MUNICIPAL COSTS AND SERVICES, A LAND USE COMPARISON

LEE SOBEL, DIRECTOR OF PUBLIC STRATEGIES
Fire Protection Costs
Fire Protection Costs Increase Dramatically at Very Low Densities

Determinants of Operating Efficiency
- Response Shed Size
- Population Density
- Rate of Calls per Population
- Capacity per Fire Engine

Fire Protection Cost per Capita
Montgomery County, MD

Costs per capita decrease until engine capacity is filled requiring the expense of a new engine
School Transportation Costs
School Transportation Costs Increase Once Lower Densities Cause More Students to Live Outside The Walk Zone

This analysis is using average walk zones and typical scenarios, and does not take into effect the “case by case” basis reality that if there is a busy road near a school a zone might decrease dramatically from the norm.
Road Length and Area per Capita
Road Length and Area per Capita Decreases as Density Increases

Suburban Residential (ex: Potomac, Poolesville)
- Residents: 325
- Employees: 55
- Total: 380
- Total Res. & Emp Per Acre: 2.2
- Total Road Area: 354,000 SF
- Road Area per Capita: **1,100 SF**

Downtown Urban (ex: Bethesda, Silver Spring)
- Residents: 4,000
- Employees: 11,000
- Total: 15,000
- Total Res. & Emp Per Acre: 100
- Total Road Length: 1,150,000 SF
- Road Length per Capita: **77 SF**

Road Cost per Capita by Density
- Low Density (1 HU/acre): $82.50
- Base Scenario (4 HU/acre): $34.47
- High Density (8 HU/acre): $22.62
- Walkable Urban (12 HU/acre): $17.84
Pipe Length and Area per Capita
At lower densities of development, Montgomery County does not provide public water or sewer (approx. 8 people per acre or less). For the purposes of this model we have assumed water was provided throughout, although this is one situation in which very low density development may save the city money as no water or sewer is provided.
## FISCAL PLANNING FOR FUTURE GROWTH AND DEVELOPMENT

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Low Density</th>
<th>Base Density</th>
<th>Higher Density</th>
<th>Walkable Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family Detached</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
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<tr>
<td>Townhouses</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Multifamily Units</td>
<td>1,000</td>
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<tr>
<td>Total Units</td>
<td>3,000</td>
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<tr>
<td>Commercial SF</td>
<td>2,600,000</td>
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<tr>
<td>Net Residential Density</td>
<td>1.0</td>
<td>4.0</td>
<td>8.0</td>
<td>12.0</td>
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<tr>
<td>Total Gross Area</td>
<td>3,636</td>
<td>936</td>
<td>486</td>
<td>336</td>
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</tbody>
</table>
MONTGOMERY COUNTY PER CAPITA COUNTY COSTS BY DENSITY

NOTE: Does not include potential density-related savings associated with solid waste or use of existing infrastructure
THANK YOU

LEE SOBEL, DIRECTOR OF PUBLIC STRATEGIES