Housing Costs

Objectives

- Calculate rough cost estimates for a house to be constructed.
- Determine the most accurate cost estimate for a house being constructed.

Importance of Housing Cost Estimates

- Determine cost of a house with limited knowledge of house design.
- On the fly idea of actual cost while house hunting.

Preliminary Estimates

- Square foot method
- Cubic foot method

Square foot method

- Use square footage of house to determine cost of house.
- Different cost for finished and unfinished areas.
- Need estimated cost per square foot.
- Does not include cost for lot.

Square foot method

- Estimate cost fluctuates with
  - Area
  - Type of house
    - 2 story house = $100
    - Ranch = $200

Square foot method

- Example
  - You would like to build a house from the plans given to you. What would the estimated square foot cost be? The contractor stated that the cost for a house is approximately $120/ft^2.
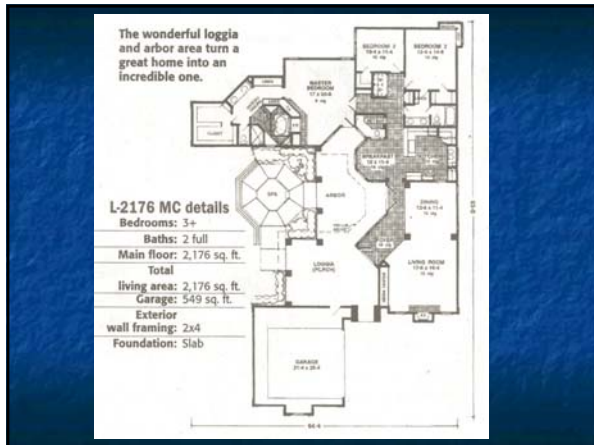

The wonderful loggia and arbor area turn a great home into an incredible one.

L-2176 MC details
Bedrooms: 3+
Baths: 2 full
Main floor: 2,176 sq. ft.
Total living area: 2,176 sq. ft.
Garage: 549 sq. ft.
Exterior wall framing: 2x4
Foundation: Slab

Example

- Finished area = 2176 ft^2
- Unfinished area = 549 ft^2

SF = 2176 ft^2 * \$120/ft^2 + 549 ft^2 * \$60/ft^2

SF = \$261,120 + \$32,940

SF = \$294,060

Cubic foot method

- Using volume instead of area
- Height figured from basement floor to ceiling
- Attic also included
  - Attic volume (AV) = attic area * ½ rise of roof
- Need $/ft^3 from house builder

Cubic foot method

- Example
  - Using the same house, what would the cost estimate be using the cubic foot method? The height from floor to ceiling is 8 ft. The total rise of the roof is 8 ft. The contractor stated that the cost for a house is approximately $14/ft^3.

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Example

- Finished volume = 2176 ft^2 * 8 ft +
    = 17,408 ft^3
- Unfinished volume = 2176 ft^2 * (8 ft/2) + 549 ft^2
* 8 ft + 549 ft^2 * (8 ft/2) = 15,292 ft^3
SF = 17,408 ft^3 * \$12/ ft^3 + 15,292 ft^3 * \$6/ ft^3
SF = \$208,896 + \$91,752
SF = \$300,648

RS Means

- More accurate
- Uses square foot costs BUT more specific

RS Means

- Breaks down by type of house being built
    - Building class
    - Configuration
    - Building type

RS Means

Residential Building Types — Configurations — Detached House, Semi-Detached House, Town Row House

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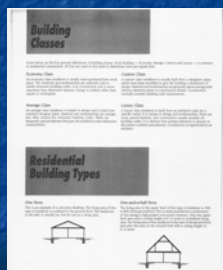
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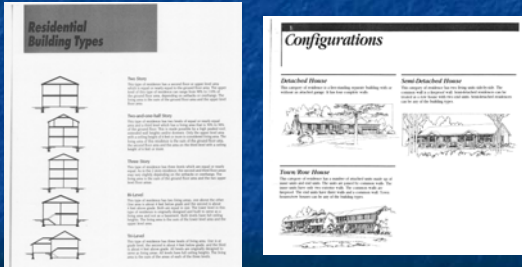
Residential Garage Types
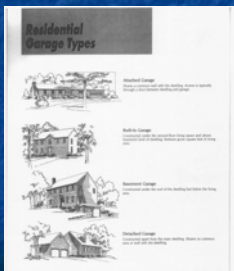
- Garage types

RS Means

- Determine base cost from
  - Exterior
  - Living area
- Add ons
  - Basement
    - Finished/unfinished
    - Other modifications

RESIDENTIAL — Custom — 2 Story

Base cost per square foot of living area

RS Means

- Other modifications
  - Kitchen
  - Garage
  - Bathroom
  - Roof type

RS Means

RS Means

- Appliances
- Fencing
- Porches
- Fireplaces

RS Means

RS Means

- Add together all components
  - Must make sure that all SF multipliers are added together and then multiplied by SF of livable area.
  - Add in modifications that are based on cost per unit

RS Means

- Use Location Factor
  - Champaign = 1.00

Example

- Use the same house to determine the cost by using RS Means version.

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Example

- Determine type of house?
- Basement?
- Modifications?
  - Extra kitchens or bathrooms?
  - Garage?
  - Fireplace?

Example

- Modifications?
  - Roof
  - Kitchen
    - Cabinets?
    - Countertops?
  - Bathroom vanities?

Example

- Appliances?
- Porches?
- Anything else?

Example

- Add everything together
- Multiply by Location factor
  - 1.00
- About $320,000

Other methods

- More accurate
- More thorough review of
  - materials used
  - Cost
  - Overhead

Other Methods

Other Methods

Other methods

- Materials used
  - Actual cost from supplier
  - Review plans to estimate materials used
  - Estimate material waste

Other methods

- Cost of labor and installation
  - Contact local contractor for these costs
  - Usually about 60–80% total cost
  - Pay for supervising
  - Guide To Construction Costs by Architects Contractors Engineers

Other methods

- Overhead
  - Permits
  - Insurance for workers
  - Weather delays

Other methods

- www.building-cost.net/CornersType.asp

Other methods example

- Example
  - Using the same house, what would the cost estimate be using the website on the following page?

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Comparing Estimates

- Square foot
- Cubic foot
- RS Means
- Internet

- $294,000
- $300,000
- $318,000
- $280,000