IrrLotCode Analysis

Goal: To identify lots categorized as regular, whose shapes are in fact irregular (Lot Area not equal to Lot Front * Lot Depth). In some cases, these will be lots that were regular, and subdivided.)

Result: A process that will update the indicator on 1,096 lots. (I last ran this process a couple of weeks ago using PLUTO 20v2.)

Process:

1. Disaggregate PLUTO's (unclipped version) geometry to points. Exclude sliver lots (generously defined as 15,000 square feet or less), and lots whose envelope is not at least 15% larger than the lot area. Load the results to an intermediate table called pluto_points.
2. Run a script called Irrlot.py, which counts and measures the angles in each polygon. Bypass angles considered "straight lines": angles that measure between 160 and 200 degrees in size. Polygons having an angle count of 4 are considered regular. Other polygons are considered irregular. This script writes the output to a csv file.
3. Load the csv to a table. Add the geometry, IrrLotCode, LotArea, LotFront, LotDepth, LotFront * LotDepth, and the PLUTO Shape_Area for easy comparison in ArcMap.
4. I also explored the possibility of replacing the LotArea with the Shape_Area for the affected records. The original LotArea summed to 163,349,455, and the Shape_Area summed to 158,619,284, for a difference of -4,730,171 square feet.
5. The process also included a break out by land use code. All land uses saw declines in their area save commercial and office space.

Supporting Documents

Jupiter Notebook

Spreadsheet with List of Affected Lots, LotArea Summary, LandUse Breakout

LandUse Bar Chart

Tuesday, April 21, 2020