

Bondurant, Iowa

Property Valuation Analysis

Completed by ICIGO at the University of Iowa as part of the Iowa Initiative for Sustainable Communities (IISC) 2023-24 partnership with the City of Bondurant.

May 2024

Introduction

This 3-D Valuation Map aims to visualize the value of each parcel in the City of Bondurant. The height of each parcel is relative to each parcel's value per square foot.

Data

All information was taken from Polk County parcel data provided by the City of Bondurant.

Methods

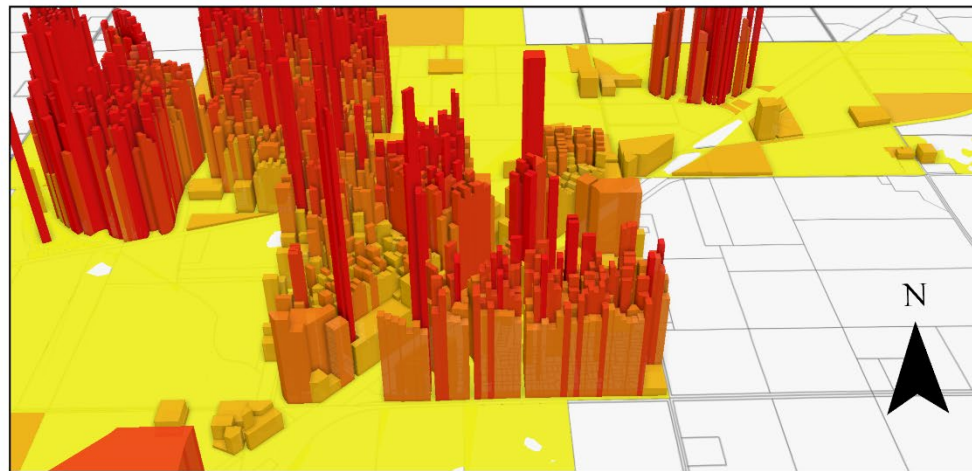
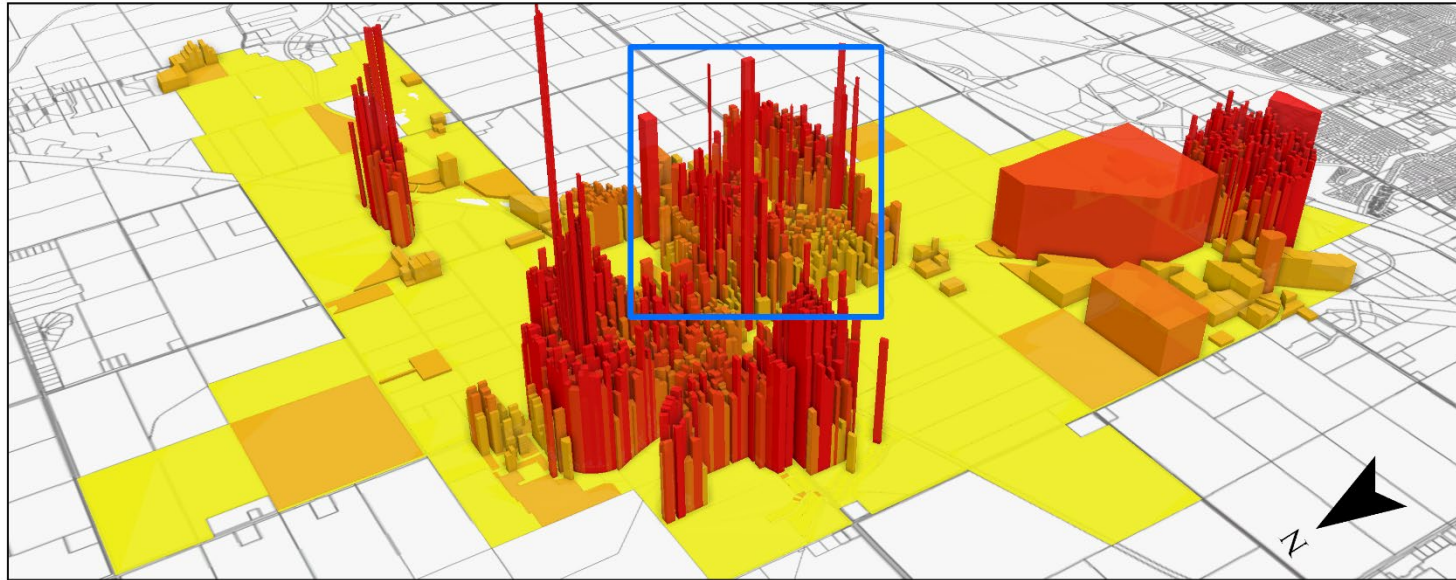
To begin, the parcel data was cut to only within Bondurant city limits. This was done using ArcGIS Pro's (Arc) select-by-attribute tool. All parcels with the 'city' value of 'Bondurant' were selected and isolated onto a new layer.

Bondurant's parcels were then loaded onto a new Global Scene in Arc. This allows for three-dimensional manipulation of the data. In Global Scene, the extrusion tab can extrude polygons by a certain unit (feet, meters, yards) in relation to a field within the shapefiles table. For this project, the parcel fields used were 'total_full' and 'shape_area'. In the extrusion tool's expression builder, the code: $(\$feature.total_full/\$feature.Shape_Area)*10$ was used to calculate the total land valuation by area. The equation was multiplied by a factor of 10 to better visualize the difference between parcels. Different values were also visualized by changing the color of the parcel depending on its value per area.

Deliverable

The final layout of the map shows the entire city within corporate limits from an aerial view looking from the Northwest. A smaller view of the Southeast area of town is also shown. NOTE: There was a small parcel outside of the Chichaqua Valley Trail with an extremely low area. There was nothing but trees in the parcel. This created an area with 100 times the value of other parcels. This was determined as an outlier and deleted from the dataset. Alternative visualizations are also provided. A project file and geodatabase were provided to City of Bondurant staff.

Bondurant Land Valuation



Valuation by Area:
Dollars per Square Foot

