Land-use Model Development (UrbanSim)

Madison County Council of Governments
Transportation Department
Systems Planning Section
Project Schedule

Task 1: Database setup
   Schedule: Months 1-5 (June through October 2013)

Task 2: UrbanCanvas setup
   Schedule: Month 6 (November 2013)

Task 3: UrbanSim setup
   Schedule: Month 7-8 (December 2013 and January 2014)

Task 4: UrbanSim calibration
   Schedule: Months 9-10 (February and March 2014)

Task 5: Connect UrbanSim to travel model
   Schedule: Month 11 (April 2014)

Task 6: Sensitivity testing
   Schedule: Month 12 (May 2014)

Details

Consultant: Synthicity, LLC

Model type: Parcel

Model components

<table>
<thead>
<tr>
<th>Model</th>
<th>Agent</th>
<th>Dependent Variable</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Location Choice</td>
<td>Household (new/moving)</td>
<td>Residential Buildings with vacant unit</td>
<td>Multinominal logit</td>
</tr>
<tr>
<td>Employment location choice</td>
<td>Job (new/ moving)</td>
<td>Non-residential building with vacant space</td>
<td>Multinominal logit</td>
</tr>
<tr>
<td>Home-based job choice</td>
<td>Worker (without job)</td>
<td>Binary choice (Work at home)</td>
<td>Binary Logit</td>
</tr>
<tr>
<td>Workplace Choice</td>
<td>Non-home based worker (without job)</td>
<td>Vacant Job</td>
<td>Multinominal Logit</td>
</tr>
<tr>
<td>Real Estate Price</td>
<td>Parcel</td>
<td>Price Per Square Foot</td>
<td>Linear multiple regression (hedonic principles)</td>
</tr>
</tbody>
</table>