##### [00:00:01.630] - Speaker 1

Welcome to this Community Viz Video Tutorial. This tutorial will teach you about running the spatial and visual phases of a standard buildout analysis using the Scenario 360 Buildout Wizard. As we explained in the first video video in this series, there are three main phases to a community that is build out analysis numeric how much development is possible under rule specified spatial, where might this development be located under rule specified and visual, what might this development look like? These steps are sequential, so you need to complete them in order. In previous videos, we've run numeric using both basic inputs and some more refined options.

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So we're now ready to move on to the next two phases of the wizard. We'll start by launching the build out wizard from the Scenario 360 drop down tools. Since we've already input numeric information, we'll go directly to the spatial phase. Clicking on this button, Spatial Build Out will take the information we have from numeric and try to create features to distribute that development. You have the ability to specify how development points will be spaced, what type of pattern you want, and if you'd like to follow a specified road network, you can input a setback distance.

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These dimensions are probably measuring slightly differently than your local regulations. Spatial build out is going to measure the minimum separation distance of two buildings by the center point of each structure. Similarly, the minimum setback from roads will be measured from the center line of the road to the center of the building. Point codes commonly use terms like separation and distance. The most common way to measure building separation from a zoning perspective is from the outside walls of the structure.

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When codes talk about road setbacks, typically this is a measure from front face of structure to edge of pavement or the edge of road right away. If you want to use your code allowances to help you determine appropriate spatial build out inputs, remember to adjust upward where appropriate. You may want to add some distance for approximate structure dimensions, and in the case of road setbacks, you may need to add in half of the road width. If your codes don't provide much guidance or you want to base your future on existing development, an easy way to estimate is to use the ArcGIS Measure tool. Find a spot on the map where development looks similar to your future desired conditions, and simply measure from center of roof to center of roof and center of roof to center of road.

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Now that we've got through the measurements, I can enter my options directly into this table. I make sure to specify a road layer and setback distance for all land uses, where I specify follow roads as the pattern that completes the spatial buildup phase, and I'm ready to move on to visual build out. This is where I can start to associate three dimensional data with my analysis. For each land use designation, I can click on the white space in the table to get a Browse folder button. Once in the browser, you want to navigate to a location where you have some 3D model stored.

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Scenario Three D The three D program which comes as part of Community that will accept models in KMZ Dae and three DS file formats. If you plan to create a 3D scene for display in Google Earth or Arch Explorer, look for models in the Km Z format. If you're just getting started with 3D, there is a library of models provided with Community vis. This can be found in the Scenario 3D program file folder on your C drive. You can choose a single model for each land use type, or you can hold down the CTRL key to multiseelect several models which will be randomly assigned to building features in the land use designation.

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Be sure to assign models in each land use designation where development is allowed. Parks or conservation areas where there is no assigned density can be left blank. Once you've finished selecting models, click Next. Make sure all three phases Numeric, Spatial and Visual are selected on the finished screen and click Run Build Out. I'm again going to create a new scenario called Urban Fabric Spatial so we can see a comparison with the previous numeric buildout runs.

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To see my results, I'm going to locate my build out layer grouping in the table of contents. The layer, called Buildings, now has features represented as color coded dots on the map. These are the points that were generated from our spatial build out settings. Notice that the land uses where I chose the pattern follow roads are aligned and equally spaced along their closest roadway. Grid layout features are spaced along a north south axis.

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Random points are distributed in a more scattered pattern. Looking at the attribute table for the building's layer, I see that there is data for the parent land use designation, the building use, number of dwelling units, floor area floors, and footprint size for each building point. The field 3D model contains the file path name assigned to each individual building point from Visual buildout. This field can be referenced when exporting buildings to 3D platforms like Scenario 3D, Google Earth and RGIs Explorer. Looking at charts, we now finally have data on the green indicator for spatial results.

##### [00:05:10.180] - Speaker 1

This displays my totals for dwelling units, buildings and floor area spatially represented on the map. You'll see that in all cases, spatial is less than numeric. Since this is a more refined calculation incorporating spatial parameters, this video explored the basic inputs for the spatial and visual phases in a community viz. Build out analysis. Follow up videos explore more advanced options in numeric and spatial build out phases.

##### [00:05:38.850] - Speaker 1

Thank you for watching this Community Viz video tutorial. For more video tutorials and Community Viz resources, please visit our website.