## MATCHING THE GEOCODED ADDRESSES TO CENSUS TRACT NUMBERS

✛ Add your tract shapefile to your map, along with your geocoded shapefile.

▦ Open ArcToolbox and under Analysis Tools, select Overlay and then Spatial Join.
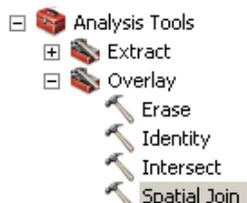
Select the geocoded address shapefile for the Target Features and the tract shapefile for the Join Features. Under Output Feature Class, choose a folder and name for the joined file. Check the box for Keep All Target Features and for Match Option select HAVE_THEIR_CENTER_IN. (It is not necessary to change the other fields.) Then select "OK."

ArcGIS will create a new shapefile that includes the attributes from the geocoded address file with the attributes from the tract shapefile appended to it.

MORE INFORMATION

Detailed information about the Address Range Feature shapefiles (ADDR_FEAT) can be found online in the TIGER/Line® Shapefiles technical document Chapter 6. The documentation is available on each year's TIGER/Line® Shapefiles webpage.

** Note that the instructions in this brochure were written using ArcGIS v10.1.

QUESTIONS

Visit:

http://www.census.gov/geo/maps-data/data/tiger.html

E-mail:

geo.tiger@census.gov

Call:

(301) 763-1128

GEOCODING USING ARCGIS & TIGER/LINE® SHAPEFILES

United States™ Census Bureau

ADDRESS RANGE FEATURE SHAPEFILE

In response to growing customer needs, the Address Range Feature shapefiles (ADDREFEAT) were added to the TIGER/Line® Shapefiles product suite beginning in 2011. This file provides an easier option for geocoding address lists using the TIGER/Line Shapefiles in ArcGIS.

The county-based shapefiles contain all address range to feature name and address range to edge database relationships.

DOWNLOADING

From the TIGER/Line® Shapefiles main website, select the year of interest (2011 or later).
http://www.census.gov/geo/maps-data/data/tiger-line.html

Use the web interface or FTP site to download the Address Range Feature (ADDRFEAT) shapefile(s). The files are available by county.

Next, download the shapefile(s) for the type of geography that you want to geocode to. For this example, we will use census tracts, which are available by state.

If using the FTP site, the files are listed by state and county FIPS codes. Listings of state and county FIPS codes are located on our Geographic Codes webpage:

http://www.census.gov/geo/reference/ansi.html

The downloads are zipped files containing five files. Unzip all five files into a directory on your computer or server.

ADDRESS LIST FORMAT

Before starting, verify your address list format. The address list must contain at least an address field that includes house number and street name and a ZIP Code field. Usable file types include text files (.csv and .txt), as well as Excel (.xls) and dBASE IV (.dbf) files.

CREATE AN ADDRESS LOCATOR FILE

The first step is to create an address locator file from the Address Range Feature Shapefile.

Open ArcToolbox and under Geocoding Tools, select "Create Address Locator."
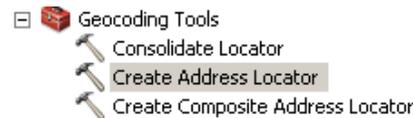
For the Address Locator Style, select "US Address – Dual Ranges." Then select your Address Range Feature shapefile as the Reference Data. In the Field Map section, map the five required fields as follows:

From Left –   LFROMHN
To Left –   LTOHN
From Right –   RFROMHN
To Right –   RTOHN
Street Name - FULLNAME

Next, choose your output folder and a name for your Address Locator File and select "OK."

GEOCODE ADDRESS LIST

Add your address list to your map.

Open ArcToolbox and under Geocoding Tools, select "Geocode Addresses."
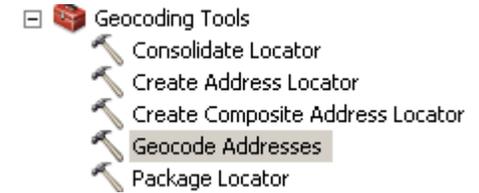
Select your address list as your Input Table. Select the Address Locator File created in the previous step as the Input Address Locator. Map the Street and ZIP fields to the street address and ZIP Code field names in your address file. Choose your output folder and a file name and select "OK."

GEOCODING RESULTS

Once ArcGIS has finished geocoding the addresses, you have the option to either close the window and view the results or to rematch the addresses in order to try to match all of the addresses. In the example below, you can see two addresses are unmatched.
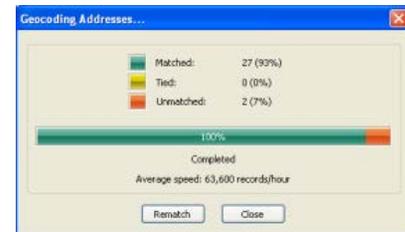
Select "rematch" if you would like to work through the interactive rematch wizard to achieve a 100% match.

ArcGIS will map the geocoded addresses, creating a new shapefile containing the address list and coordinates.