Why you need an insurance appraisal

Insurance Appraisals
Presented By:
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Suncorp Valuations

Overview of Suncorp Valuations
Suncorp Valuations
S
Canada
USA
RIMS
Massachusetts Chapter
What is an Insurance Appraisal?

- Defined as:
- “the art and science of estimating the insurable cost or value of a property as of a specific date”.
- An appraisal will include specific insurable property
- Utilizing a premise of value relevant for insurance purposes
- Performed by qualified accredited senior appraisers (ASA) designated by the American Society of Appraisers
- Complies to the Uniform Standards of Professional Appraisal Practice (USPAP) whose guidelines are established by the Appraisal Foundation

Why do we require Insurance Appraisals?

- An Insurance Appraisal should be one component of an overall Program to manage an organization’s various risks:
  - Health & Safety Risks
  - Security Risks
  - Professional Liability
  - Property Loss Risks
  - Proprietary Knowledge
  - Business Interruption
  - Workforce Retention
  - Environmental Risks
  - Directors' Liability

2017 Thomas Fire in California
2015 US Snowstorms and 2017 Hurricanes

Northeast Snowstorms $3.8 Billion in Losses
Hurricane Harvey $100 Billion in Losses

Property Loss Experience

How many organizations can achieve their objectives, after a loss, with only 2/3 of their Assets replaced?

Loss experience has shown that the destroyed property on average is 30% under-insured.

How Were Values Established?
SAMPLE OF APPRAISED PROPERTIES & PREMISES OF VALUE
Appraisal Process – Historically Designated Property

20 Year Old Injection Molding Machine

Example of Value Relationships
Assume we have a 2008 10-year old riding fork lift truck 5,000 lb capacity in good condition.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Cost</td>
<td>$33,000</td>
</tr>
<tr>
<td>Net Book Value</td>
<td>$10,000</td>
</tr>
<tr>
<td>Market Value</td>
<td>$13300</td>
</tr>
<tr>
<td>Orderly Liquidation</td>
<td>$36,700</td>
</tr>
<tr>
<td>Replacement Cost</td>
<td>$40,000</td>
</tr>
<tr>
<td>Actual Cash Value</td>
<td>$18,000</td>
</tr>
</tbody>
</table>
Example of Value Relationships

<table>
<thead>
<tr>
<th>RC</th>
<th>OC</th>
<th>ACV</th>
<th>MV</th>
<th>NBV</th>
<th>OLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>$40,000</td>
<td>$33,000</td>
<td>$18,000</td>
<td>$14,000</td>
<td>$10,000</td>
<td>$6,700</td>
</tr>
</tbody>
</table>

Using Incorrect Premise of Value will understate the Insurable Value

Equipment Cost Trends for Various Industries

Construction Cost Trends for Various Cities
## Construction Cost Changes

<table>
<thead>
<tr>
<th>U.S. City</th>
<th>% Change Last Year</th>
<th>% Change Last 5 Years</th>
<th>% Change Last 10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>3.6%</td>
<td>7.9%</td>
<td>23.1%</td>
</tr>
<tr>
<td>Boston</td>
<td>1.6%</td>
<td>11.1%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Chicago</td>
<td>3.9%</td>
<td>12.7%</td>
<td>31.1%</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>3.2%</td>
<td>11.5%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Houston</td>
<td>4.4%</td>
<td>12.5%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>3.2%</td>
<td>10.2%</td>
<td>23.6%</td>
</tr>
<tr>
<td>New York</td>
<td>2.1%</td>
<td>13.2%</td>
<td>27.0%</td>
</tr>
<tr>
<td>Portland</td>
<td>4.7%</td>
<td>11.6%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Seattle</td>
<td>6.0%</td>
<td>12.5%</td>
<td>30.5%</td>
</tr>
</tbody>
</table>

Sourced from Marshall Valuation Service – January 2018

## Property Inclusions

- **Buildings**
- **Site Improvements**
- **Other Infrastructure**
- **Leasehold Improvements**

## Property Inclusions

- **Machinery & Equipment**
- **Furnishings & Equipment**
- **Mobile Equipment**
- **Computer Hardware**
Property Inclusions

INSURANCE APPRAISAL
PROCESS

Proposal Issuance
- Information provided by client may include:
  - Listing of Assets to be Appraised
  - Premise(s) of Insurable Value
  - Square Footages of Buildings
  - Occupancies of Buildings
  - Quantity & Capacities of M&E
  - Level of Detail Required In Report
  - Specified Date for Final Report Delivery
  - Availability of Construction Drawings
- Fees estimated based on the professional time required to complete the appraisal
- Proposal issued outlining parameters of appraisal service
Project Planning

- Formal written authorization is received from client
- Client is contacted to re-confirm parameters of proposed appraisal service
- Information is requested from client including:
  - Architectural Drawings, Site Plans, Blueprints, Construction Related Data & Property Records
  - Site Contact(s)
- Scheduling of Appraisal Inspection

Site Inspection

For Buildings & Infrastructure:
- Review “As-Built” architectural drawings
- Measure the structures
- Record pertinent architectural features of building construction
- Determine specifications of building systems
- Photograph buildings (if authorization from client is received)
- Assess Physical Condition (for ACV)

Develop Insurable Values

Buildings & Infrastructure:
- Develop CRN, RCN or ACV value using reliable costing sources:
  - RS means Construction Cost Estimating
  - Advice of Local Contractors
  - Proprietary Database
- Employ valuation approach to suit building under appraisal:
  - Segregated Cost Method
  - Model-Based Method
Develop Insurable Values

Demolition and Debris Removal

- Confirm property loss assumption is in compliance with policy
- Give consideration to pertinent cost factors:
  - Location/Ease of Access
  - Type and Quality of Construction
  - Distance from Dump Site
- Apply benchmark cost:
  - On a per sq. ft. basis; or
  - As a % of Building CRN

Site Inspection & Verification – Machinery & Equipment

Site Inspection

For Machinery & Equipment:
- Inventory assets by location, building and cost center and/or dollar cut off, $25K, $50K, $100K
- Record Manufacturer, Model Number, Capacity and Specialty Features
- Note age and condition (for ACV)
- Review Property Records
Develop Insurable Values

Machinery & Equipment (Continued)

• Give consideration to other applicable costs:
  ➢ Freight
  ➢ Engineering/Design
  ➢ Installation including foundations, controls, piping and electrical connections
  ➢ Start-up and Testing
  ➢ Taxes

Develop Insurable Values

Machinery & Equipment

• Develop RCN or ACV values using reliable costing sources:
  ➢ Current quotes from equipment suppliers
  ➢ Richardson’s Process Plant Construction Estimating
  ➢ Equipment manufacturers’ catalogues
  ➢ Proprietary Database
  ➢ Comparison to original cost (if recent & available)
BENEFITS OF AN INSURANCE APPRAISAL PROGRAM

Benefits To Property Owners
An appraisal by an accredited appraiser will:
- Avoid a co-insurance penalty, for an under-insured loss
- Avoid paying too much premium, if over-insured
- Rate reduction may apply
- Provide an accurate documentation of the Insured assets
- Transfer risk to appraisal firm
- Expedite claim

Benefits To Insurance Brokers
An up-to-date appraisal will:
- Transfer risk to appraisal firm
- Facilitate placement of insurance with underwriters
- Provide an allocation of insurable value by property class
- Enable implementation of an annual update program
Benefits To Insurers

An appraisal from a reliable source:
- Ensures that insurance is underwritten on current accurate data
- Facilitates assessment of risks
- Provides documented evidence of the specific insured assets
- Avoids under-insured loss scenario
- May avoid unnecessary litigation costs in the event of loss claim dispute

INSURANCE APPRAISAL
REPORT MANDATORY REQUIREMENTS

Report Preparation & Issuance
- Report complies to the Uniform Standards of Professional Appraisal Practice (USPAP)
- Report is structured to the terms of the authorized service
- Deliverables provided to client in hard-copy and/or electronic format
- Support data for appraisal is retained on file for at least seven years
- Supplemental information can be provided to client, upon request
Purpose, Effective Date and Intended Users

- Purpose may be primarily for Insurance Purposes but appraisal service can be expanded to meet other purposes such as Property Records & Financial Reporting.

- Effective Date - typically the last date of the appraisal inspection.

- Intended Users generally consist of:
  - Client of Record
  - Insurance Broker or Agent
  - Insurer of Property

Premise(s) of Value

- **Replacement Cost New**: “the estimated monetary cost, as at the valuation date, of constructing new, a building or structure that would have a similar utility to the subject property under appraisal, but constructed with modern materials and according to current standards, design and layout.”

- **Cost of Reproduction New**: “the monetary amount required to reproduce property of like kind and quality at one time in accordance with current market prices for materials, labor, manufactured equipment, contractor’s overhead, profit and fees, but without provisions for overtime, bonuses for labor, or premiums for materials”

- **Actual Cash Value**: “Replacement or Reproduction Cost New Less Physical Depreciation”

Approaches to Value

- Income Approach

- Direct Comparison (Sales Comparison)

- Cost Approach
  - Segregated Cost Method
  - Model Based Method
Conclusion of Value

- Re-states Effective Date
- Premise of Value
- Summary of Insurable Costs by Property Classification
- Total Insurable Value
- Currency

Addenda

- General Service Conditions
- Contingent and Limiting Conditions
- Certification Statement
- Summary of Insurable Costs
- Construction Cost Analysis
- Inventory of Machinery and Equipment

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SAMPLE INSURANCE APPRAISAL – EQUIPMENT INVENTORY

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>VALUE</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Addenda – Construction Cost Analysis

- Property Name
- Property Address including Postal Code
- May have a Legal Description
- Date Built
- Size (square feet)
- Building Components & Services (i.e. Floor, Roof, HVAC)
- Fire Protection System Details

Benchmarking Current Construction Cost Ranges

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>Cost Range Per Square Foot (Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining Mill Buildings:</td>
<td>$200 - $250</td>
</tr>
<tr>
<td>Food Processing Plants:</td>
<td>$150 - $250</td>
</tr>
<tr>
<td>Power Plants:</td>
<td>$300 - $400</td>
</tr>
<tr>
<td>Pulp &amp; Paper Mills:</td>
<td>$100 - $300</td>
</tr>
<tr>
<td>Hospitals</td>
<td>$400 - $600</td>
</tr>
<tr>
<td>Light Manufacturing (Non-Butler type):</td>
<td>$80 - $100</td>
</tr>
<tr>
<td>Heavy Process Manufacturing Plants:</td>
<td>$250 - $400</td>
</tr>
<tr>
<td>Office Buildings</td>
<td></td>
</tr>
<tr>
<td>Under 5 Stories:</td>
<td>$160 - $250</td>
</tr>
<tr>
<td>5 - 10 Stories:</td>
<td>$170 - $270</td>
</tr>
<tr>
<td>10 - 20 Stories:</td>
<td>$190 - $350</td>
</tr>
<tr>
<td>Over 20 Stories:</td>
<td>$250 - $450</td>
</tr>
<tr>
<td>Regional Shopping Malls:</td>
<td>$160 - $250</td>
</tr>
</tbody>
</table>
### Benchmarking Current Contents Cost Ranges

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>Cost Per Square Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical:</td>
<td>$350 - $400</td>
</tr>
<tr>
<td>Food Processing Plants:</td>
<td>$250 - $350</td>
</tr>
<tr>
<td>Office Buildings:</td>
<td>$40 - $70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>Cost Per Operating Capacity Unit (in U.S. Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement Plant:</td>
<td>$170* - $350* per Metric Ton</td>
</tr>
<tr>
<td>Pulp &amp; Paper Plants:</td>
<td>$800,000 to $1,300,000* per Metric Ton</td>
</tr>
</tbody>
</table>

### Benchmark Costs For Electricity Generating Plants

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Technology Type</th>
<th>Nominal Capacity</th>
<th>Cost/KW (US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>Ultra Supercritical Coal</td>
<td>650,000</td>
<td>3,636</td>
</tr>
<tr>
<td>Coal</td>
<td>Ultra Supercritical Coal with CCS</td>
<td>650,000</td>
<td>5,084</td>
</tr>
<tr>
<td>Coal</td>
<td>Pulverized Coal Converted to Natural Gas</td>
<td>300,000</td>
<td>226</td>
</tr>
<tr>
<td>Nat. Gas</td>
<td>Natural Gas Combined Cycle</td>
<td>702,000</td>
<td>978</td>
</tr>
<tr>
<td>Nat. Gas</td>
<td>Advanced Combined Cycle</td>
<td>429,000</td>
<td>1,104</td>
</tr>
<tr>
<td>Nat. Gas</td>
<td>Conventional Combustion Turbine</td>
<td>100,000</td>
<td>1,101</td>
</tr>
<tr>
<td>Nat. Gas</td>
<td>Advanced Combustion Turbine</td>
<td>237,000</td>
<td>678</td>
</tr>
<tr>
<td>Nat. Gas</td>
<td>Recip. Internal Combustion Engine</td>
<td>85,000</td>
<td>1,342</td>
</tr>
</tbody>
</table>

* Source – U.S. Department of Energy
Benchmark Costs for Healthcare Facilities

<table>
<thead>
<tr>
<th>Building Construction</th>
<th>Cost/Sq. Ft. Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Building</td>
<td>$500 - $600</td>
</tr>
<tr>
<td>Clinic Building</td>
<td>$400 - $450</td>
</tr>
<tr>
<td>Laboratory Building</td>
<td>$450 - $550</td>
</tr>
<tr>
<td>Administrative Building</td>
<td>$280 - $330</td>
</tr>
<tr>
<td>Above Ground Parking Garage</td>
<td>$90 - $110</td>
</tr>
<tr>
<td>Underground Parking Garage</td>
<td>$90 - $130</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Furnishings &amp; Equipment</th>
<th>Cost Per Square Foot</th>
<th>Cost Per Bed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Per Square Foot</td>
<td>$140 - $200</td>
<td></td>
</tr>
<tr>
<td>Cost Per Bed</td>
<td>$350,000 - $450,000</td>
<td></td>
</tr>
</tbody>
</table>

* Cost Source: Suncorp Valuations Internal Data

Thank you

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