### Table 13.1 Sales Comparison Grid

<table>
<thead>
<tr>
<th></th>
<th>Subject Property</th>
<th>Comparable 1</th>
<th>Adjustment</th>
<th>Comparable 2</th>
<th>Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>8225 Washington Blvd.</td>
<td>1430 E. 82nd Street</td>
<td>$79,000</td>
<td>1710 E. 80th Street</td>
<td>$55,000</td>
</tr>
<tr>
<td><strong>Sale price</strong></td>
<td>$0</td>
<td>$79,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Price per sq. ft.</strong></td>
<td>$0</td>
<td>$2.13</td>
<td>0.00%</td>
<td>$3.61</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Rights transferred</strong></td>
<td>fee simple</td>
<td>fee simple</td>
<td></td>
<td>fee simple</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$79,000</td>
<td></td>
<td></td>
<td>$55,000</td>
<td></td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td>assume cash</td>
<td>contract sale</td>
<td>-5.00%</td>
<td>cash to seller</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$75,050</td>
<td></td>
<td></td>
<td>$55,000</td>
<td></td>
</tr>
<tr>
<td><strong>Conditions of sale</strong></td>
<td>arm’s-length</td>
<td>arm’s-length</td>
<td>0.00%</td>
<td>arm’s-length</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$75,050</td>
<td></td>
<td></td>
<td>$55,000</td>
<td></td>
</tr>
<tr>
<td><strong>Date of sale</strong></td>
<td>now</td>
<td>5 months ago</td>
<td>1.25%</td>
<td>4 months ago</td>
<td>1.00%</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$75,988</td>
<td></td>
<td></td>
<td>$55,550</td>
<td></td>
</tr>
<tr>
<td><strong>Topography</strong></td>
<td>rolling</td>
<td>level</td>
<td>5.00%</td>
<td>level</td>
<td>5.00%</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>cul-de-sac</td>
<td>corner lot</td>
<td>10.00%</td>
<td>cul-de-sac</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Wooded</strong></td>
<td>10%</td>
<td>50%</td>
<td>-8.00%</td>
<td>50%</td>
<td>-8.00%</td>
</tr>
<tr>
<td><strong>Flood area</strong></td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Size (square feet)</strong></td>
<td>22,000</td>
<td>37,026</td>
<td>-17.25%</td>
<td>15,246</td>
<td>7.75%</td>
</tr>
<tr>
<td><strong>Size (acres)†</strong></td>
<td>0.5051</td>
<td>0.8500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Zoning</strong></td>
<td>residential</td>
<td>residential</td>
<td>0.00%</td>
<td>residential</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Utilities</strong></td>
<td>public water/sewer</td>
<td>public water/sewer</td>
<td>0.00%</td>
<td>public water/sewer</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Type (platted)</strong></td>
<td>platted</td>
<td>platted</td>
<td>0.00%</td>
<td>platted</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Improved property</strong></td>
<td>$300,000</td>
<td>$450,000</td>
<td>-7.50%</td>
<td>$200,000</td>
<td>6.25%</td>
</tr>
<tr>
<td><strong>Price range‡</strong></td>
<td>$400,000</td>
<td>$550,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other factors</strong></td>
<td>None</td>
<td></td>
<td>0.00%</td>
<td>None</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Net adjustment</strong></td>
<td>N/A</td>
<td>-17.75%</td>
<td></td>
<td></td>
<td>11.00%</td>
</tr>
<tr>
<td><strong>Indicated value</strong></td>
<td>N/A</td>
<td>$62,500</td>
<td></td>
<td>$61,661</td>
<td></td>
</tr>
</tbody>
</table>

* Date of sale adjustment = 0.25% per month
† Lot size adjustment = 50% per acre
‡ Price range adjustment = 0.05% per $1,000 in value

© Appraisal Institute 2004
Paired Data Sales Analysis

In paired data sales analysis, appraisers measure the difference in the sale prices of two properties and explain it by studying differences in the properties. This means appraisers normally adjust to a point where all the bottom-line answers are the same. This is not just luck, it is the method.

As an example, assume the subject property is a lot in the middle of the block on Main Street (Lot 15 in the figure). The sale properties are equal to the subject in all other elements of comparison. The process of extracting adjustments from the comparable sales data is shown in the adjustment grid.

The first adjustment extracted in the grid is for the date of sale (i.e., market conditions). Comparing the sales of Lots 2 and 4 shows that the price has increased by $1,000 over the last six months. This implies an appreciation rate of $2,000 per year. Another straightforward example of extraction is between the sales of Lots 20 and 23, where there is a $2,000 difference in price that occurred over 12 months. This again shows an increase of $2,000 per year. Comparing sales of Lots 1 and 6 shows a rate of $2,000 per year as well.

The second adjustment is for street location. Comparing the sale prices of Lots 6 and 12 shows that the market may be paying $1,000 more for lots with frontage on Main Street than for lots with frontage on Market Street. Comparing sales of Lots 14 and 20 further reveals that there seems to be a $1,000 premium for locations on Lake Street over Main Street. Lots 2 and 9 can also be compared to extract a location adjustment after the adjustment for date of sale is made. The sales of Lots 14 and 23 can also be considered to derive an indication of the adjustment for location but only after adjustment for the date of sale. There could also be an adverse locational issue for properties adjacent to or above Market Street; the farther the property is away from that adverse influence, the less its price is affected.

A final adjustment is made for corner influence. This adjustment rate can be extracted from comparable sales of Lots 9 and 12, which imply that the price of a corner lot is $1,000 more than a property not on a corner. Comparing Lots 19 and 23 also supports a $1,000 higher price for the corner lots.

© Appraisal Institute 2004
**Table 13.2 Land Value via Extraction**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross sale price</td>
<td>$301,000</td>
</tr>
<tr>
<td>Cost of residence</td>
<td>2,800 @ $75.00 = $210,000</td>
</tr>
<tr>
<td>Cost of basement</td>
<td>500 @ $25.00 = $12,500</td>
</tr>
<tr>
<td>Cost of porches, etc.</td>
<td>500 @ $25.00 = $12,500</td>
</tr>
<tr>
<td>Cost of garage</td>
<td>750 @ $25.00 = $18,750</td>
</tr>
<tr>
<td><strong>Total cost of building improvements</strong></td>
<td><strong>$253,750</strong></td>
</tr>
<tr>
<td>Total depreciation (all causes)</td>
<td>12% – $30,450</td>
</tr>
<tr>
<td>Depreciated value of building improvements</td>
<td>– $223,300</td>
</tr>
<tr>
<td>Depreciated value of site improvements</td>
<td>– $12,500</td>
</tr>
<tr>
<td>Estimated land value</td>
<td>$65,200</td>
</tr>
</tbody>
</table>

© Appraisal Institute 2004
### Table 13.3 Land Value via the Allocation Method

<table>
<thead>
<tr>
<th></th>
<th>Sale 1</th>
<th>Sale 2</th>
<th>Sale 3</th>
<th>Sale 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale price</td>
<td>$250,000</td>
<td>$300,000</td>
<td>$220,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>Estimated land value</td>
<td>− $50,000</td>
<td>− $56,000</td>
<td>− $45,000</td>
<td>− $40,000</td>
</tr>
<tr>
<td>Estimated building value</td>
<td>$200,000</td>
<td>$244,000</td>
<td>$175,000</td>
<td>$160,000</td>
</tr>
<tr>
<td>Land/property ratio</td>
<td>20.00%</td>
<td>18.67%</td>
<td>20.45%</td>
<td>20.00%</td>
</tr>
</tbody>
</table>

© Appraisal Institute 2004
### Figure 13.1 Land Value via Direct Capitalization of Ground Rent

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income to the land ($I_L$)</td>
<td>$12,000</td>
</tr>
<tr>
<td>Capitalization rate for the land ($R_L$)</td>
<td>÷ 0.12</td>
</tr>
<tr>
<td>$100,000</td>
<td></td>
</tr>
</tbody>
</table>

© Appraisal Institute 2004
The net operating income for the property is $125,000 ($I_0 = $125,000). The capitalization rate for the land is 10% ($R_L = 0.10$). The value of the building is $800,000 ($V_B = $800,000). The capitalization rate to the building is 12% ($R_B = 0.12$). Therefore, the value of the building multiplied by the capitalization rate to the building equals the income to the building:

\[ V_B \times R_B = 800,000 \times 0.12 = 96,000 \]  

The income to the building is subtracted from the income overall to determine the income to the land:

\[ I_0 - I_B = 125,000 - 96,000 = 29,000 \]  

The income to the land is divided by the capitalization rate to the land to estimate land value:

\[ \frac{I_L}{R_L} = \frac{29,000}{0.10} = 290,000 \]
### Table 13.4 Land Value by Discounted Cash Flow Analysis

<table>
<thead>
<tr>
<th>Quarter</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lots per quarter</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Sale price per lot</td>
<td>$47,500</td>
<td>$47,500</td>
<td>$47,500</td>
<td>$47,500</td>
<td>$47,500</td>
<td>$47,500</td>
<td>$47,500</td>
<td>$47,500</td>
</tr>
<tr>
<td>Estimated PGI</td>
<td>$356,250</td>
<td>$356,250</td>
<td>$356,250</td>
<td>$356,250</td>
<td>$356,250</td>
<td>$356,250</td>
<td>$356,250</td>
<td>$356,250</td>
</tr>
<tr>
<td>Less estimated expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development costs</td>
<td>$200,000</td>
<td>$200,000</td>
<td>$200,000</td>
<td>$200,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Real estate taxes</td>
<td>$400</td>
<td>$0</td>
<td>$400</td>
<td>$0</td>
<td>$2,000</td>
<td>$0</td>
<td>$2,000</td>
<td>$0</td>
</tr>
<tr>
<td>Sales commission (7%)</td>
<td>$24,938</td>
<td>$24,938</td>
<td>$24,938</td>
<td>$24,938</td>
<td>$24,938</td>
<td>$24,938</td>
<td>$24,938</td>
<td>$24,938</td>
</tr>
<tr>
<td>Advertising, etc. (4%)</td>
<td>$14,250</td>
<td>$14,250</td>
<td>$14,250</td>
<td>$14,250</td>
<td>$14,250</td>
<td>$14,250</td>
<td>$14,250</td>
<td>$14,250</td>
</tr>
<tr>
<td>Entrepreneurial incentive (20%)</td>
<td>$71,250</td>
<td>$71,250</td>
<td>$71,250</td>
<td>$71,250</td>
<td>$71,250</td>
<td>$71,250</td>
<td>$71,250</td>
<td>$71,250</td>
</tr>
<tr>
<td>Total expenses</td>
<td>$310,838</td>
<td>$310,438</td>
<td>$310,838</td>
<td>$310,438</td>
<td>$112,438</td>
<td>$110,438</td>
<td>$112,438</td>
<td>$110,438</td>
</tr>
<tr>
<td>Net cash flow</td>
<td>$45,412</td>
<td>$45,812</td>
<td>$45,412</td>
<td>$45,812</td>
<td>$243,812</td>
<td>$245,812</td>
<td>$243,812</td>
<td>$245,812</td>
</tr>
<tr>
<td>Discounted @ 12%</td>
<td>0.9709</td>
<td>0.9426</td>
<td>0.9151</td>
<td>0.8885</td>
<td>0.8626</td>
<td>0.8375</td>
<td>0.8131</td>
<td>0.7894</td>
</tr>
<tr>
<td>Present value</td>
<td>$44,091</td>
<td>$43,182</td>
<td>$41,556</td>
<td>$40,704</td>
<td>$210,312</td>
<td>$205,868</td>
<td>$198,242</td>
<td>$194,044</td>
</tr>
</tbody>
</table>

Present value of land = $977,999

© Appraisal Institute 2004