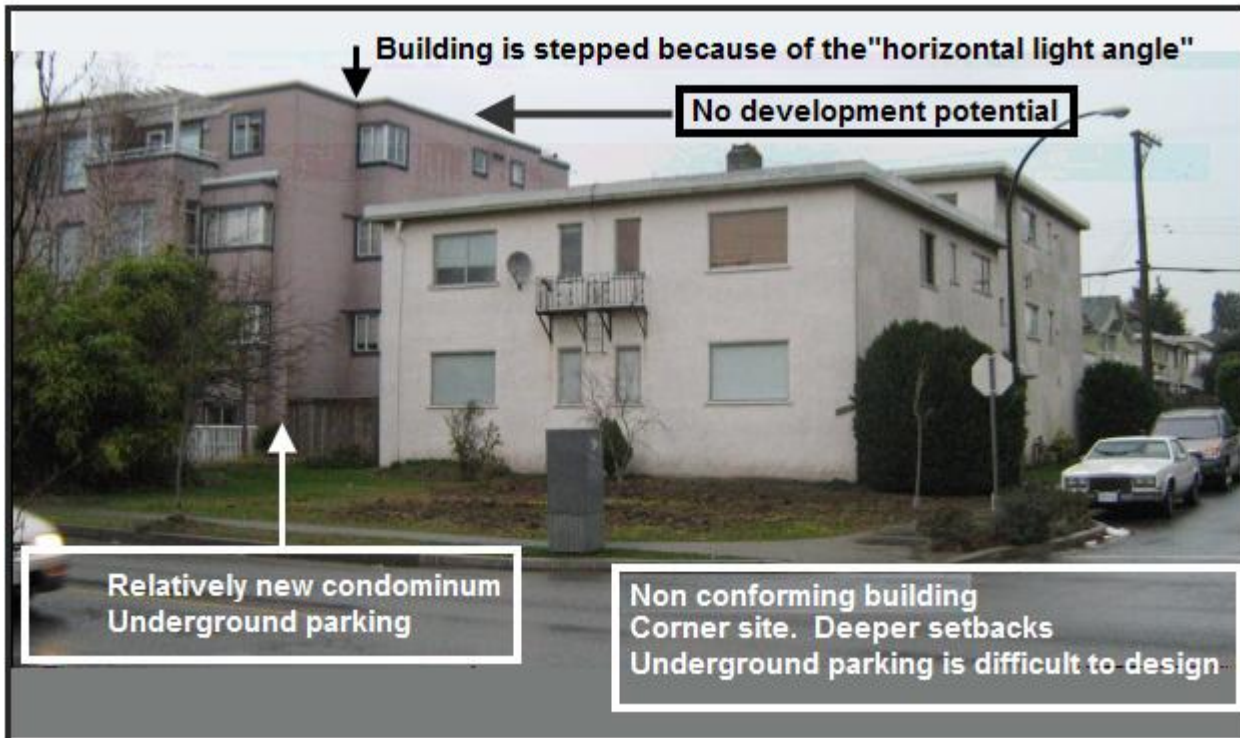
Look at the real estate on both sides and behind of the property. Is there potential for future development?

Example of a building with no development potential.

This site is very difficult to develop because it is a small corner site requiring setbacks from both streets. The site is not very wide. Development of the underground parking is difficult and costly.

The current use is non-conforming with insufficient parking. If the building was destroyed by a fire it could not be replaced with a similar building.

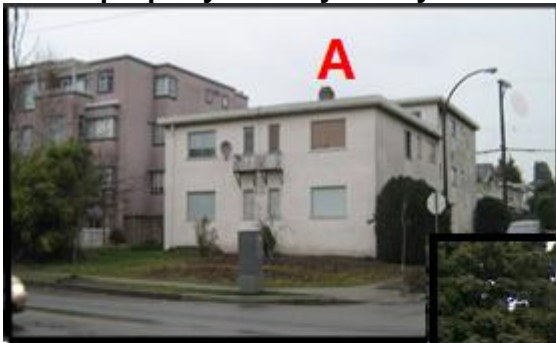
No development potential



Good assembly potential



Which property would you buy?



Property A has no development potential whereas properties B, C and D have development potential.

Analyzing a site with assembly potential. Case study

A realtor had a listing on a large site and wondered how to determine the value of the land. The following observations were made upon visiting the site.

1. Two large trees. Question: Are the trees protected? Yes. Live Oak trees. Reduces buildable area
2. Deep drainage ditch on the right side of the property. Suggests water problems and the need for a retention pond. Reduces buildable area
3. Zoning. Town houses

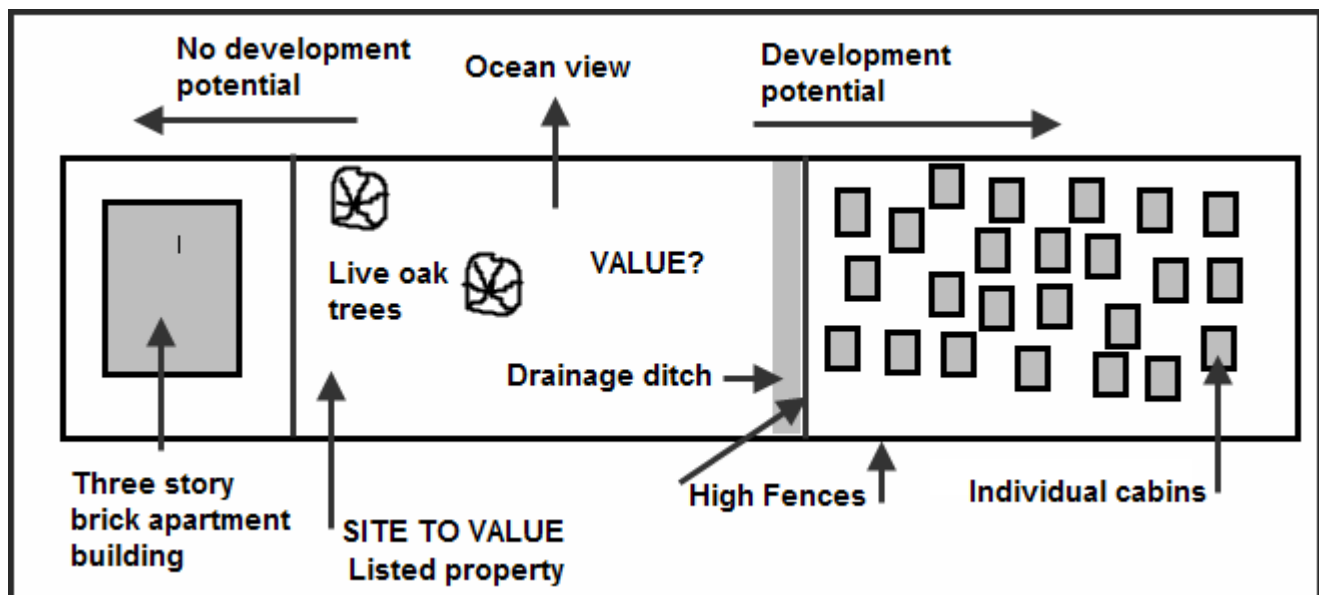
Always look for development potential. What is beside and behind the site and is there a potential assembly?

Property to the left. Has an existing relatively new, three story brick apartment building. No development potential.

Property to the right. There was a high fence surrounding the property. The site is large and has a cluster of small cabins. Clearly not operating at highest and best use. Could this site be acquired?

Observations

1. Site is reasonably large. Protecting the two large live oak trees and building will create site layout problems, reduces buildable area and land value
2. The development would be greatly enhanced if it includes the property to the right of the site which is being underutilized



Steps in determining the value:

1. Get architectural sketch plans done to determine what can be built on the site for the:
 - a) listed site
 - b) listed site combined with the property to the right (Land assembly)
2. Carry out development analysis and determine the land value for the:
 - a) listed site
 - b) listed site combined with the property to the right (Land assembly)

Development Check List

The following outline items are representative of the variety of Development Tasks in check list format that must be co-coordinated and/or performed by the Developer/Owner either with their own personnel or through direction of retained consultants and outsourced contractors:

Land Acquisition

Survey
 Title Commitment / Policy
 Utilities Availability: Sewer, Water, Electrical, Gas
 Zoning
 Restrictions
 Flood Plain
 Drainage: Retention / Detention / Off-site
 Sanitary Sewer Lines / Capacity
 Tree Survey
 Environmental Studies
 Topographical Survey
 Soil Tests: Bearing / Wet / Dry
 Water Lines
 Rights of Way
 Access
 Curb Cuts
 Easements; Set-Backs
 Visibility
 Signage
 Purchase Structure
 Financing
 Land Tract Partial Releases

Project / Site Feasibility

Demographics: 1, 3, 5 Mile Radii
 Growth Patterns / Trends
 Employment Centers / Drive Times
 Area Amenities: Recreational, Entertainment, Shopping
 Market Absorption Dynamics: Historical & Projected
 Competition Analysis: Rent / Sale Structures; Absorption per Type
 Suggested Unit Types, Sizes and Mix
 Rent PSF and Per Unit per Month Projections
 Land / Unit Yield Ratio
 Land Cost per Unit
 Developable Scenarios: Low, Medium, High Densities
 Four side surrounding use

Feasibility Package

Market:

Macro

Micro

Comparables:

Rents

Sizes

Occupancy per unit type

Occupancy per market area

Concessions

Popular amenities

Chamber of Commerce Information

Other Media Info

Employment Base

Market Dynamics

Project Package

General Description

Site Plan

Floor Plans

Rendering (color)

Construction / Development Schedule

Preliminary Construction Budget: Hard Costs & Soft Costs

Detailed Construction Estimate / Line Item Quote

Capital Budget Schedule

Lease-up Schedule

Cash Flow Schedule

Summary Ratios

Pro Forms:

Initial through Lease-up

Projected stabilized

Income & Expenses detailed

Financing

Preliminary Organizational Meeting

Legal

Issuer / Borrower

Underwriter

Financing Plan

Credit Documents

Appraisal / Feasibility

Final Approval Process

Funding

Architectural & Engineering

Sketch Plans
 Preliminary Plans (Financing Package)
 Site Preliminary
 Architectural Preliminary
 Engineering Preliminary
 Preliminary Contractor Bids
 Final Working Drawings & Specs / (red line)
 Negotiated Bid
 Permits:
 Planning
 Building
 Fire
 Flood
 Sewer
 Water
 Highway / Transportation
 Environmental Impact
 Certificates of Occupancy

Contractor

Preliminary Bid
 Negotiated or Hard Bid
 Bond
 Insurance
 Contract Type
 Final Plans & Specs
 Draw Form
 Draw Schedule / Holdback Provisions
 Progressive Lien Waivers: G.C. & Subs
 Inspections:
 Schedule
 Personnel
 Sub-contractor Approval:
 Contracts
 Bonding
 Draw Schedule
 Shop Drawing Approval Procedure
 Change Order Procedure
 Punch List Procedure
 Certificate of Occupancy Procedure

Lender

(Interim Financing)
 Loan Negotiation
 Account Set-up:
 Trust
 Project Development
 Operating Team:
 Loan Officers / Draw Officers / Inspectors
 Draw Forms / Draw Schedule

Information Sources and Web Sites

www.investitpro.com Visit the Online Learning Center for additional educational resources, articles etc.

The following organizations provide information on income and operating expenses.

Institute of Real Estate Management (IREM)

www.irem.org

Tel: (312) 329-6000

Income/Expense Analysis. Office Buildings

Income/Expense Analysis. Shopping Centers

Income/Expense Analysis. Conventional Apartments

Income/Expense Analysis. Federally Assisted Apartments

Income/Expense Analysis. Condominiums, Co-ops & PUDs

Building Owners and Managers Assoc. (BOMA)

www.boma.org

Tel: 1-800-426-6292

Office building expenses. Experience Exchange Report

International Council of Shopping Centers (ICSC) www.icsc.org Tel: (646) 728-3800

Appraisal Institute www.appraisalinstitute.org

Excellent books on analyzing many kinds of properties including Hotel and Motels, Mobile Home & RV Parks, Apartment Buildings, Nursing Homes, Land Subdivisions, Golf Courses, Marinas, Convenience Stores & Retail Facilities, Shopping Centers, Religious Facilities, Rural Properties, Industrial Properties etc

A variety of reports on sales, operating expenses and percentage by type of shopping center, location etc.

Commercial Listing services called CIE's (Commercial Information Exchanges)

www.icx.ca Canada CREA

www.clslink BC Canada

www.ICIWorld.ca Canada

www.commercialsources.com USA

www.loopnet.com USA & Canada

www.costar.com USA Excellent free news letter

CCIM Institute. www.CCIM.com or CCIM.NET CCIM.STDB (Site to do business)

Construction Costs. There are a number of regional and national online construction cost calculators that you can find one including several provided by RS Means for the USA and for Canada which you can easily find by Googling "Construction cost calculators"

Snagit Screen Capture program www.techsmith.com