UMass Donahue Institute Population Estimates Program

Resources and Techniques to Support a Successful Local Update of Census Addresses for the 2020 Census: ***LUCA 2020***

Susan Strate, Senior Manager

February 8, 2018

UMASS DONAHUE INSTITUTE
ECONOMIC & PUBLIC POLICY RESEARCH

Research Analysts/GIS Specialists:

Meghan Flanagan
Matt Schlaikjer
Ken LeFebvre
Michael McNally

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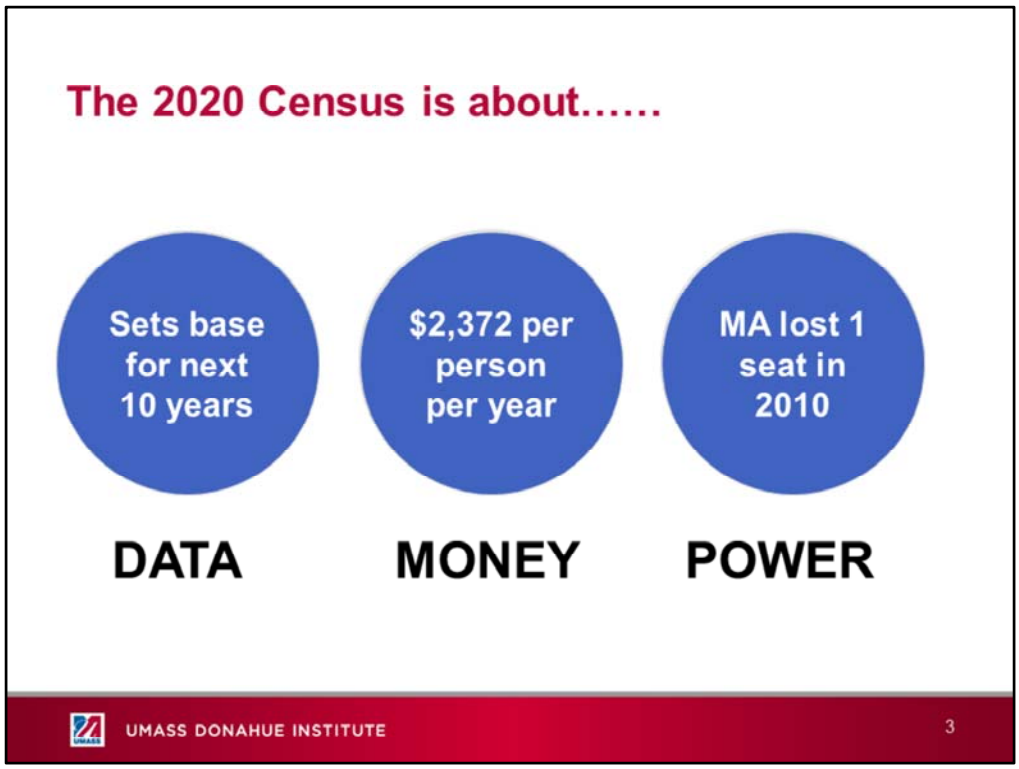
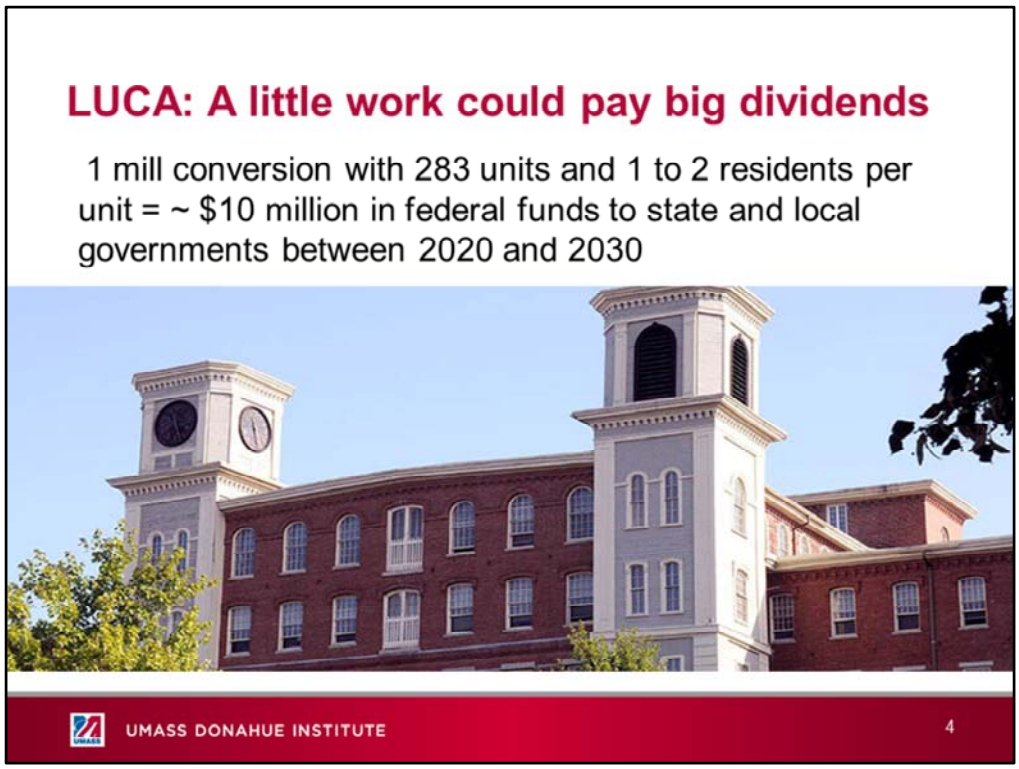
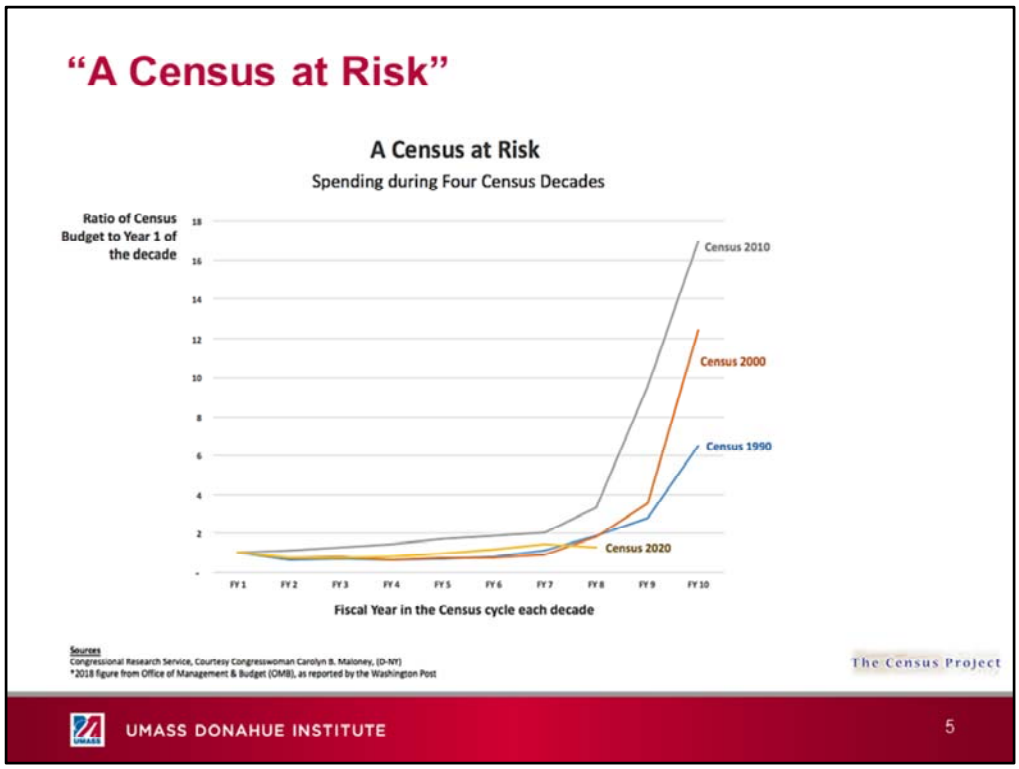


*- George Washington University report: Counting for Dollars 2020: The Role of the Decennial Census in the Geographic Distribution of Federal Funds (https://gwipp.gwu.edu/counting-dollars-role-decennial-census-geographic-distribution-federal-funds)



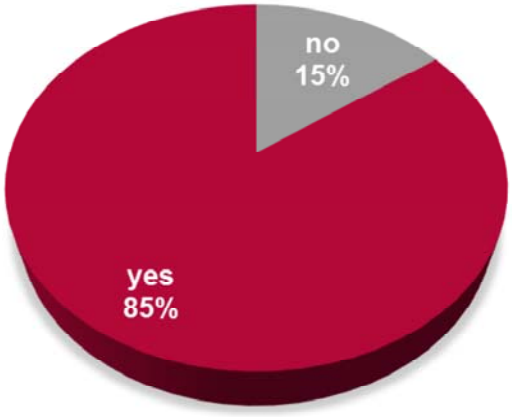
Here's an example. This is the Massachusetts Mills in Lowell, MA, a conversion that could be easily missed in Census canvassing efforts. (Read slide)



It's also worth noting that Census spending for this cycle is lagging behind other decades to a concerning degree. While in previous decades funding has already started to ramp up by the 8th year in the decade, so far the Census operational budget has been virtually flat-lining. This puts Census planning and testing behind schedule, and it means that local and state participation is more critical than ever to support a successful Census count in Massachusetts.

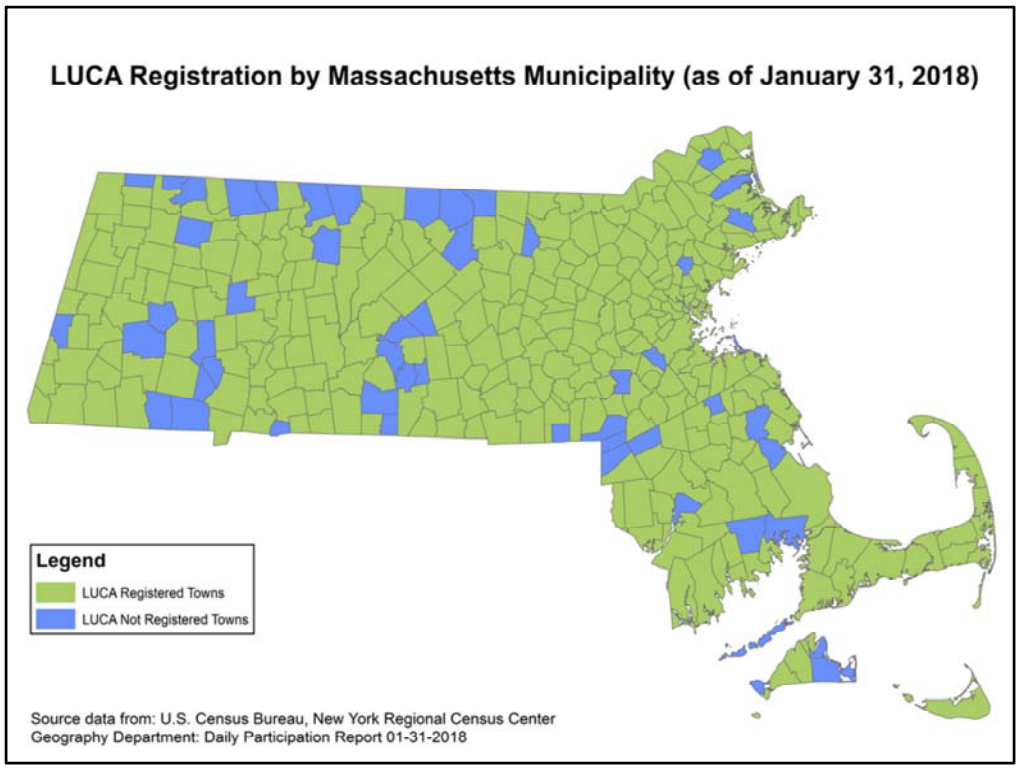
LUCA 2020 Registration in Massachusetts

298 out of 351 Massachusetts Municipalities

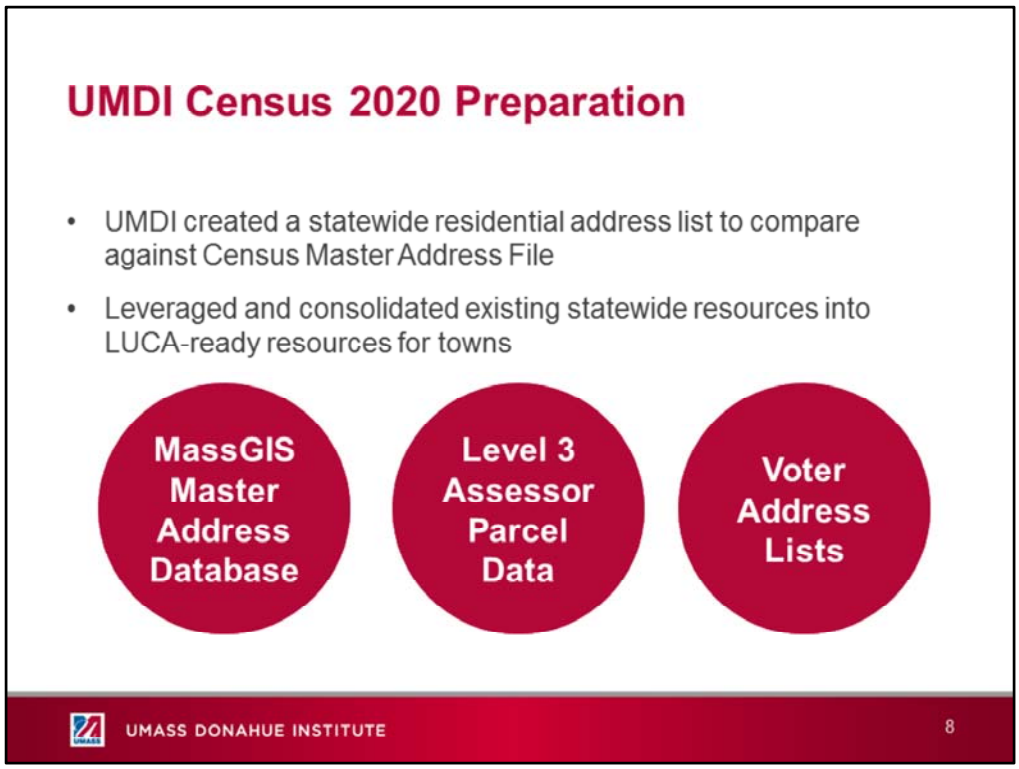


Representing **95%** of Massachusetts Population

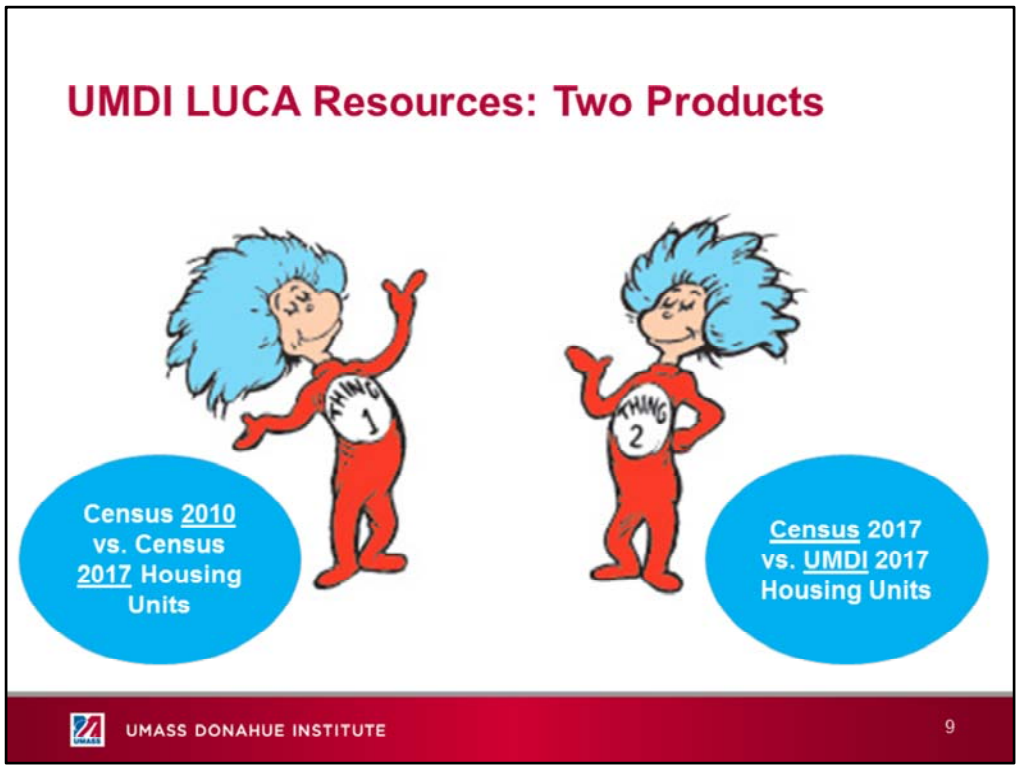
LUCA Participation Map



Overall Massachusetts has seen a remarkably strong response in LUCA registration, with towns representing more than 95% of the Commonwealth's population participating



^ The Donahue Institute has been working to develop a statewide list of residential addresses using three primary address databases…..



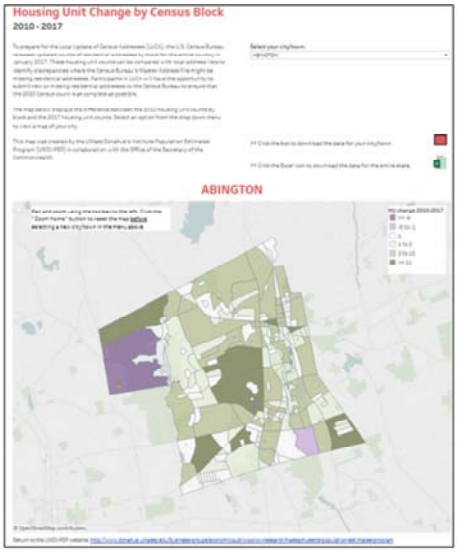
The two products look similar, but are made up of different data sources to be used in different ways.

^ Thing 1 shows you housing unit counts from 2010 compared to housing unit counts in the current Census Master Address File - by Census block

^ Thing 2 shows you the Census Master Address File counts for 2017 compared the addresses that we have for each block in the statewide address list that we have been developing

^ Use thing 1 to see where the Census Bureau has or has not captured residential growth since 2010 in your town and if you find trouble spots, start to assemble address lists for those areas

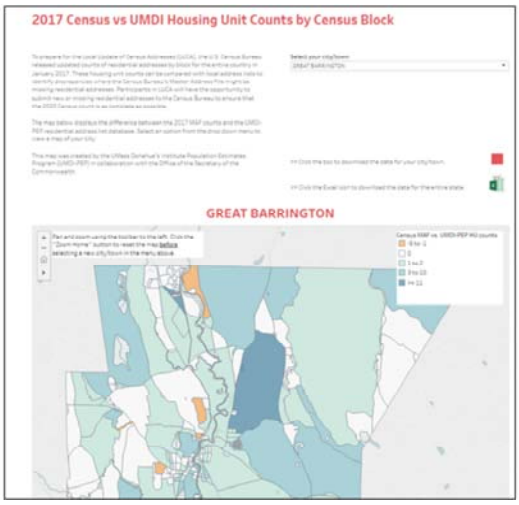
UMDI LUCA Resource #1 *"Thing One"*



- Online interactive with Excel download option
- Census 2010 housing units vs. 2017 housing units
- Lets towns see where Census has *or has not* captured recent growth at the town and census block level.

When you look at these comparisons, ask whether Census seems to have captured growth since 2010 where you expected them too. If not, these are your focus areas. Start compiling address lists for these neighborhoods using whatever resources you have available to you.

UMDI LUCA Resource #2 *"Thing 2"*

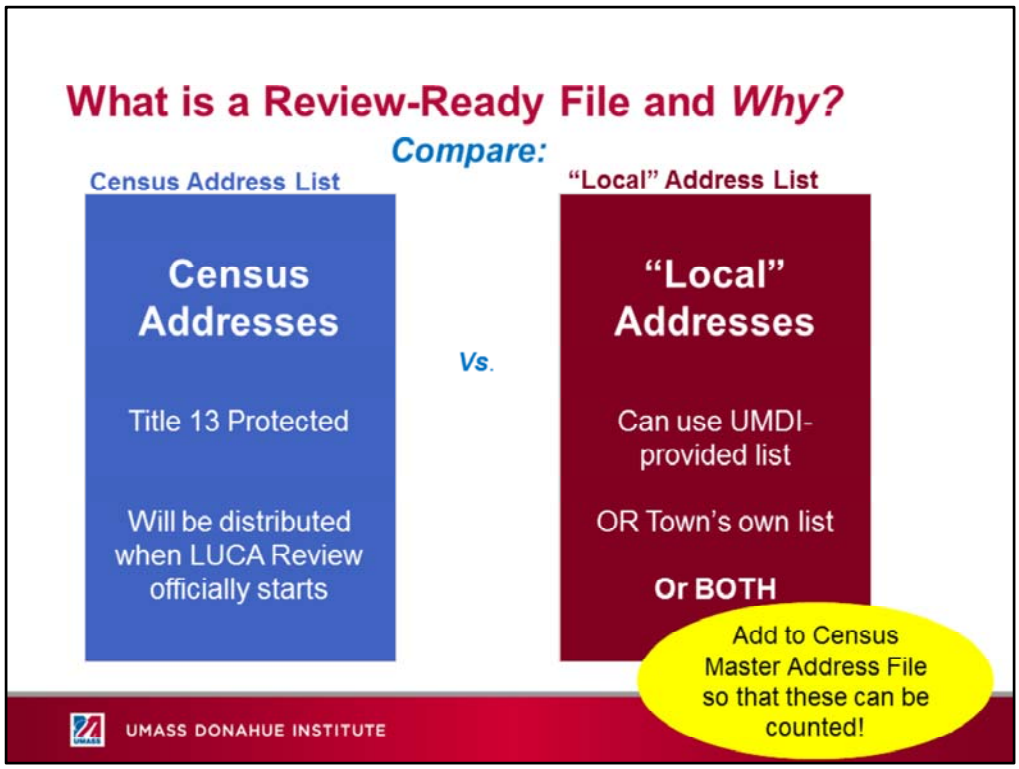


- Census 2017 housing units vs. UMDI (state-sourced) 2017 housing units
- Allows towns to identify priorities: Blocks where Census missing the most
- Request corresponding Excel address files from UMDI
  (geodatabase format available upon request)

A second resource allows for current comparisons of our housing unit counts versus what the Census counts in their Master Address File.^

Goals:

- Identify Where Census has missed addresses
- Prepare Review-Ready Files

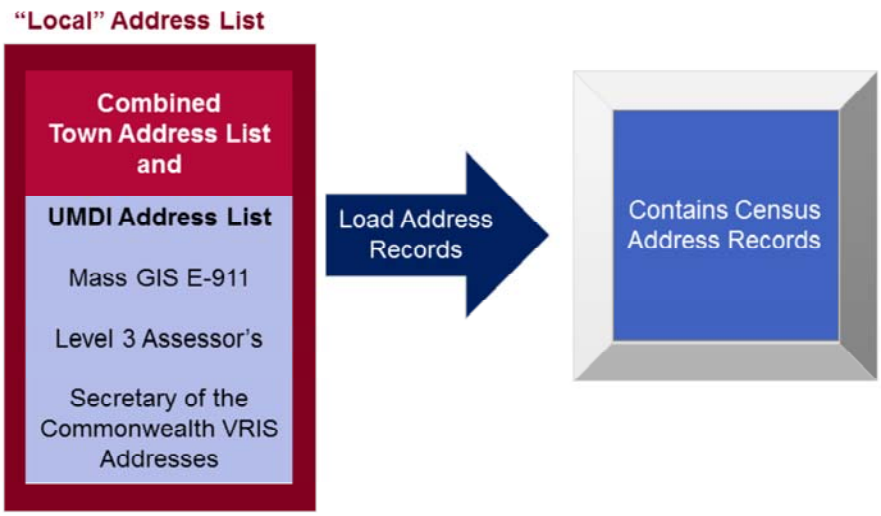

What is a Review-Ready File and *Why?*
Compare:
Census Address List
Census Addresses
Title 13 Protected
Will be distributed when LUCA Review officially starts
Vs.
"Local" Address List
"Local" Addresses
Can use UMDI-provided list
OR Town's own list
Or BOTH
Add to Census Master Address File so that these can be counted!
UMASS DONAHUE INSTITUTE

What is a Review-Ready File and *Why?*

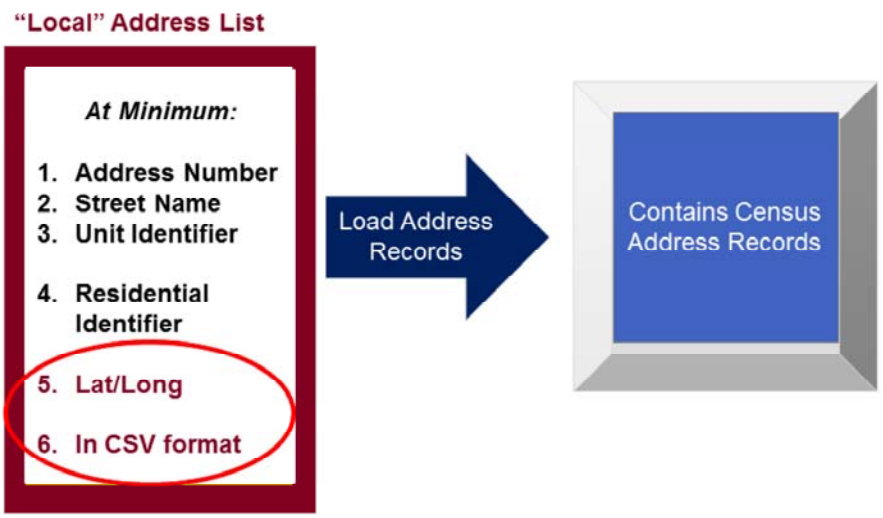
"Local" Address List

ADDR_NUM	STREET
19	ARROWHEAD CIR
17	ARROWHEAD CIR
21	ARROWHEAD CIR
7	ARROWHEAD CIR
20	CINDY LN
34	CINDY LN
28	CINDY LN
84	DANIELS RD
90	DANIELS RD
11	DEXTER DR
21	DEXTER DR
22	DEXTER DR
57	EMILY LN
708	HAVERHILL ST

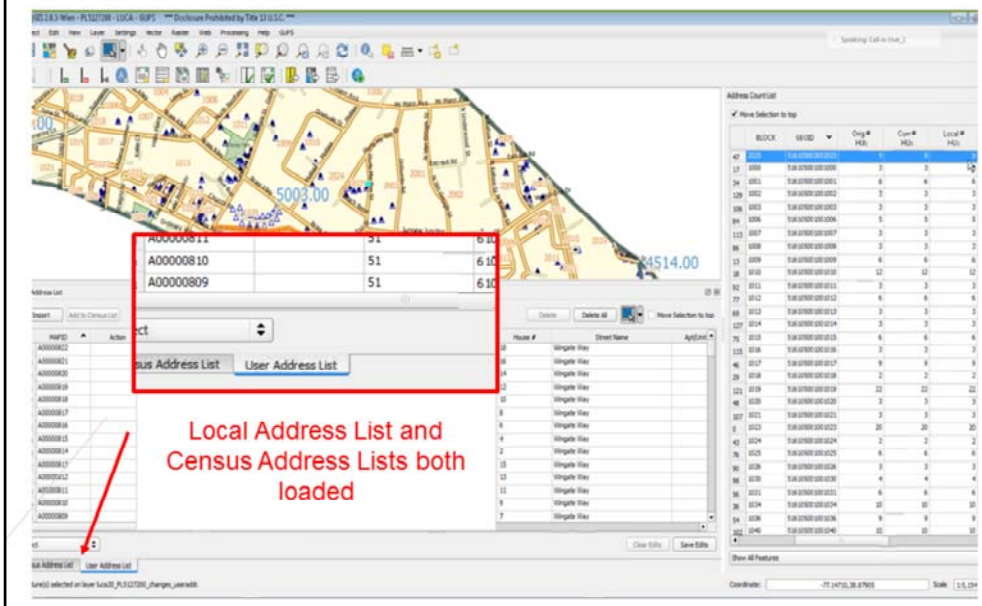
What is a Review-Ready File and *Why?*



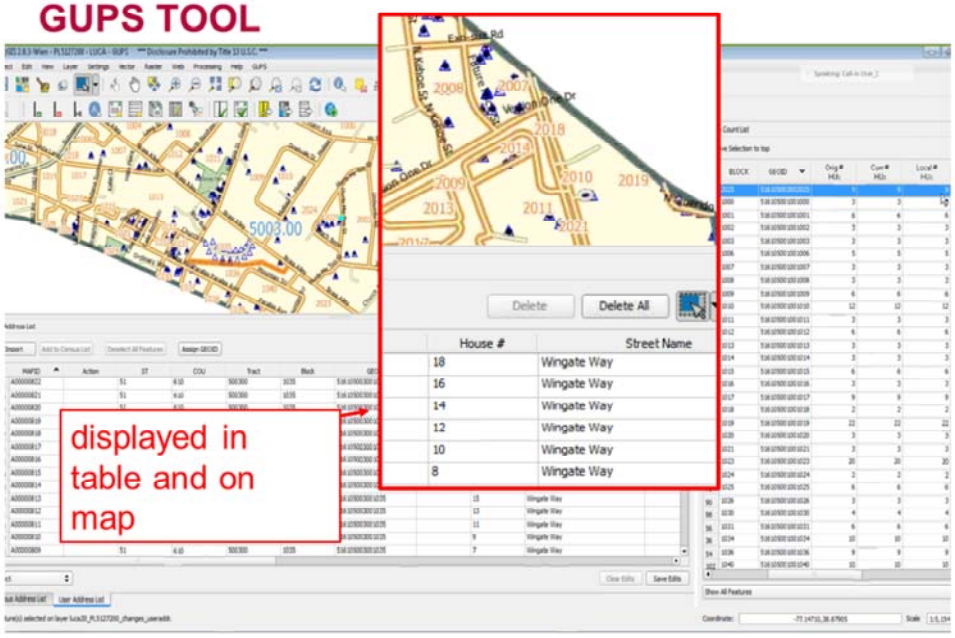
What is a Review-Ready File and *Why?*



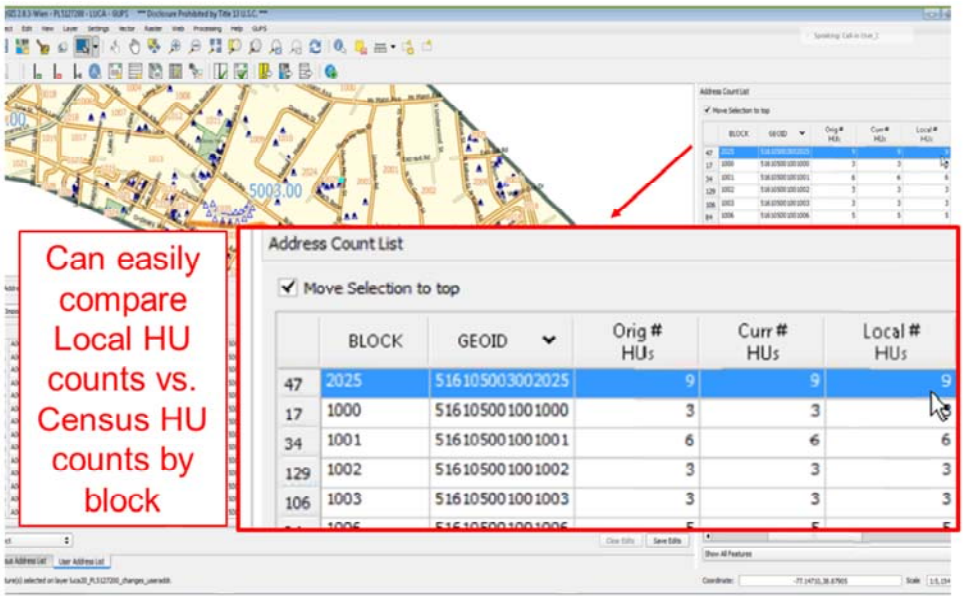
GUPS TOOL


A00000811
A00000810
A00000809
51
User Address List
Local Address List and Census Address Lists both loaded

GUPS TOOL

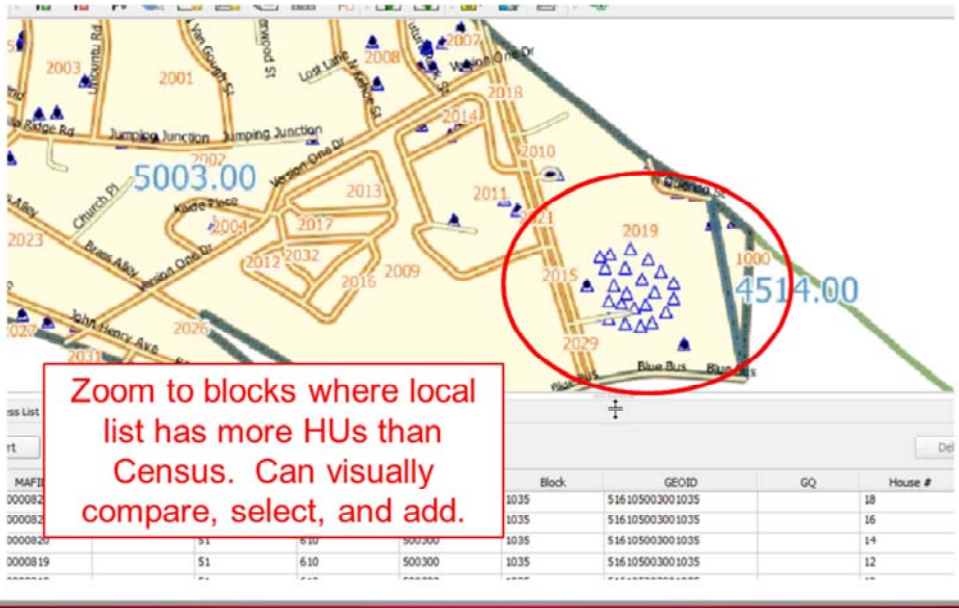

Delete
Delete All
House #
Street Name
18
Wingate Way
16
Wingate Way
14
Wingate Way
12
Wingate Way
10
Wingate Way
8
Wingate Way
displayed in table and on map

GUPS TOOL



Can easily compare Local HU counts vs. Census HU counts by block

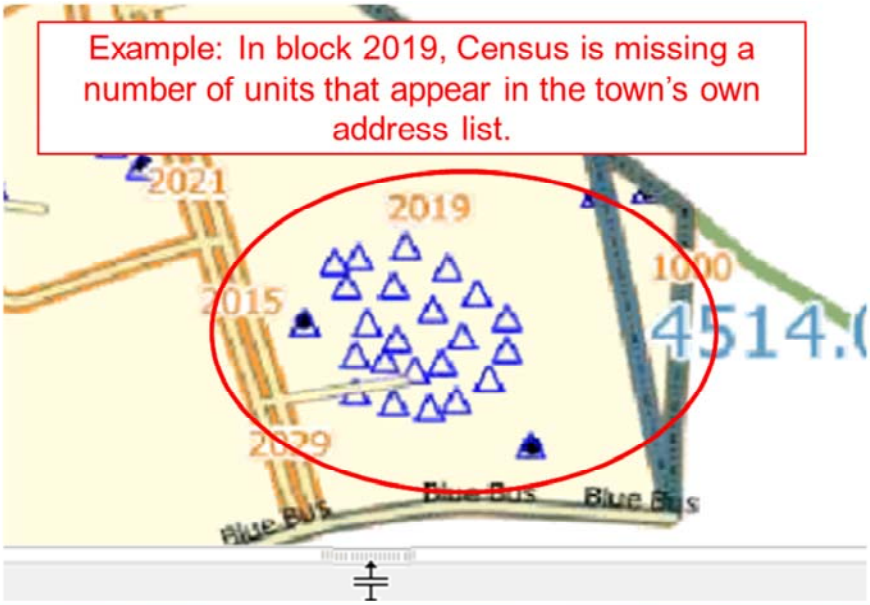
GUPS TOOL



Zoom to blocks where local list has more HUs than Census. Can visually compare, select, and add.

MAFID					Block	GEOID	GQ	House #
0000820		51	610	500300	1035	516105003001035		18
0000820		51	610	500300	1035	516105003001035		16
0000820		51	610	500300	1035	516105003001035		14
0000819		51	610	500300	1035	516105003001035		12

GUPS TOOL


Example: In block 2019, Census is missing a number of units that appear in the town's own address list.
2021
2019
2015
Blue Bus
Blue Bus
Blue Bus

Goals:

Identify Where Census has missed addresses

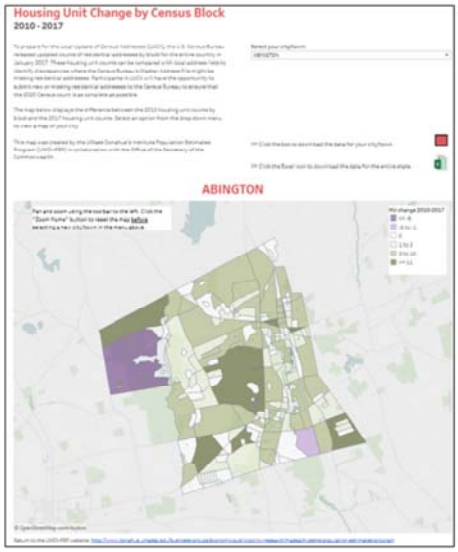
- Use “Thing1” resource and other resources to check status of new growth areas

Prepare Review-Ready Files

- Add any missing addresses/new growth to “Thing 2” UMDI address lists
- Check that address list is de-duplicated and ready to load up

Check New Growth Using "Thing 1"

- Navigate to your town
- Compare to your **new growth** areas
- Compare visually via map compare or through address lists
- Download 2010-2017 growth by block file
- To compare address lists you may need to geocode your addresses first!

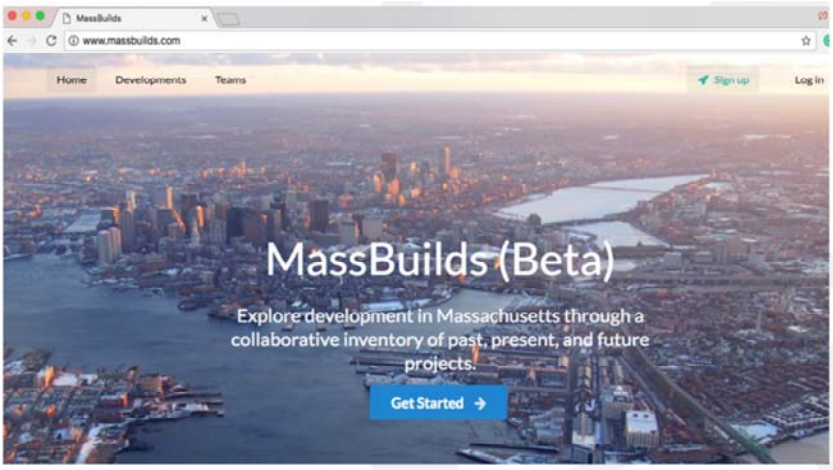


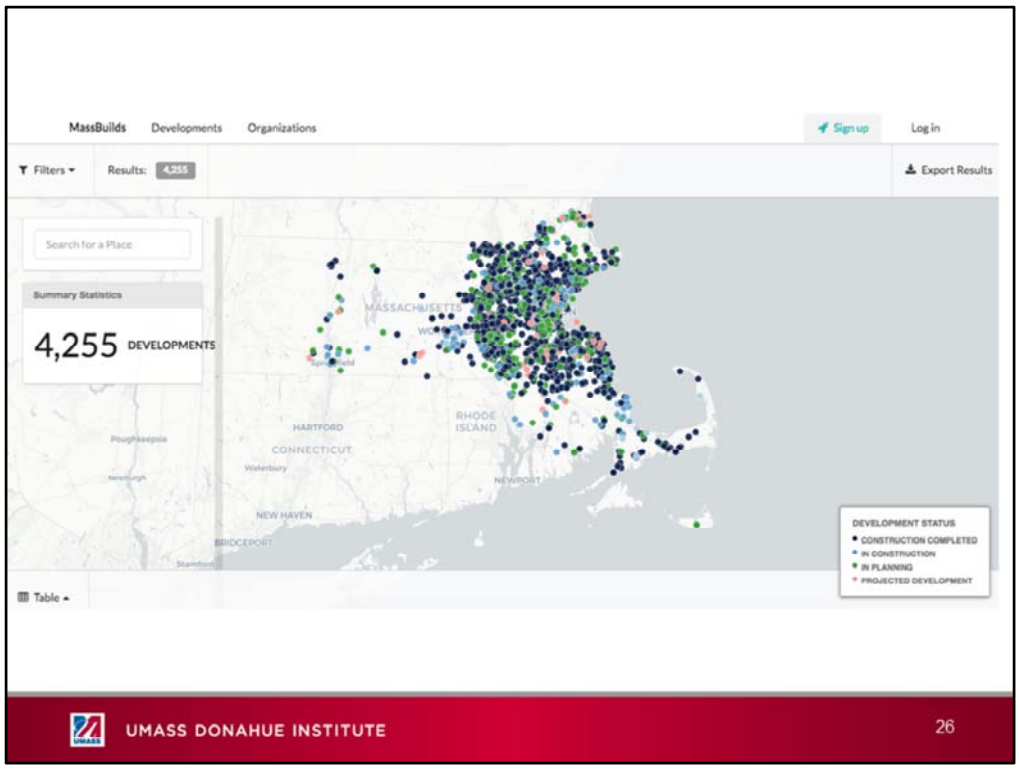
Preparing Review-Ready Files: New Growth

Possible Town Sources of New Growth:

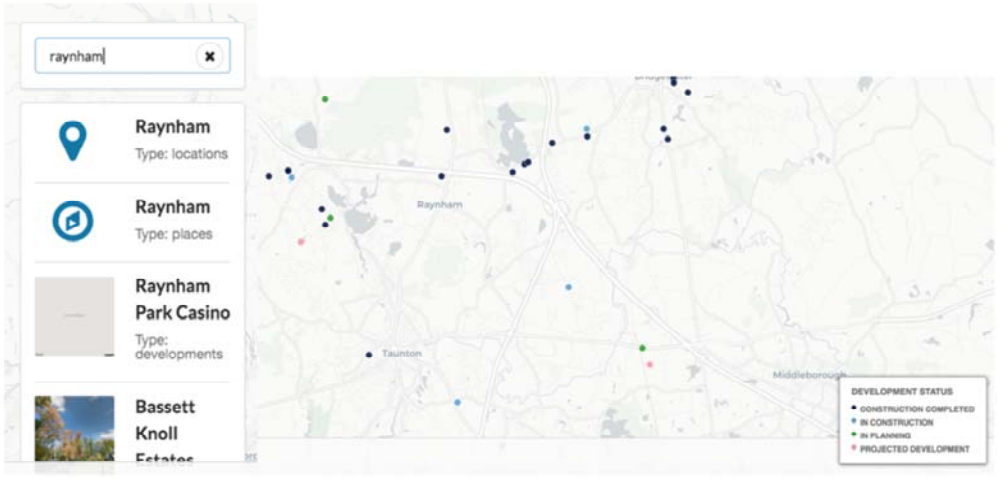
- **Development Lists or websites**
- Internet research
- Assessor's Data
- Building Permit records by address

MassBuilds Database

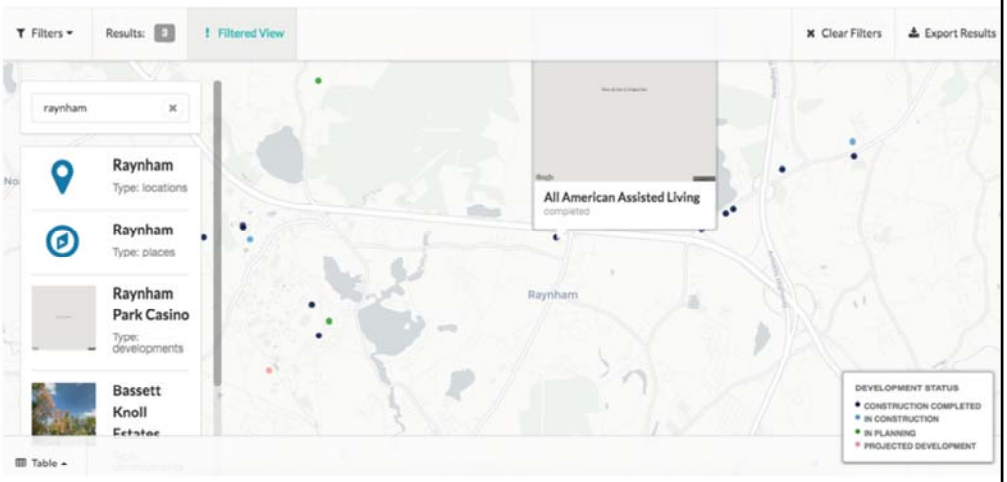


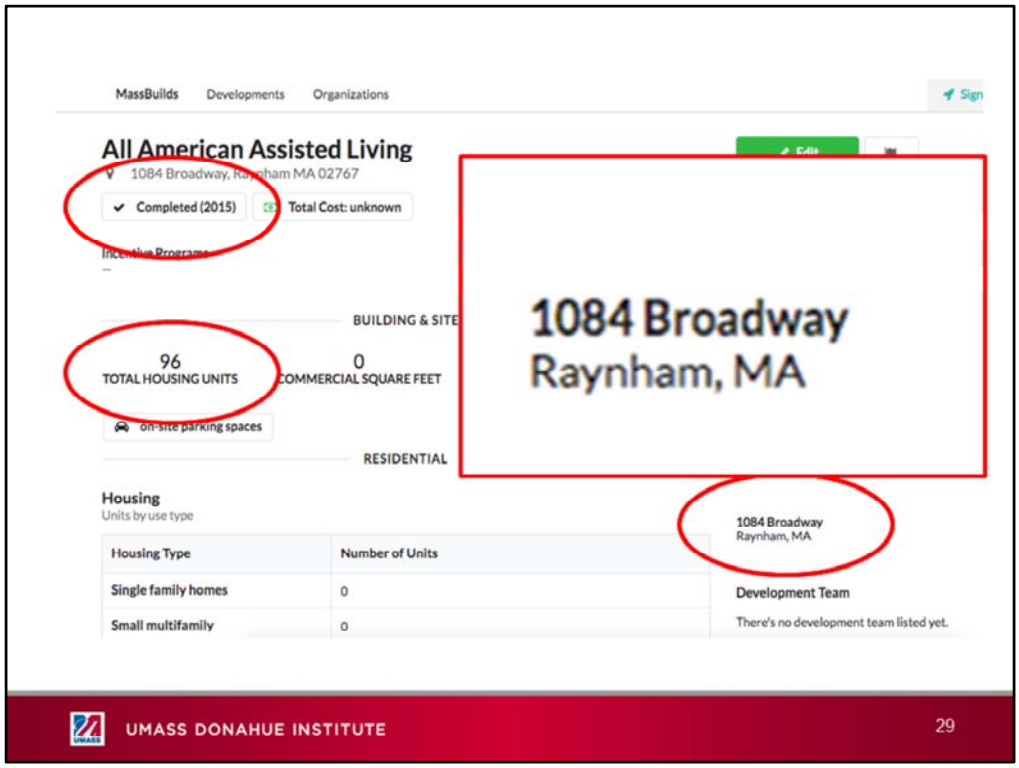

MassBuilds
Developments
Organizations
Sign up
Log in
Filters
Results: 4,255
Export Results
Search for a Place
Summary Statistics
4,255 DEVELOPMENTS
MASSACHUSETTS
HARTFORD
CONNECTICUT
RHODE ISLAND
NEWPORT
NEW HAVEN
BRIDGEPORT
Table
DEVELOPMENT STATUS
CONSTRUCTION COMPLETED
IN CONSTRUCTION
IN PLANNING
PROJECTED DEVELOPMENT

Search developments by city/town

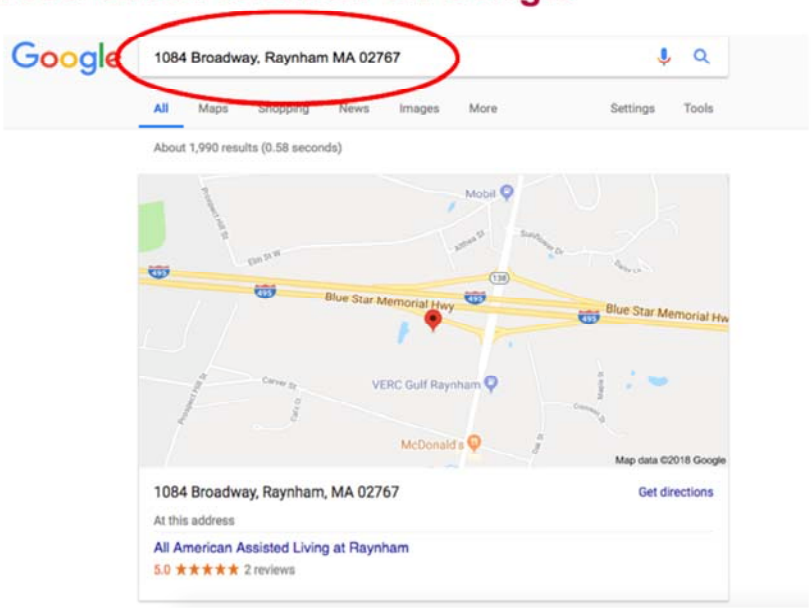


Choose development



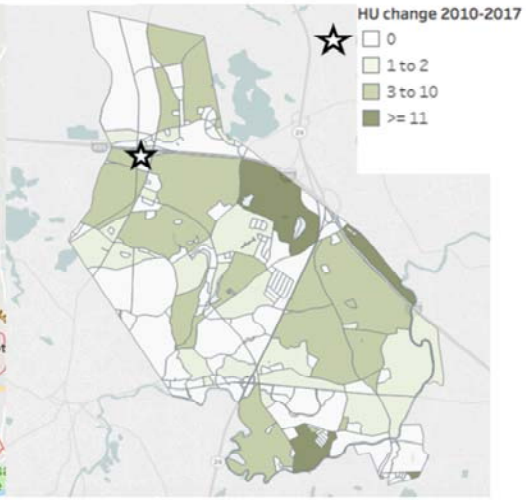

MassBuilds
Developments
Organizations
Sign
All American Assisted Living
1084 Broadway, Raynham MA 02767
Completed (2015)
Total Cost: unknown
Incentive Programs
BUILDING & SITE
96
TOTAL HOUSING UNITS
0
COMMERCIAL SQUARE FEET
on-site parking spaces
RESIDENTIAL
1084 Broadway
Raynham, MA
Housing
Units by use type
Housing Type
Number of Units
Single family homes
0
Small multifamily
0
1084 Broadway
Raynham, MA
Development Team
There's no development team listed yet.

Cross-check location on Google



Check Against Thing 1 Map (Census Growth)

Google Maps



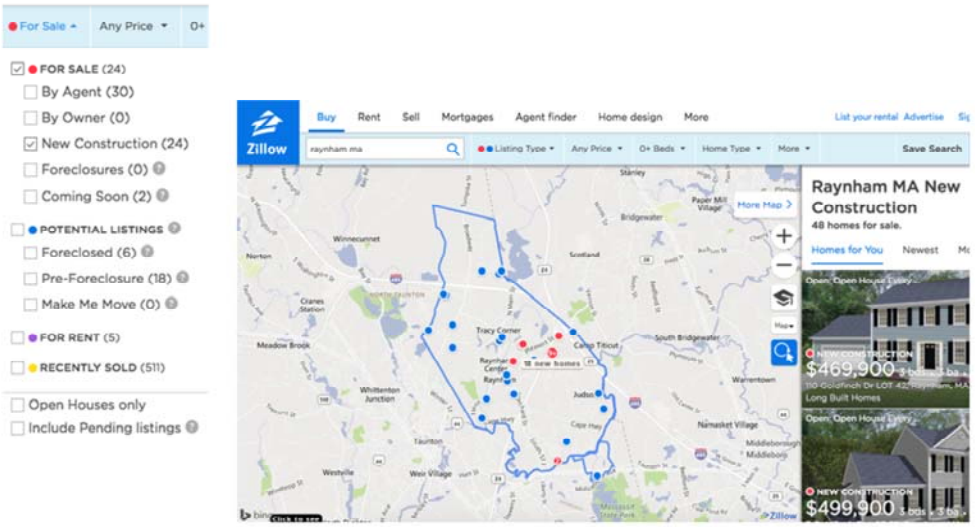
UMDI Interactive Dashboard 1

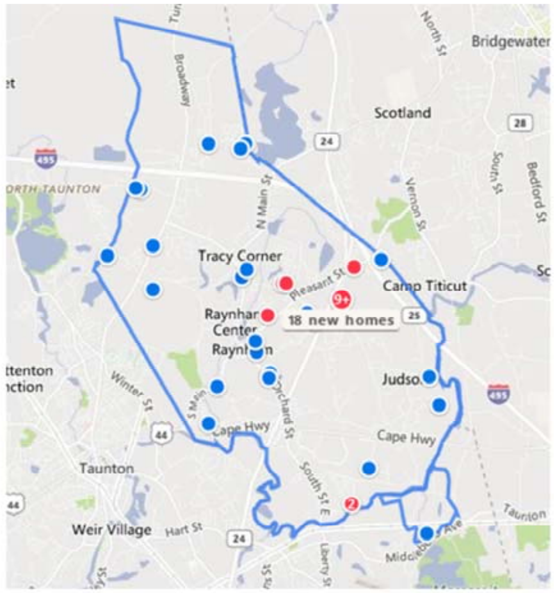
Preparing Review-Ready Files: New Growth

Possible Town Sources of New Growth:

- Development Lists or websites
- **Internet research**
- Assessor's Data
- Building Permit records by address

New Construction Home Listings

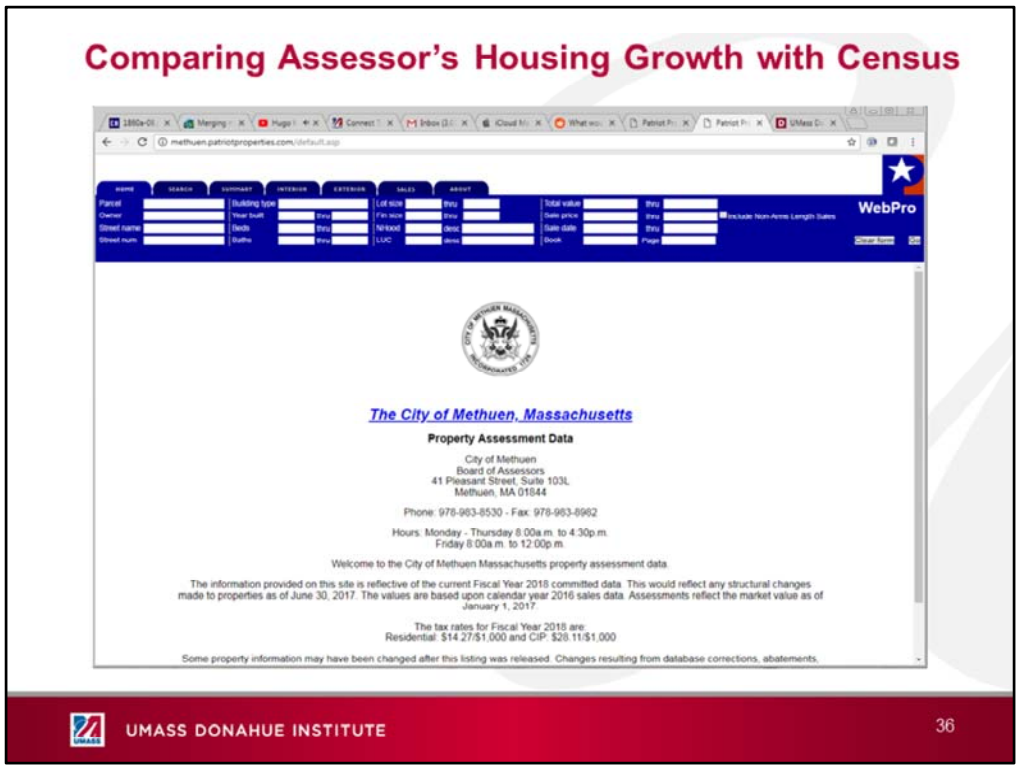



Bridgewater
Scotland
NORTH TAUNTON
Tracy Corner
Pleasant St
Camp Titicut
Raynham Center
18 new homes
Judson
Cape Hwy
Taunton
Weir Village
Hart St
South St E
N Main St
Vernon St
Bedford St
Broadway
Winter St

Preparing Review-Ready Files: New Growth

Possible Town Sources of New Growth:

- Development Lists or websites
- Internet research
- **Assessor's Data**
- Building Permit records by address



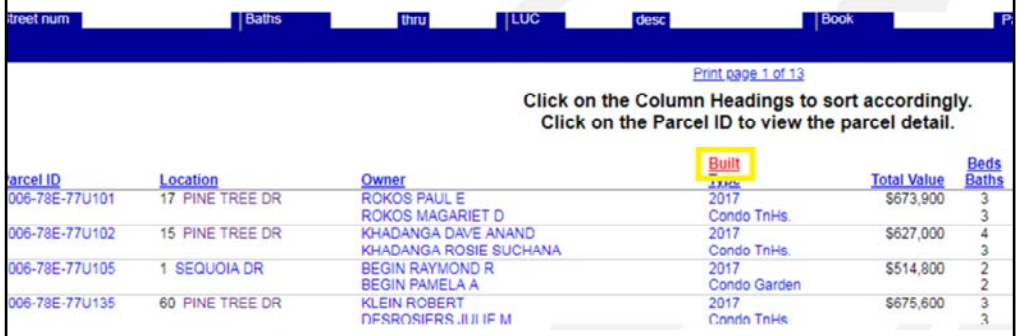
In order to make sure that new developments have been captured in US Census data, let's go to our municipal assessor's data and pull up all new developments since the last census.

Here we see a fairly typical PatriotProperties assessor database for the City of Methuen.

Comparing Assessor's Housing Growth with Census

To view new developments, under the Year Built fields, we'll enter **2010** thru **2017** and press Enter to return the results

Comparing Assessor's Housing Growth with Census



treet num | Baths | thru | LUC | desc | Book | P

Print page 1 of 13

Click on the Column Headings to sort accordingly.
Click on the Parcel ID to view the parcel detail.

arcel ID	Location	Owner	Built	Total Value	Beds / Baths
006-78E-77U101	17 PINE TREE DR	ROKOS PAUL E ROKOS MAGARIET D	2017 Condo TnHs.	$673,900	3 3
006-78E-77U102	15 PINE TREE DR	KHADANGA DAVE ANAND KHADANGA ROSIE SUCHANA	2017 Condo TnHs.	$627,000	4 3
006-78E-77U105	1 SEQUOIA DR	BEGIN RAYMOND R BEGIN PAMELA A	2017 Condo Garden	$514,800	2 2
006-78E-77U135	60 PINE TREE DR	KLEIN ROBERT DESROSIERS JULIE M	2017 Condo TnHs	$675,600	3 3

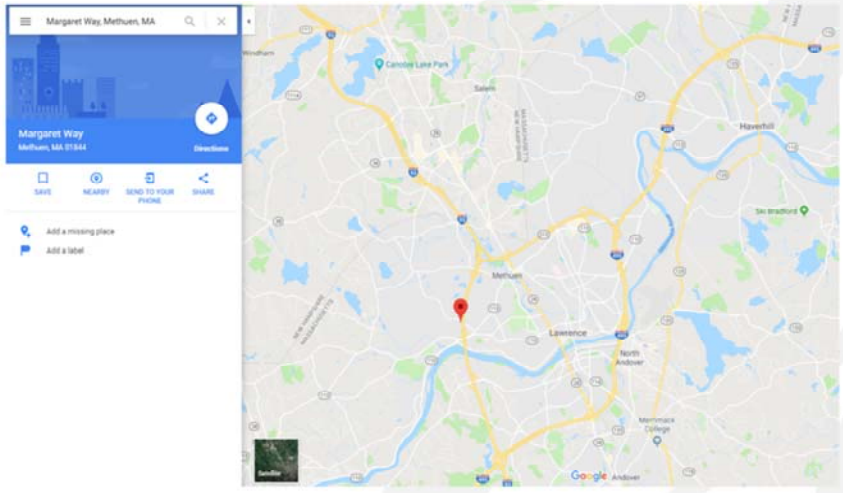
To sort our results by the most recent, simply click the header "Built" above its corresponding column, this will organize our results by most to least recent within the date range we queried.

Comparing Assessor's Housing Growth with Census

216-129B-7BU50	1 ASHLEY LN	NEWELL CHARLENE	2017 Condo Ga
416-154-6B	1 MARGARETS WAY	PAPPALARDO STEVEN A SHAMBERGER KRYSTIN	2017 Colonial
416-154-6C	3 MARGARETS WAY	HASHEM ABDO HASHEM SAMARIA	2017 Colonial
416-154-6D	5 MARGARETS WAY	AHMED RUKHSANA	2017 Colonial
416-154-6E	7 MARGARETS WAY	PLOUFFE JESSE J PLOUFFE JENNIFER M	2017 Colonial
416-154-6F	9 MARGARETS WAY	OBRIEN KEVIN T JR	2017 Colonial
416-154-6G	11 MARGARETS WAY	GILMORE KEVIN P GILMORE TERESITA A	2017 Colonial
416-154-6H	6 MARGARETS WAY	HARRINGTON ELISA S HARRINGTON DAVID P	2017 Colonial
416-154-6J	4 MARGARETS WAY	RACIOPPA PHILIP J PAIS LUCIA MARIA	2017 Colonial
416-154-6K	2 MARGARETS WAY	PATEL SHETAL PATEL ILABEN	2017 Colonial
418-164-6A	33 MARJORIE ST EXT	OMARI ERIC OMARI NANCY	2017 Colonial

Within these listings, you will usually find new developments with relative ease from multiple addresses on the same street

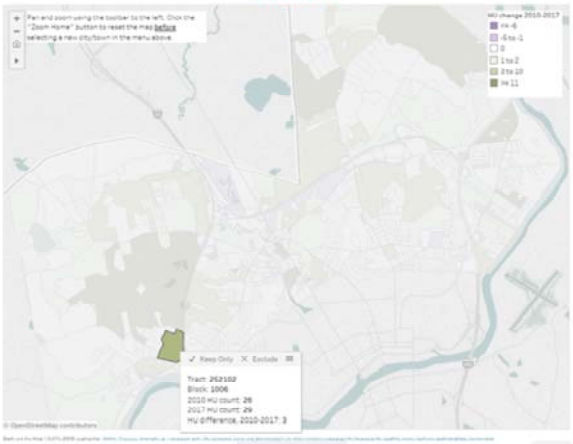
Comparing Assessor's Housing Growth with Census



To compare these with Thing 1, our dashboard showing Housing Unit Changes, we'll go to Google Maps and locate this street of new development properties.

Comparing Assessor's Housing Growth with Census

METHUEN



As you can see, the Housing Unit count for that census block has seen growth, however it shows 3 new housing units, rather than the 9 that returned in the assessor's database.

In the dashboard, select the town in question in the dropdown menu, and then after finding the location of your development, hover your mouse over that census block or click on it to display the data associated with that area-

Preparing Review-Ready Files: New Growth

Possible Town Sources of New Growth:

- Development Lists or websites
- Internet research
- **Assessor's Data - Excel File Format**

Can also use this to supplement UMDI address lists if more current!

Open Assessor's Data File

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	PROP_ID	LOC_ID	BLDG_VA	LAND_VA	OTHER_V	TOTAL_V	FY	LOT_SIZE	LS_DATE	LS_PRICE	USE_COD	SITE_ADD	ADDR_NU	FULL_STR	LOCATION
2	1-26A	F_773800	101500	271900	1600	375000	2012	608981.0	20030915	300000	101	1979 BRO	1979	BROADW	
3	1-29	F_773750	83900	136400	13700	234000	2012	98022.0	19760105	27800	101	54 ROBIN	54	ROBINSO	
4	1-30	F_773825	78300	131100	600	210000	2012	61867.0	20090625	1	101	68 ROBIN	68	ROBINSO	
5	1-31	F_773894	144000	130300	0	274300	2012	56204.0	20050725	0	101	78 ROBIN	78	ROBINSO	
6	1-32	F_774817	489700	942900	7400	1440000	2012	2352676.0	19931013	151000	960	110 ROBI	110	ROBINSO	
7	1-33	F_774123	81800	119900	600	202300	2012	13068.0	20050930	310000	101	78 WILBUI	78	WILBUR S	
8	1-34	F_774229	76900	122700	300	199900	2012	19166.0	20050311	0	101	88 WILBUI	88	WILBUR S	
9	1-35	F_774324	94600	123200	20400	238200	2012	20000.0	19860829	0	101	98 WILBUI	98	WILBUR S	
10	1-36	F_774469	101500	127900	18500	247900	2012	40000.0	20040729	290000	101	106 WILB	106	WILBUR S	
11	1-36A	F_774626	298600	127900	28700	455200	2012	40000.0	20040429	150000	101	128 WILB	128	WILBUR S	

Most assessors' data will include more fields than we need

Choosing Fields

Good fields to keep...

- Any ID fields (PROP_ID, LOC_ID…)
- Building value field
- Any site address fields (ADDR_NUM, FULL_STR, SITE_ADDR…)
- Fields with use information, or building style information
- Fields with unit information, either as a subaddress (e.g. “Apt 1”) or unit counts
- Year built

Choosing Fields

	A	B	C	D	E	F	J	K	L	M	N	O
1	PROP_ID	LOC_ID	BLDG_VA	LAND_VA	OTHER_V	TOTAL_V	LS_PRICE	USE_CODE	SITE_ADDR	ADDR_NUM	FULL_STR	LOCATI
2	1-26A	F_773800	101500	271900	1600	375000	300000	101	1979 BROADWAY	1979	BROADWAY	
3	1-29	F_773750	83900	136400	13700	234000	27800	101	54 ROBINSON ST	54	ROBINSON ST	
4	1-30	F_773825	78300	131100	600	210000	1	101	68 ROBINSON ST	68	ROBINSON ST	
5	1-31	F_773894	144000	130300	0	274300	0	101	78 ROBINSON ST	78	ROBINSON ST	
6	1-32	F_774817	489700	942900	7400	1440000	151000	960	110 ROBINSON ST	110	ROBINSON ST	
7	1-33	F_774123	81800	119900	600	202300	310000	101	78 WILBUR ST	78	WILBUR ST	
8	1-34	F_774229	76900	122700	300	199900	0	101	88 WILBUR ST	88	WILBUR ST	
9	1-35	F_774324	94600	123200	20400	238200	0	101	98 WILBUR ST	98	WILBUR ST	
10	1-36	F_774469	101500	127900	18500	247900	290000	101	106 WILBUR ST	106	WILBUR ST	

	Z	AA	AB	AC	AD	AE	AF	AG	AH
	REG_ID	ZONING	YEAR_BU	BLD_AREA	UNITS	RES_AREA	STYLE	STORIES	NUM_RC
			1950	1766	0	0	CAPE	1.5	7
			1953	1062	0	0	RANCH	1.0	5
			1956	1145	0	0	RANCH	1.0	5
			1953	2256	0	0	RANCH	1.0	8
			1994	6127	0	0		1.0	0
			1951	1000	0	0	RANCH	1.0	7
			1956	780	0	0	RANCH	1.0	4
			1930	1248	0	0	CONVENT	1.0	4
			1950	1440	0	0	CAPE	1.5	6

Concatenating Addresses

Create a new field at the end of your data

F	G	H	I	J	K	L	M	N
ADDR_NUM	FULL_STR	ZONING	YEAR_BUILT	BLD_AREA	UNITS	STYLE	FULL_ADDRESS	
1979	BROADWAY		1950	1766	0	CAPE		
54	ROBINSON ST		1953	1062	0	RANCH		

Concatenate the address together

F	G	H	I	J	K	L	M	N	O	P
ADDR_NUM	FULL_STR	ZONING	YEAR_BUILT	BLD_AREA	UNITS	STYLE	FULL_ADDRESS			
1979	BROADWAY		1950	1766	0	CAPE	=CONCATENATE(F2, " ",G2)			
54	ROBINSON ST		1953	1062	0	RANCH				

CONCATENATE(text1, [text2], [text3], [text4], ...)

Drag and drop formula to the end of your data

F	G	H	I	J	K	L	M
ADDR_NU	FULL_STR	ZONIN	YEAR_BUI	BLD_ARI	UNITS	STYLE	FULL_A
1979	BROADWAY		1950	1766	0	CAPE	1979 BRO
54	ROBINSON ST		1953	1062	0	RANC	54 ROBIN
68	ROBINSON ST		1956	1145	0	RANC	68 ROBIN
78	ROBINSON ST		1953	2256	0	RANC	78 ROBIN
110	ROBINSON ST		1994	6127	0		110 ROBIN
78	WILBUR ST		1951	1000	0	RAN	78 WILBUR

Concatenating Addresses

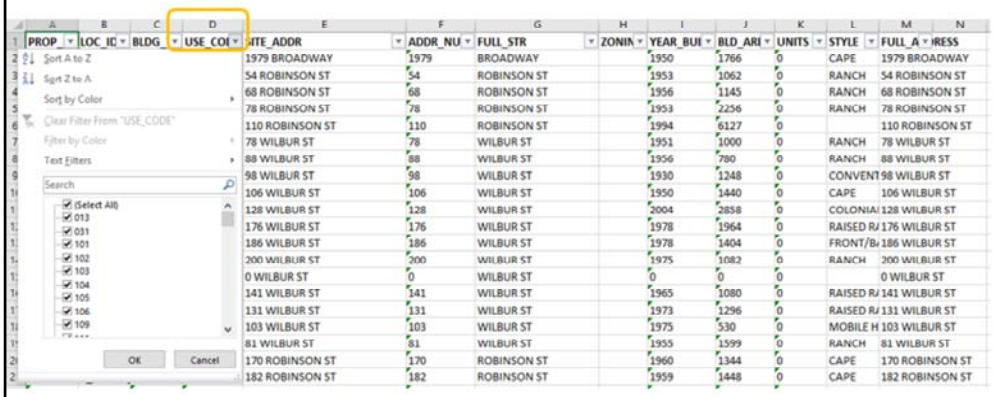
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	PROP_ID	LOC_ID	BLDG_VA	USE_CODE	SITE_ADDR	ADDR_NUM	FULL_STR	ZONING	YEAR_BUILT	BLD_AREA	UNITS	STYLE	FULL_ADDRESS	
2	1-26A	F_773800	101500	101	1979 BROADWAY	1979	BROADWAY		1950	1766	0	CAPE	1979 BROADWAY	
3	1-29	F_773750	83900	101	54 ROBINSON ST	54	ROBINSON ST		1953	1062	0	RANCH	54 ROBINSON ST	
4	1-30	F_773825	78300	101	68 ROBINSON ST	68	ROBINSON ST		1956	1145	0	RANCH	68 ROBINSON ST	
5	1-31	F_773894	144000	101	78 ROBINSON ST	78	ROBINSON ST		1953	2256	0	RANCH	78 ROBINSON ST	
6	1-32	F_774817	489700	960	110 ROBINSON ST	110	ROBINSON ST		1994	6127	0		110 ROBINSON ST	
7	1-33	F_774123	81800	101	78 WILBUR ST	78	WILBUR ST		1951	1000	0	RANCH	78 WILBUR ST	
8	1-34	F_774229	76900	101	88 WILBUR ST	88	WILBUR ST		1956	780	0	RANCH	88 WILBUR ST	
9	1-35	F_774324	94600	101	98 WILBUR ST	98	WILBUR ST		1930	1248	0	CONVEN	98 WILBUR ST	
10	1-36	F_774469	101500	101	106 WILBUR ST	106	WILBUR ST		1950	1440	0	CAPE	106 WILBUR ST	
11	1-36A	F_774626	298600	101	128 WILBUR ST	128	WILBUR ST		2004	2858	0	COLONIA	128 WILBUR ST	
12	1-38-7	F_774925	225600	101	176 WILBUR ST	176	WILBUR ST		1978	1964	0	RAISED R	176 WILBUR ST	
13	1-38-6	F_775077	140600	101	186 WILBUR ST	186	WILBUR ST		1978	1404	0	FRONT/B	186 WILBUR ST	
14	1-38A	F_775246	85800	101	200 WILBUR ST	200	WILBUR ST		1975	1082	0	RANCH	200 WILBUR ST	
15	1-85	F_774960	0	130	0 WILBUR ST	0	WILBUR ST		0	0	0		0 WILBUR ST	
16	1-83	F_774782	115700	101	141 WILBUR ST	141	WILBUR ST		1965	1080	0	RAISED R	141 WILBUR ST	
17	1-82	F_774685	127900	101	131 WILBUR ST	131	WILBUR ST		1973	1296	0	RAISED R	131 WILBUR ST	
18	1-79	F_774455	18100	101	103 WILBUR ST	103	WILBUR ST		1975	530	0	MOBILE H	103 WILBUR ST	
19	1-77	F_774200	127500	101	81 WILBUR ST	81	WILBUR ST		1955	1599	0	RANCH	81 WILBUR ST	
20	1-88	F_774304	99200	101	170 ROBINSON ST	170	ROBINSON ST		1960	1344				

Finding Residential Addresses

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	PROP_ID	LOC_ID	BLDG_VA	USE_CODE	SITE_ADDR	ADDR_NUM	FULL_STR	ZONING	YEAR_BUILT	BLD_AREA	UNITS	STYLE	FULL_ADDRESS	
2	1-26A	F_773800	101500	101	1979 BROADWAY	1979	BROADWAY		1950	1766	0	CAPE	1979 BROADWAY	
3	1-29	F_773750	83900	101	54 ROBINSON ST	54	ROBINSON ST		1953	1062	0	RANCH	54 ROBINSON ST	
4	1-30	F_773825	78300	101	68 ROBINSON ST	68	ROBINSON ST		1956	1145	0	RANCH	68 ROBINSON ST	
5	1-31	F_773894	144000	101	78 ROBINSON ST	78	ROBINSON ST		1953	2256	0	RANCH	78 ROBINSON ST	
6	1-32	F_774817	489700	960	110 ROBINSON ST	110	ROBINSON ST		1994	6127	0		110 ROBINSON ST	
7	1-33	F_774123	81800	101	78 WILBUR ST	78	WILBUR ST		1951	1000	0	RANCH	78 WILBUR ST	
8	1-34	F_774229	76900	101	88 WILBUR ST	88	WILBUR ST		1956	780	0	RANCH	88 WILBUR ST	
9	1-35	F_774324	94600	101	98 WILBUR ST	98	WILBUR ST		1930	1248	0	CONVENT	98 WILBUR ST	
10	1-36	F_774469	101500	101	106 WILBUR ST	106	WILBUR ST		1950	1440	0	CAPE	106 WILBUR ST	
11	1-36A	F_774626	298600	101	128 WILBUR ST	128	WILBUR ST		2004	2858	0	COLONIA	128 WILBUR ST	
12	1-38-7	F_774925	225600	101	176 WILBUR ST	176	WILBUR ST		1978	1964	0	RAISED R	176 WILBUR ST	
13	1-38-6	F_775077	140600	101	186 WILBUR ST	186	WILBUR ST		1978	1404	0	FRONT/B	186 WILBUR ST	
14	1-38A	F_775246	85800	101	200 WILBUR ST	200	WILBUR ST		1975	1082	0	RANCH	200 WILBUR ST	
15	1-85	F_774960	0	130	0 WILBUR ST	0	WILBUR ST		0	0	0		0 WILBUR ST	
16	1-83	F_774782	115700	101	141 WILBUR ST	141	WILBUR ST		1965	1080	0	RAISED R	141 WILBUR ST	
17	1-82	F_774685	127900	101	131 WILBUR ST	131	WILBUR ST		1973	1296	0	RAISED R	131 WILBUR ST	
18	1-79	F_774455	18100	101	103 WILBUR ST	103	WILBUR ST		1975	530	0	MOBILE H	103 WILBUR ST	
19	1-77	F_774200	127500	101	81 WILBUR ST	81	WILBUR ST		1955	1599	0	RANCH	81 WILBUR ST	
20	1-88	F_774304	99200	101	170 ROBINSON ST	170	ROBINSON ST		1960	1344	0	CAPE	170 ROBINSON ST	

Filter for residential codes

Finding Residential Addresses



PROP	LOC_ID	BLDG_	USE_COI	ITE_ADDR	ADDR_NU	FULL_STR	ZONIN	YEAR_BUI	BLD_ARI	UNITS	STYLE	FULL_A	IRESS
				1979 BROADWAY	1979	BROADWAY		1950	1766	0	CAPE	1979 BROADWAY	
				54 ROBINSON ST	54	ROBINSON ST		1953	1062	0	RANCH	54 ROBINSON ST	
				68 ROBINSON ST	68	ROBINSON ST		1956	1145	0	RANCH	68 ROBINSON ST	
				78 ROBINSON ST	78	ROBINSON ST		1953	2256	0	RANCH	78 ROBINSON ST	
				110 ROBINSON ST	110	ROBINSON ST		1994	6127	0		110 ROBINSON ST	
				78 WILBUR ST	78	WILBUR ST		1951	1000	0	RANCH	78 WILBUR ST	
				88 WILBUR ST	88	WILBUR ST		1956	780	0	RANCH	88 WILBUR ST	
				98 WILBUR ST	98	WILBUR ST		1930	1248	0	CONVENT	98 WILBUR ST	
				106 WILBUR ST	106	WILBUR ST		1950	1440	0	CAPE	106 WILBUR ST	
				128 WILBUR ST	128	WILBUR ST		2004	2858	0	COLONIAI	128 WILBUR ST	
				176 WILBUR ST	176	WILBUR ST		1978	1964	0	RAISED RA	176 WILBUR ST	
				186 WILBUR ST	186	WILBUR ST		1978	1404	0	FRONT/Ba	186 WILBUR ST	
				200 WILBUR ST	200	WILBUR ST		1975	1082	0	RANCH	200 WILBUR ST	
				0 WILBUR ST	0	WILBUR ST		0	0	0		0 WILBUR ST	
				141 WILBUR ST	141	WILBUR ST		1965	1080	0	RAISED RA	141 WILBUR ST	
				131 WILBUR ST	131	WILBUR ST		1973	1296	0	RAISED RA	131 WILBUR ST	
				103 WILBUR ST	103	WILBUR ST		1975	530	0	MOBILE H	103 WILBUR ST	
				81 WILBUR ST	81	WILBUR ST		1955	1599	0	RANCH	81 WILBUR ST	
				170 ROBINSON ST	170	ROBINSON ST		1960	1344	0	CAPE	170 ROBINSON ST	
				182 ROBINSON ST	182	ROBINSON ST		1959	1448	0	CAPE	182 ROBINSON ST	

Filter for residential codes, usually three digits, starting with 1, but check your own assessors codes

Finding Residential Addresses

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	PROP_ID	LOC_ID	BLDG_VA	USE_CODE	SITE_ADDR	ADDR_NUM	FULL_STR	ZONING	YEAR_BUILT	BLD_AREA	UNITS	STYLE	FULL_ADDRESS	
2	1-26A	F_773800	101500	101	1979 BROADWAY	1979	BROADWAY		1950	1766	0	CAPE	1979 BROADWAY	
3	1-29	F_773750	83900	101	54 ROBINSON ST	54	ROBINSON ST		1953	1062	0	RANCH	54 ROBINSON ST	
4	1-30	F_773825	78300	101	68 ROBINSON ST	68	ROBINSON ST		1956	1145	0	RANCH	68 ROBINSON ST	
5	1-31	F_773894	144000	101	78 ROBINSON ST	78	ROBINSON ST		1953	2256	0	RANCH	78 ROBINSON ST	
6	1-32	F_774817	489700	960	110 ROBINSON ST	110	ROBINSON ST		1994	6127	0		110 ROBINSON ST	
7	1-33	F_774123	81800	101	78 WILBUR ST	78	WILBUR ST		1951	1000	0	RANCH	78 WILBUR ST	
8	1-34	F_774229	76900	101	88 WILBUR ST	88	WILBUR ST		1956	780	0	RANCH	88 WILBUR ST	
9	1-35	F_774324	94600	101	98 WILBUR ST	98	WILBUR ST		1930	1248	0	CONVENT	98 WILBUR ST	
10	1-36	F_774469	101500	101	106 WILBUR ST	106	WILBUR ST		1950	1440	0	CAPE	106 WILBUR ST	
11	1-36A	F_774626	298600	101	128 WILBUR ST	128	WILBUR ST		2004	2858	0	COLONIAL	128 WILBUR ST	
12	1-38-7	F_774925	225600	101	176 WILBUR ST	176	WILBUR ST		1978	1964	0	RAISED R/	176 WILBUR ST	
13	1-38-6	F_775077	140600	101	186 WILBUR ST	186	WILBUR ST		1978	1404	0	FRONT/B/	186 WILBUR ST	
14	1-38A	F_775240	83600	101	200 WILBUR ST	200	WILBUR ST		1973	1082	0	RANCH	200 WILBUR ST	
15	1-85	F_774960	0	130	0 WILBUR ST	0	WILBUR ST		0	0	0		0 WILBUR ST	
16	1-83	F_774783	118700	101	141 WILBUR ST	141	WILBUR ST		1965	1080	0	RAISED R/	141 WILBUR ST	
17	1-82	F_774685	127900	101	131 WILBUR ST	131	WILBUR ST		1973	1296	0	RAISED R/	131 WILBUR ST	
18	1-79	F_774455	18100	101	103 WILBUR ST	103	WILBUR ST		1975	530	0	MOBILE H	103 WILBUR ST	
19	1-77	F_774200	127500	101	81 WILBUR ST	81	WILBUR ST		1955	1599	0	RANCH	81 WILBUR ST	
20	1-88	F_774304	99200	101	170 ROBINSON ST	170	ROBINSON ST		1960	1344	0	CAPE	170 ROBINSON ST	

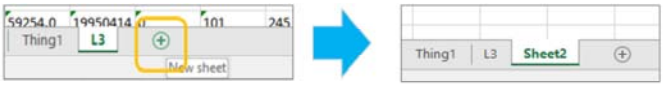
Check building areas and values for zeros…

Finding Residential Addresses

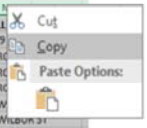
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	PROP_ID	LOC_ID	BLDG_VA	USE_CODE	SITE_ADDR	ADDR_NUM	FULL_STR	ZONING	YEAR_BUILT	BLD_AREA	UNITS	STYLE	FULL_ADDRESS	
2	1-26A	F_773800	101500	101	1979 BROADWAY	1979	BROADWAY		1950	1766	0	CAPE	1979 BROADWAY	
3	1-29	F_773750	83900	101	54 ROBINSON ST	54	ROBINSON ST		1953	1062	0	RANCH	54 ROBINSON ST	
4	1-30	F_773825	78300	101	68 ROBINSON ST	68	ROBINSON ST		1956	1145	0	RANCH	68 ROBINSON ST	
5	1-31	F_773894	144000	101	78 ROBINSON ST	78	ROBINSON ST		1953	2256	0	RANCH	78 ROBINSON ST	
6	1-32	F_774817	489700	960	110 ROBINSON ST	110	ROBINSON ST		1994	6127	0		110 ROBINSON ST	
7	1-33	F_774123	81800	101	78 WILBUR ST	78	WILBUR ST		1951	1000	0	RANCH	78 WILBUR ST	
8	1-34	F_774229	76900	101	88 WILBUR ST	88	WILBUR ST		1956	780	0	RANCH	88 WILBUR ST	
9	1-35	F_774324	94600	101	98 WILBUR ST	98	WILBUR ST		1930	1248	0	CONVEN	98 WILBUR ST	
10	1-36	F_774469	101500	101	106 WILBUR ST	106	WILBUR ST		1950	1440	0	CAPE	106 WILBUR ST	
11	1-36A	F_774626	298600	101	128 WILBUR ST	128	WILBUR ST		2004	2858	0	COLONIA	128 WILBUR ST	
12	1-38-7	F_774925	225600	101	176 WILBUR ST	176	WILBUR ST		1978	1964	0	RAISED R	176 WILBUR ST	
13	1-38-6	F_775077	140600	101	186 WILBUR ST	186	WILBUR ST		1978	1404	0	FRONT/B	186 WILBUR ST	
14	1-38A	F_775246	85800	101	200 WILBUR ST	200	WILBUR ST		1975	1082	0	RANCH	200 WILBUR ST	
15	1-85	F_774960	0	130	0 WILBUR ST	0	WILBUR ST		0	0	0		0 WILBUR ST	
16	1-83	F_774782	115700	101	141 WILBUR ST	141	WILBUR ST		1965	1080	0	RAISED R	141 WILBUR ST	
17	1-82	F_774685	127900	101	131 WILBUR ST	131	WILBUR ST		1973	1296	0	RAISED R	131 WILBUR ST	
18	1-79	F_774455	18100	101	103 WILBUR ST	103	WILBUR ST		1975	530	0	MOBILE H	103 WILBUR ST	
19	1-77	F_774200	127500	101	81 WILBUR ST	81	WILBUR ST		1955	1599	0	RANCH	81 WILBUR ST	
20	1-88	F_774304	99200	101	170 ROBINSON ST	170	ROBINSON ST		1960	1344	0	CAPE	170 ROBINSON ST	

The “STYLE” column can also help determine if it is a residence

Finding Residential Addresses

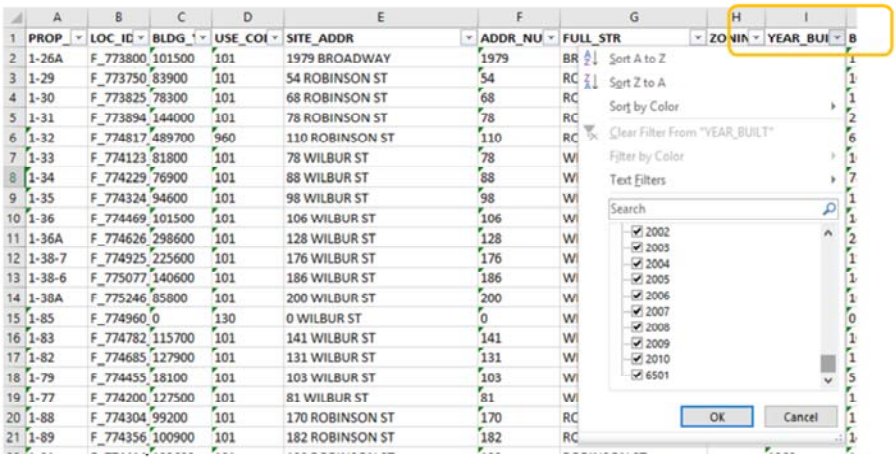


	A	B	C	D	E	F	G	H	I	J	K	L	M
1	PROP	LOC_ID	BLDG_	USE_COI	SITE_ADDR	ADDR_NU	FULL_STR	ZONIN	YEAR_BUI	BLD_ARI	UNITS	STYLE	FULL
2	1-26A	F_773800	101500	101	1979 BROADWAY	1979	BROADWAY		1950	1766	0	CAPE	1979
3	1-29	F_773750	83900	101	54 ROBINSON ST	54	ROBINSON ST		1953	1062	0	RANCH	54 R
4	1-30	F_773825	78300	101	68 ROBINSON ST	68	ROBINSON ST		1956	1145	0	RANCH	68 R
5	1-31	F_773894	144000	101	78 ROBINSON ST	78	ROBINSON ST		1953	2256	0	RANCH	78 R
7	1-33	F_774123	81800	101	78 WILBUR ST	78	WILBUR ST		1951	1000	0	RANCH	78 W
8	1-34	F_774229	76900	101	88 WILBUR ST	88	WILBUR ST		1956	780	0	RANCH	88 WILBUR ST
9	1-35	F_774324	94600	101	98 WILBUR ST	98	WILBUR ST		1930	1248	0	CONVENT	98 WILBUR ST
10	1-36	F_774469	101500	101	106 WILBUR ST	106	WILBUR ST		1950	1440	0	CAPE	106 WILBUR ST
11	1-36A	F_774626	298600	101	128 WILBUR ST	128	WILBUR ST		2004	2858	0	COLONIAL	128 WILBUR ST
12	1-38-7	F_774925	225600	101	176 WILBUR ST	176	WILBUR ST		1978	1964	0	RAISED RA	176 WILBUR ST
13	1-38-6	F_775077	140600	101	186 WILBUR ST	186	WILBUR ST		1978	1404	0	FRONT/BA	186 WILBUR ST
14	1-38A	F_775246	85800	101	200 WILBUR ST	200	WILBUR ST		1975	1082	0	RANCH	200 WILBUR ST
16	1-83	F_774782	115700	101	141 WILBUR ST	141	WILBUR ST		1965	1080	0	RAISED RA	141 WILBUR ST
17	1-82	F_774685	127900	101	131 WILBUR ST	131	WILBUR ST		1973	1296	0	RAISED RA	131 WILBUR ST
18	1-79	F_774455	18100	101	103 WILBUR ST	103	WILBUR ST		1975	530	0	MOBILE H	103 WILBUR ST
19	1-77	F_774200	127500	101	81 WILBUR ST	81	WILBUR ST		1955	1599	0	RANCH	81 WILBUR ST



Copy your residences onto a new sheet when you are done

New Construction

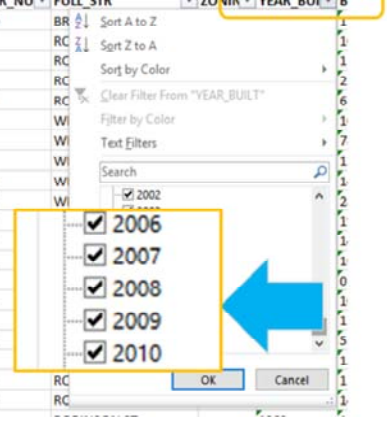


	A	B	C	D	E	F	G	H	I
1	PROP	LOC_ID	BLDG_	USE_COI	SITE_ADDR	ADDR_NU	FULL_STR	ZONIN	YEAR_BUI
2	1-26A	F_773800	101500	101	1979 BROADWAY	1979	BR		
3	1-29	F_773750	83900	101	54 ROBINSON ST	54	RC		
4	1-30	F_773825	78300	101	68 ROBINSON ST	68	RC		
5	1-31	F_773894	144000	101	78 ROBINSON ST	78	RC		
6	1-32	F_774817	489700	960	110 ROBINSON ST	110	RC		
7	1-33	F_774123	81800	101	78 WILBUR ST	78	WI		
8	1-34	F_774229	76900	101	88 WILBUR ST	88	WI		
9	1-35	F_774324	94600	101	98 WILBUR ST	98	WI		
10	1-36	F_774469	101500	101	106 WILBUR ST	106	WI		
11	1-36A	F_774626	298600	101	128 WILBUR ST	128	WI		
12	1-38-7	F_774925	225600	101	176 WILBUR ST	176	WI		
13	1-38-6	F_775077	140600	101	186 WILBUR ST	186	WI		
14	1-38A	F_775246	85800	101	200 WILBUR ST	200	WI		
15	1-85	F_774960	0	130	0 WILBUR ST	0	WI		
16	1-83	F_774782	115700	101	141 WILBUR ST	141	WI		
17	1-82	F_774685	127900	101	131 WILBUR ST	131	WI		
18	1-79	F_774455	18100	101	103 WILBUR ST	103	WI		
19	1-77	F_774200	127500	101	81 WILBUR ST	81	WI		
20	1-88	F_774304	99200	101	170 ROBINSON ST	170	RC		
21	1-89	F_774356	100900	101	182 ROBINSON ST	182	RC		

Check for development from 2010 onward and filter.

New Construction

	A	B	C	D	E	F	G	H	I
1	PROP	LOC_ID	BLDG_	USE_COI	SITE_ADDR	ADDR_NU	FULL_STR	ZONIN	YEAR_BUI
2	1-26A	F_773800	101500	101	1979 BROADWAY	1979	BR		
3	1-29	F_773750	83900	101	54 ROBINSON ST	54	RC		
4	1-30	F_773825	78300	101	68 ROBINSON ST	68	RC		
5	1-31	F_773894	144000	101	78 ROBINSON ST	78	RC		
6	1-32	F_774817	489700	960	110 ROBINSON ST	110	RC		
7	1-33	F_774123	81800	101	78 WILBUR ST	78	WI		
8	1-34	F_774229	76900	101	88 WILBUR ST	88	WI		
9	1-35	F_774324	94600	101	98 WILBUR ST	98	WI		
10	1-36	F_774469	101500	101	106 WILBUR ST	106	WI		
11	1-36A	F_774626	298600	101	128 WILBUR ST	128	WI		
12	1-38-7	F_774925	225600	101	176 WILBUR ST	176			
13	1-38-6	F_775077	140600	101	186 WILBUR ST	186			
14	1-38A	F_775246	85800	101	200 WILBUR ST	200			
15	1-85	F_774960	0	130	0 WILBUR ST	0			
16	1-83	F_774782	115700	101	141 WILBUR ST	141			
17	1-82	F_774685	127900	101	131 WILBUR ST	131			
18	1-79	F_774455	18100	101	103 WILBUR ST	103			
19	1-77	F_774200	127500	101	81 WILBUR ST	81			
20	1-88	F_774304	99200	101	170 ROBINSON ST	170	RC		
21	1-89	F_774356	100900	101	182 ROBINSON ST	182	RC		

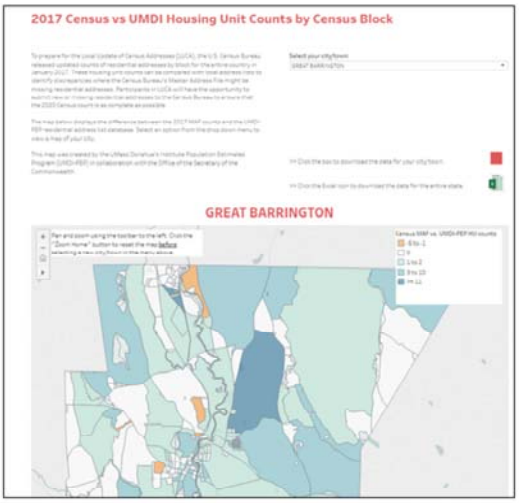


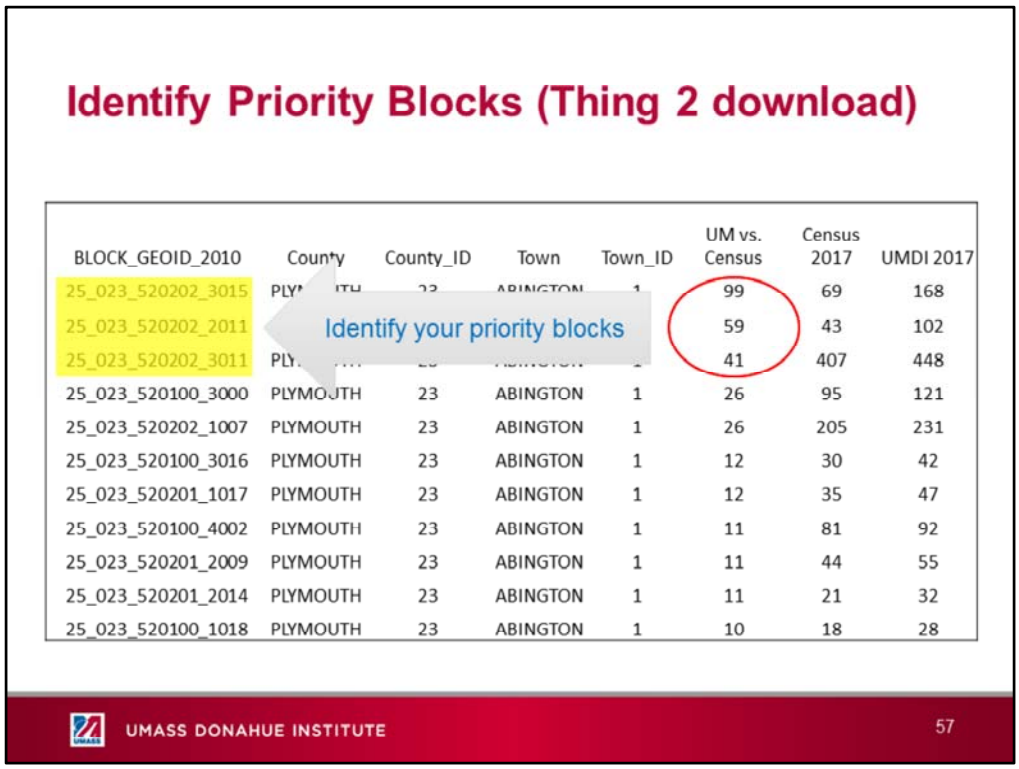
UMDI LUCA Resources: Using Thing 2

2017 counts from MAF vs. 2017 counts from UMDI

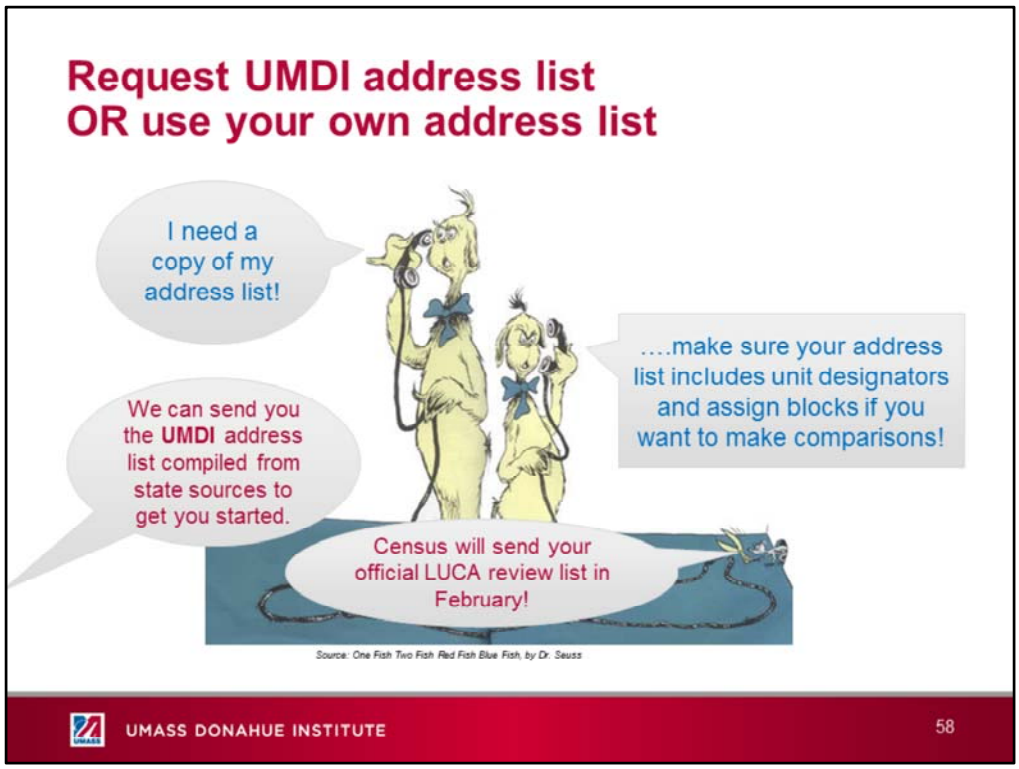
Using "Thing 2

- Navigate to your town
- Download 2017 UMDI versus Census MAF counts by block
- Request UMDI Address Lists
- Focus on areas where UMDI has more HUs than Census
- Investigate discrepancies
- Add your own addresses!

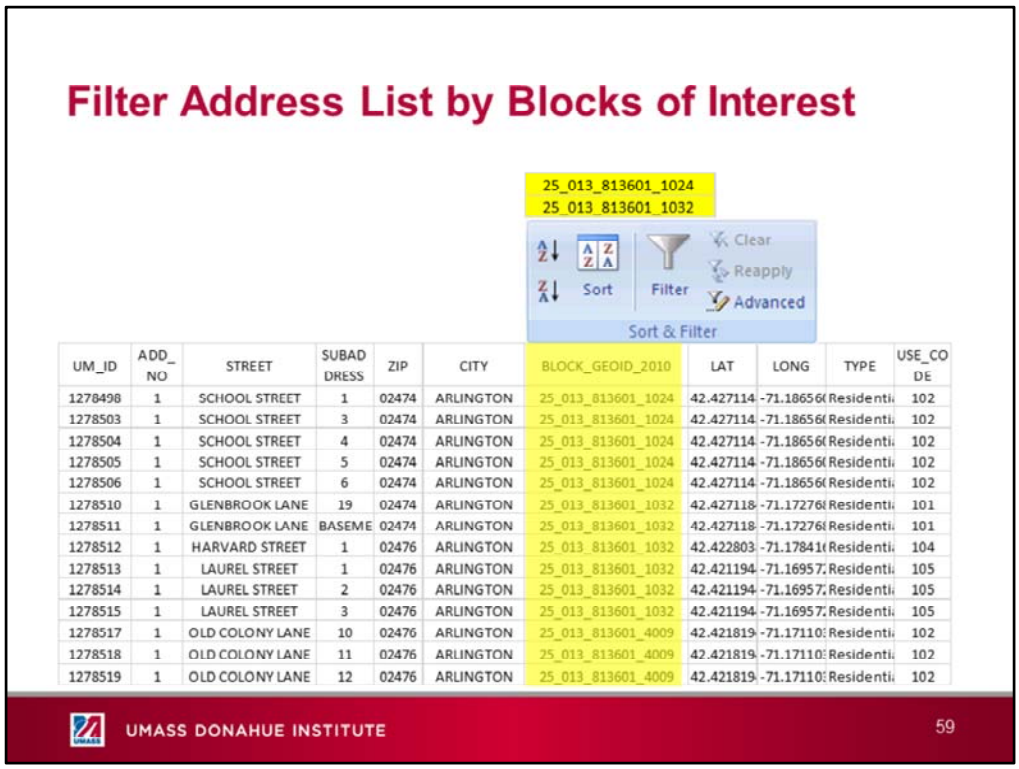




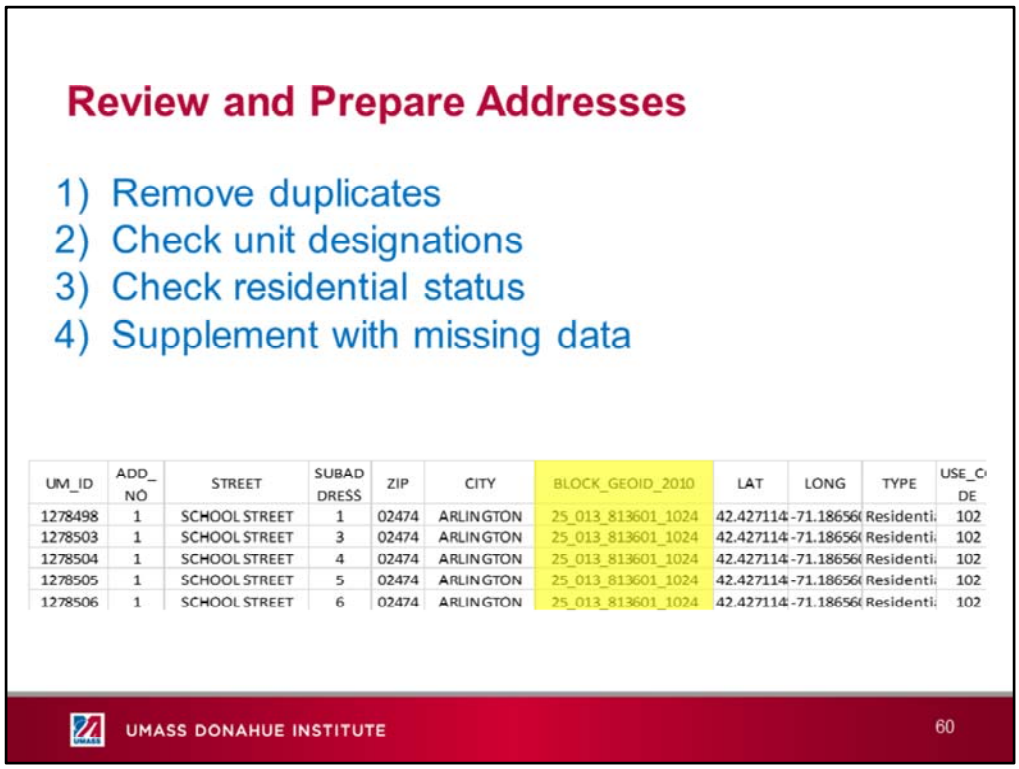
Look for largest discrepancies. Focus on these blocks.



You can request a list of addresses for that block (or your entire town) or you can use your own list. Just make sure that your list also includes Census block names. Just remember, the address list we will send you is the UMDI list that we have been assembling using state data sources. It is NOT the Title 13-protected LUCA address list that Census will send to you in February. Census will send that to you directly once the review period officially begins.



Now, take your detailed address list and use the blocks you identified as priority blocks, and filter your address by the priority blocks.



Once you are looking at just your priority block,

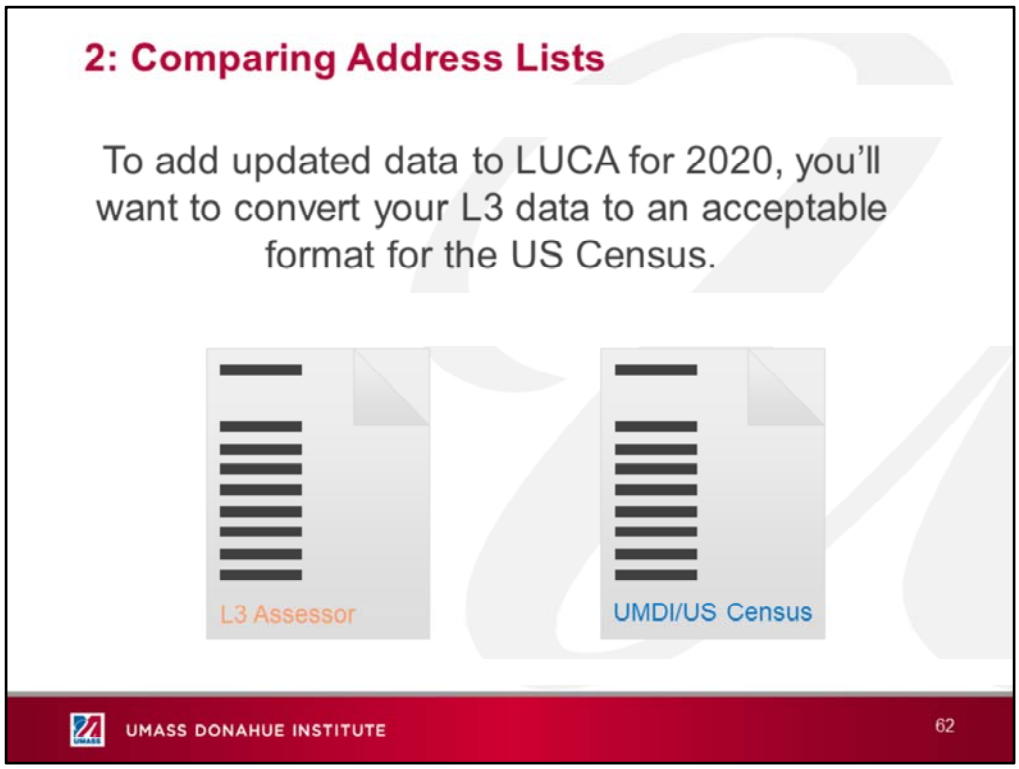
1) Remove duplicates
2) Check unit designations
3) Check residential status
4) Supplement with missing data
5) Format to Census specifications

Demonstration of

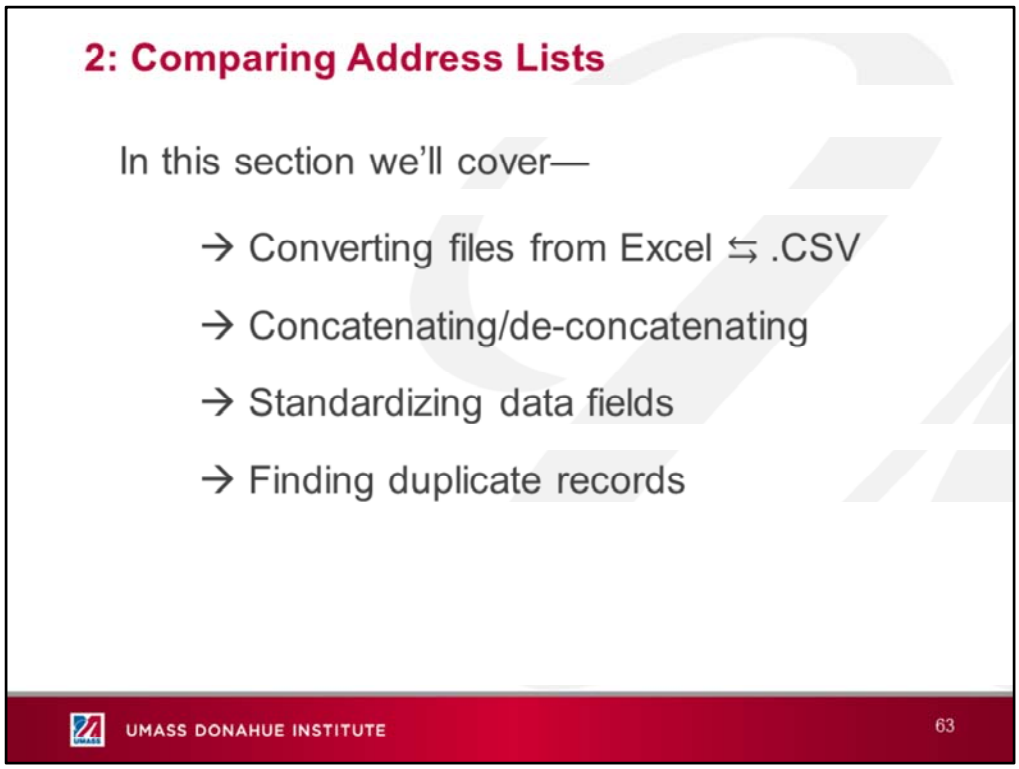
Comparing and Supplementing Address Lists

February 8, 2018

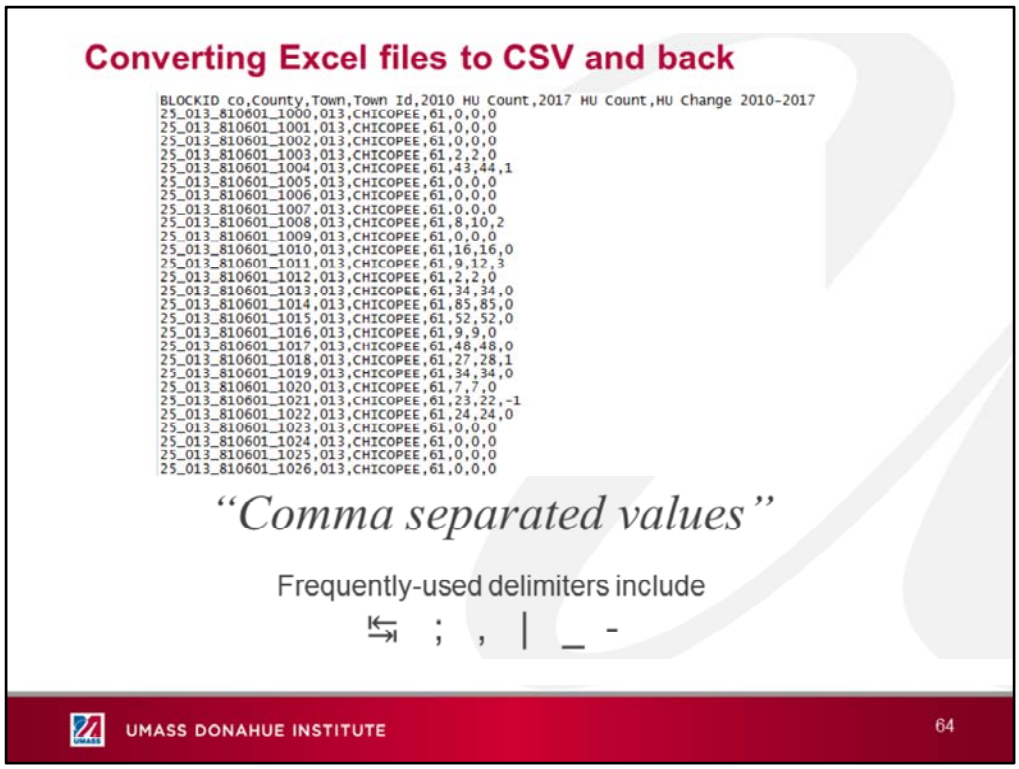
Ken Lefebvre, M.P.P.A.
Research Analyst, Population Estimates Program
UMass Donahue Institute



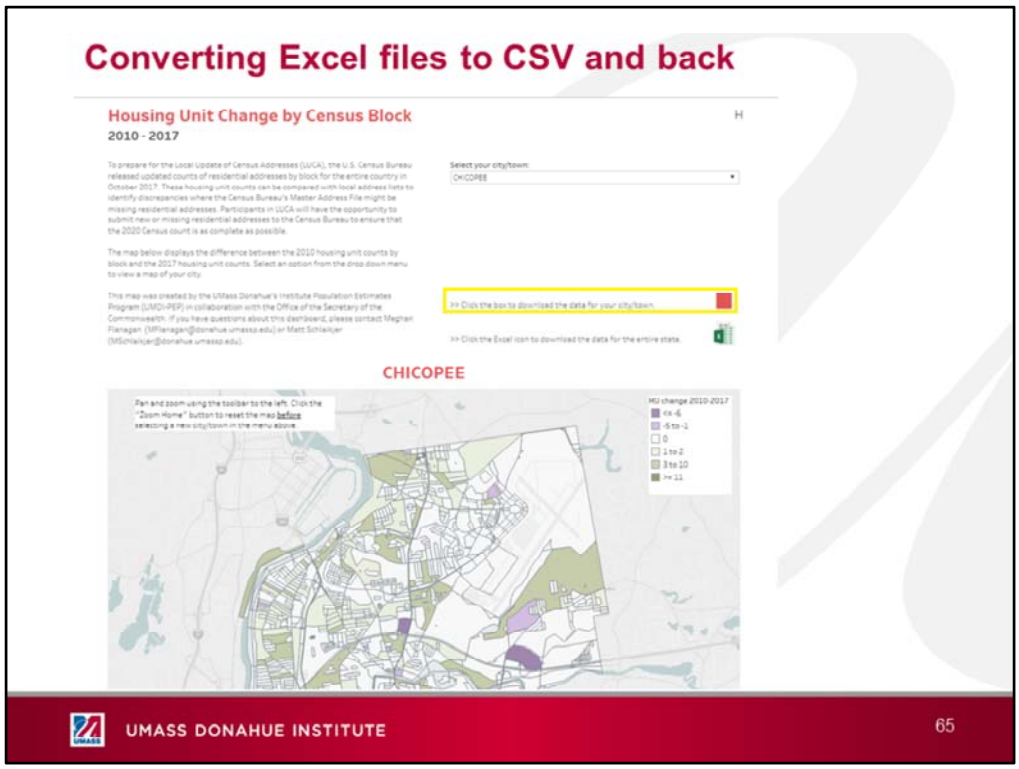
For the purpose of making our dashboards and other tools online, UMDI data uses a format which is compatible for LUCA purposes.



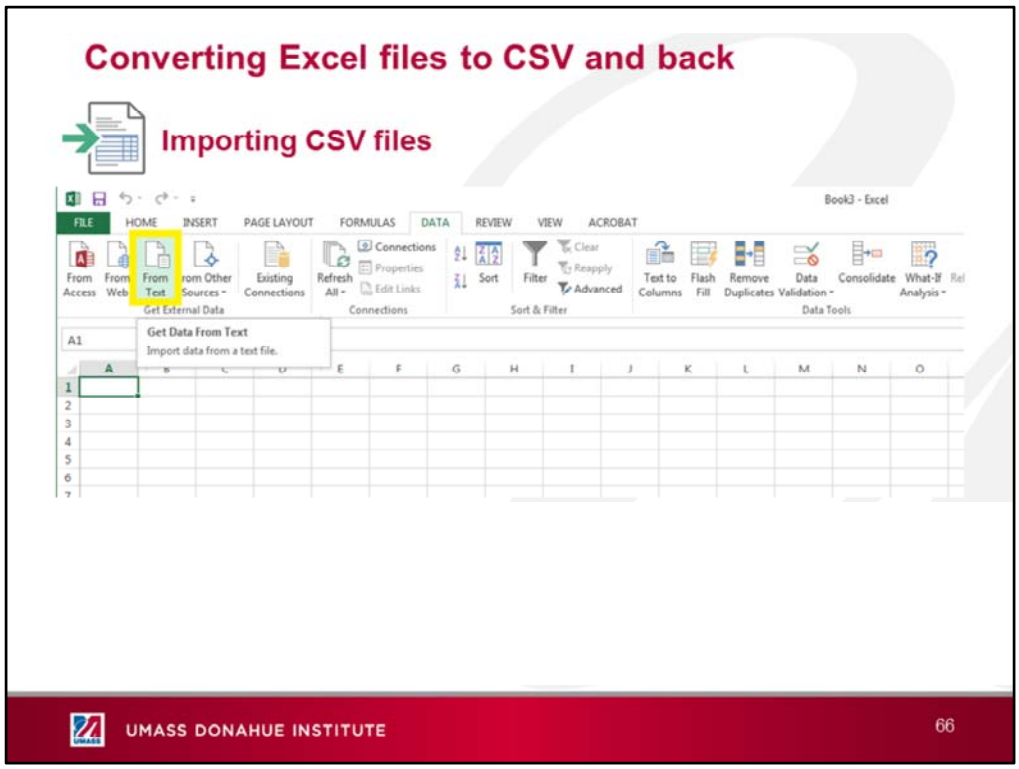
In this part of the presentation I will be showing you some of the ways you can use Excel as a multi-tool for ensuring data is correct, in the proper format and usable by the **Local Update of Census Addresses** Operation, better known as LUCA 2020.



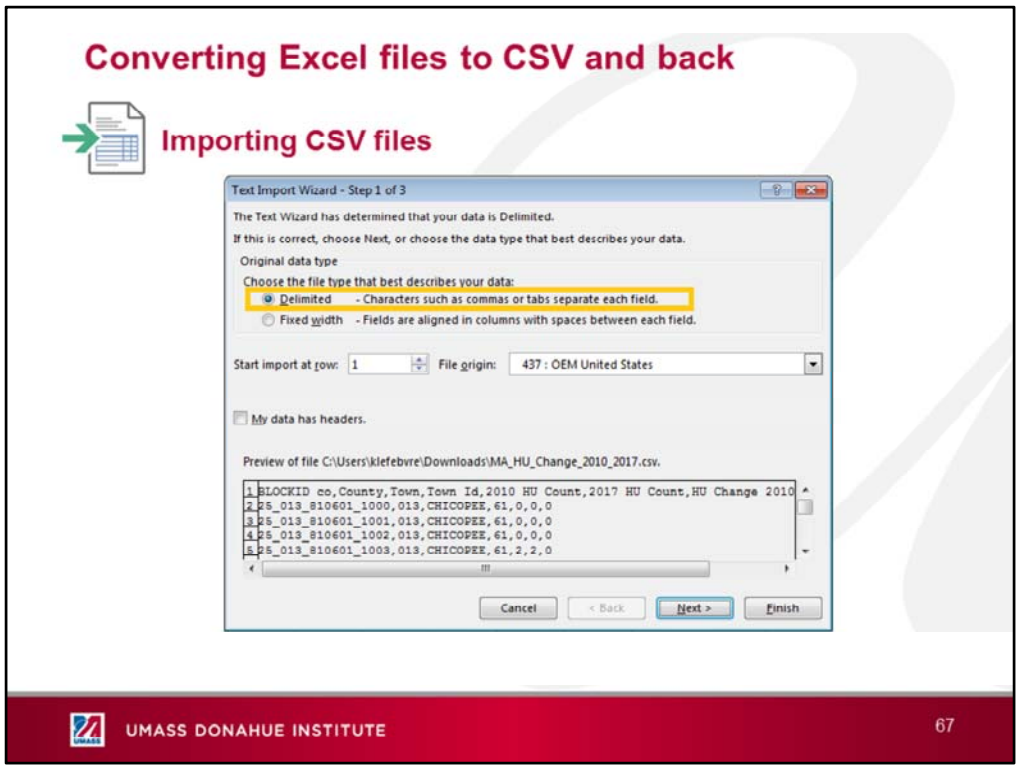
CSVs, known in full as “comma separated values” files, are especially useful for storing large sets of information in a small text-based format. Tables are stored as plain text, with cells separated or “delimited’ by a single non-alphanumeric character, usually commas, but alternately delimiters can be tabs, semicolons, commas, vertical lines, or a number of other symbols



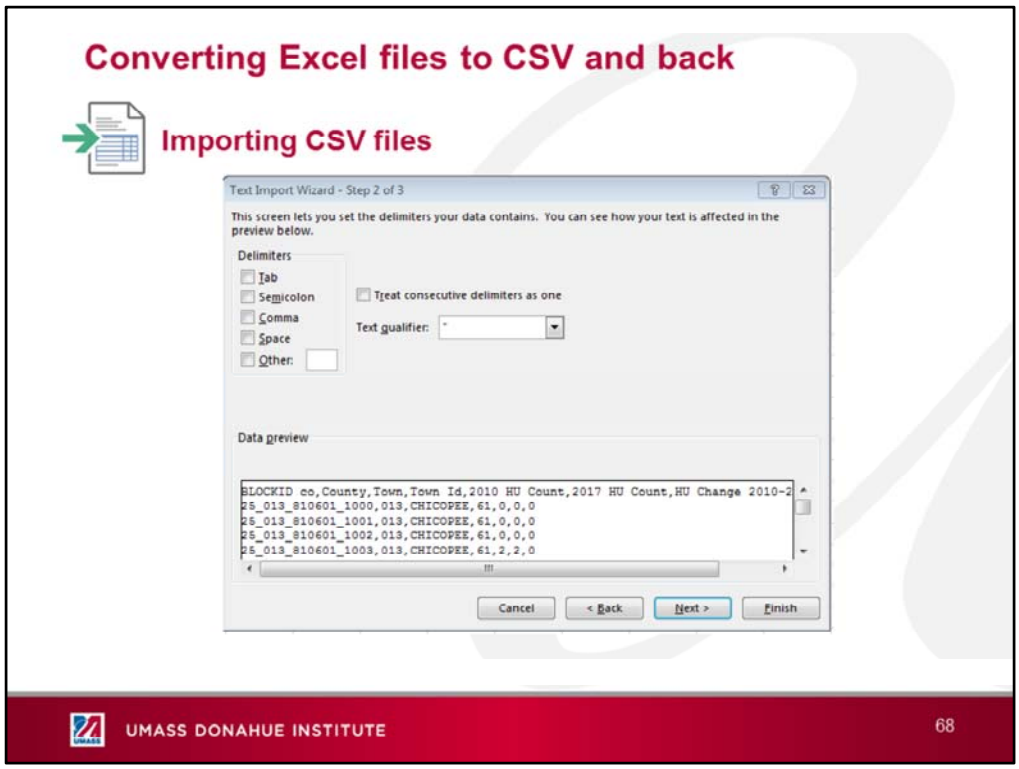
CSV files are also the format that our dashboard data is stored, again if you would like to download this data, you can do so by clicking the red button in or



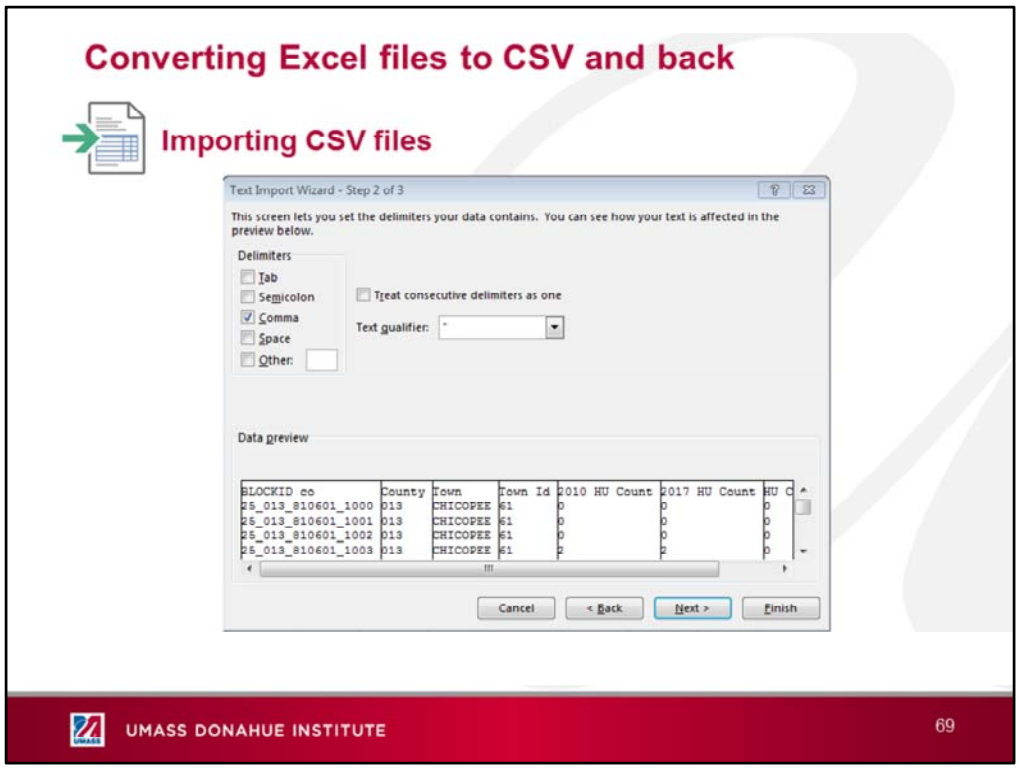
To do this, we'll open a blank workbook, go to the Data tab and click the "From Text" button in the "Get External Data" menu. Navigate to the folder containing your CSV file



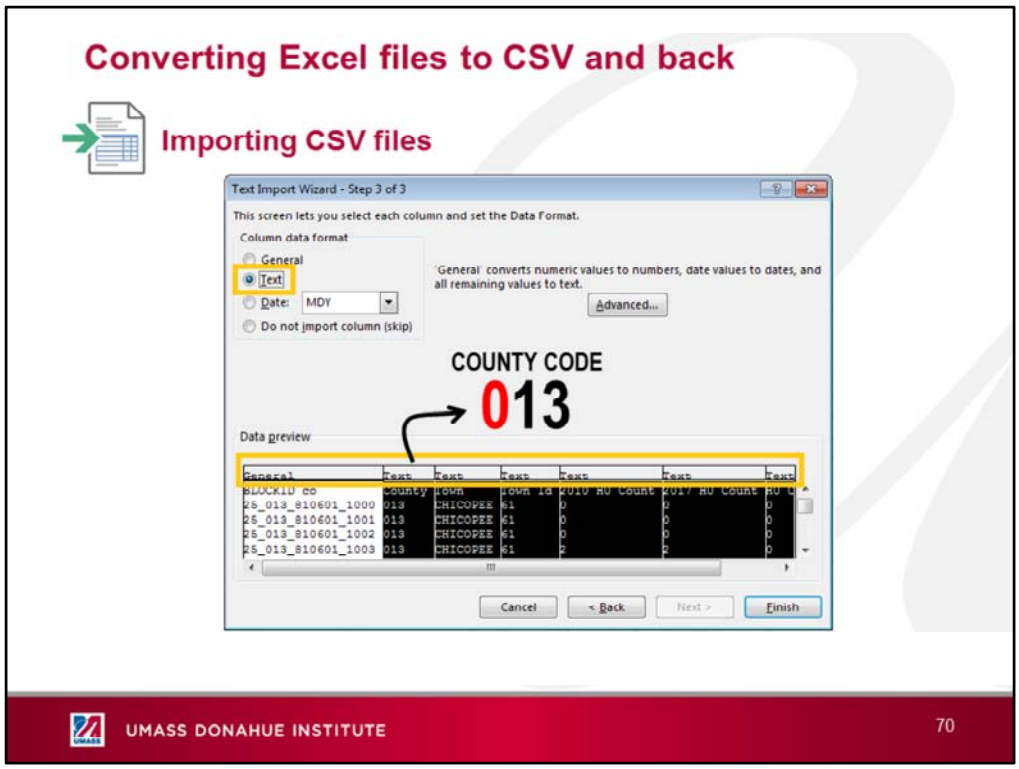
you'll be met with the "Text Import Wizard". Leave the "Original data type" as the default "Delimited" and, in general, you'll want to start at import row "1" with the default file origin.



Click Next> and then select your delimiter if it's listed, or otherwise enter it in the "Other" input box. If you do this, make sure any other delimiters are not checked by accident. [SLIDE]

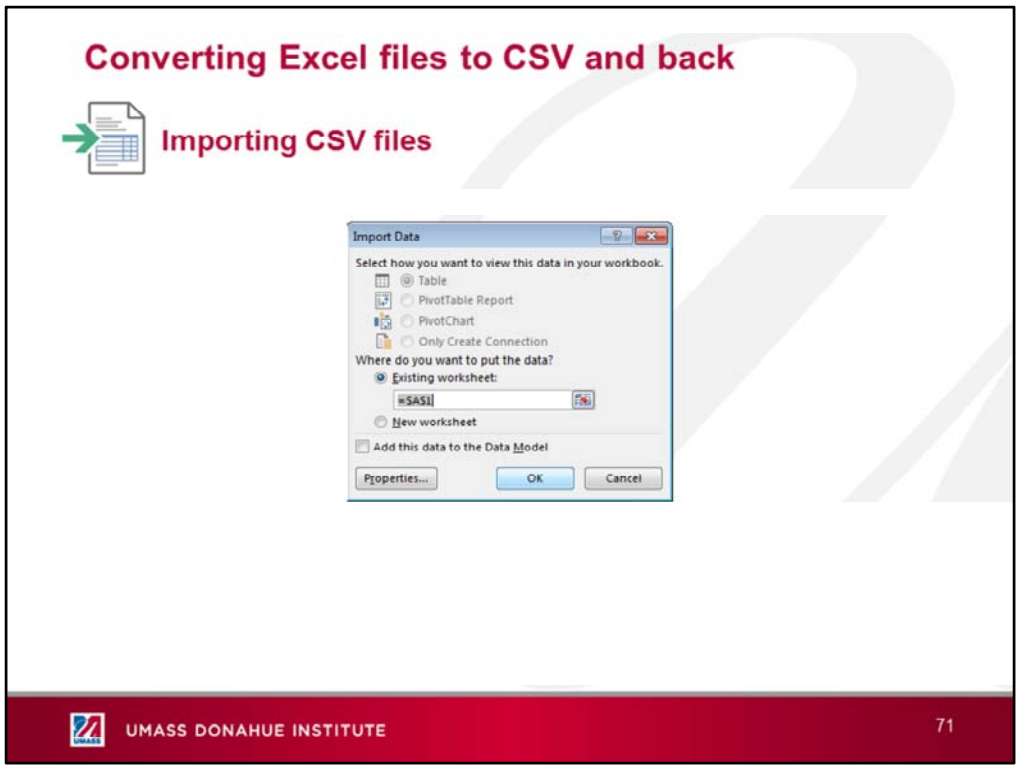


You'll be able to see if your import will be a success in the data preview.

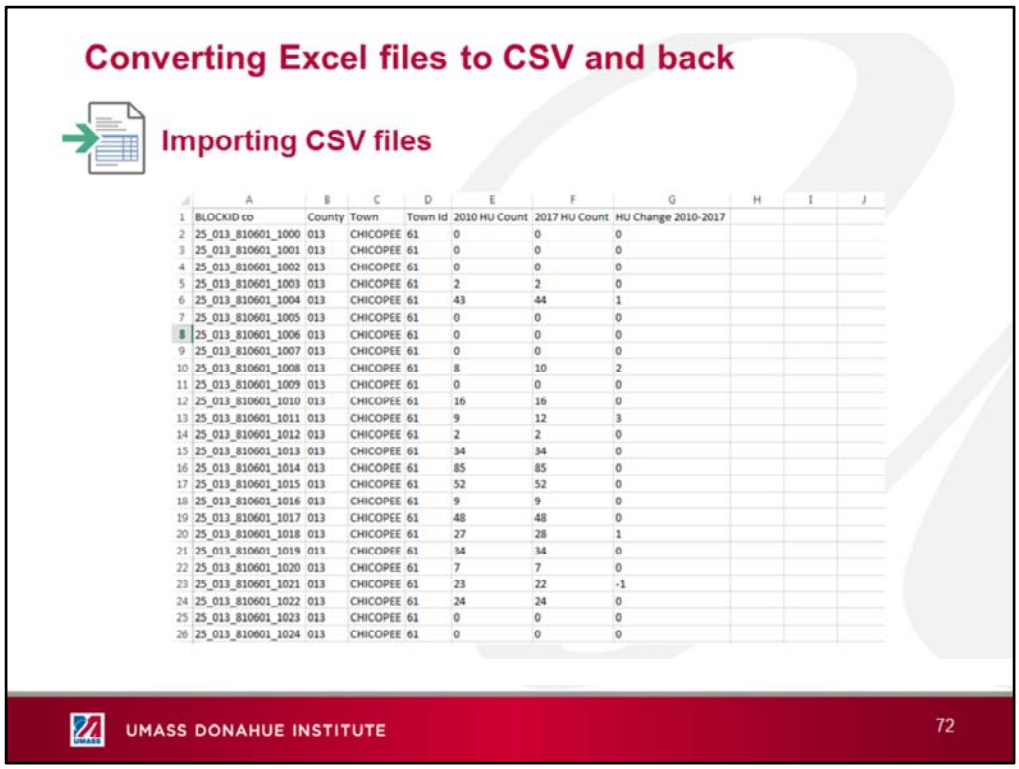


[Animation, fade in ZIP]
When importing CSV files for Census or other property data, it is generally a good idea to convert your fields to text, particularly any numeric fields, as leading zeros such as those in a ZIP code (or in this case the county code) will be removed if you import your data as in a "General" format.

Making these values into text means any formulas we enter into these cells will be treated as text rather than formulas, so while we may need to convert some other columns to the "General" format later, this is generally a good practice to ensure that no data is lost.

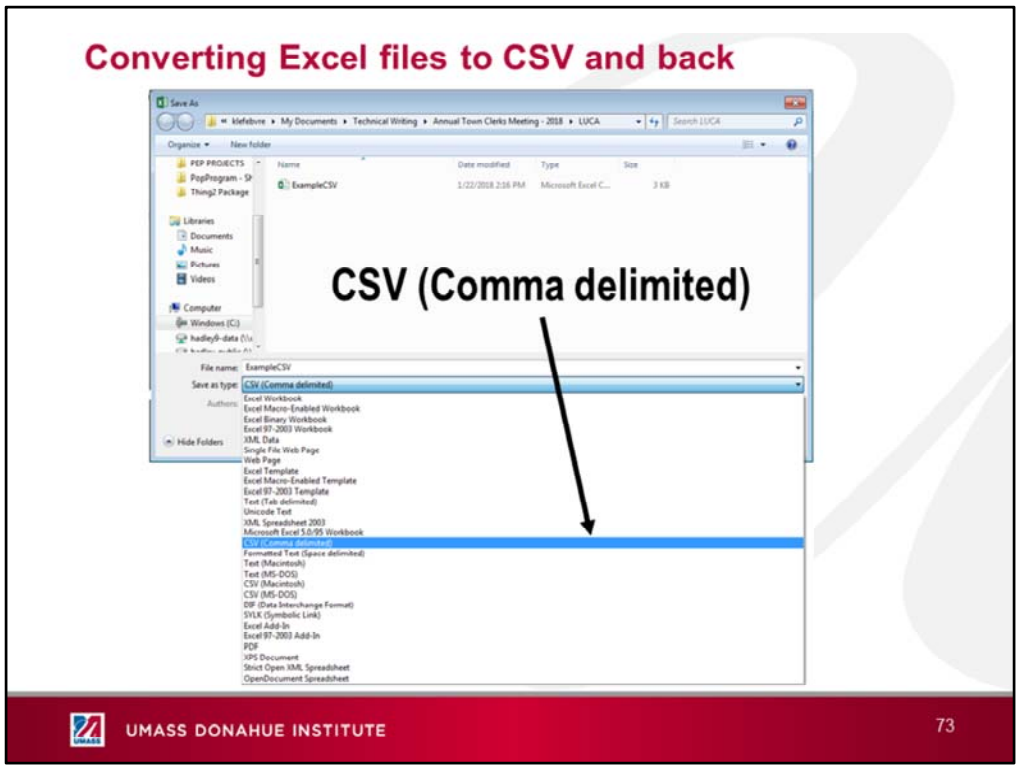


After clicking Finish, the Import Data window will prompt whether you want to add this to an existing worksheet or create a new one. In this case we'll use the default value for the existing worksheet, as our workbook is blank.

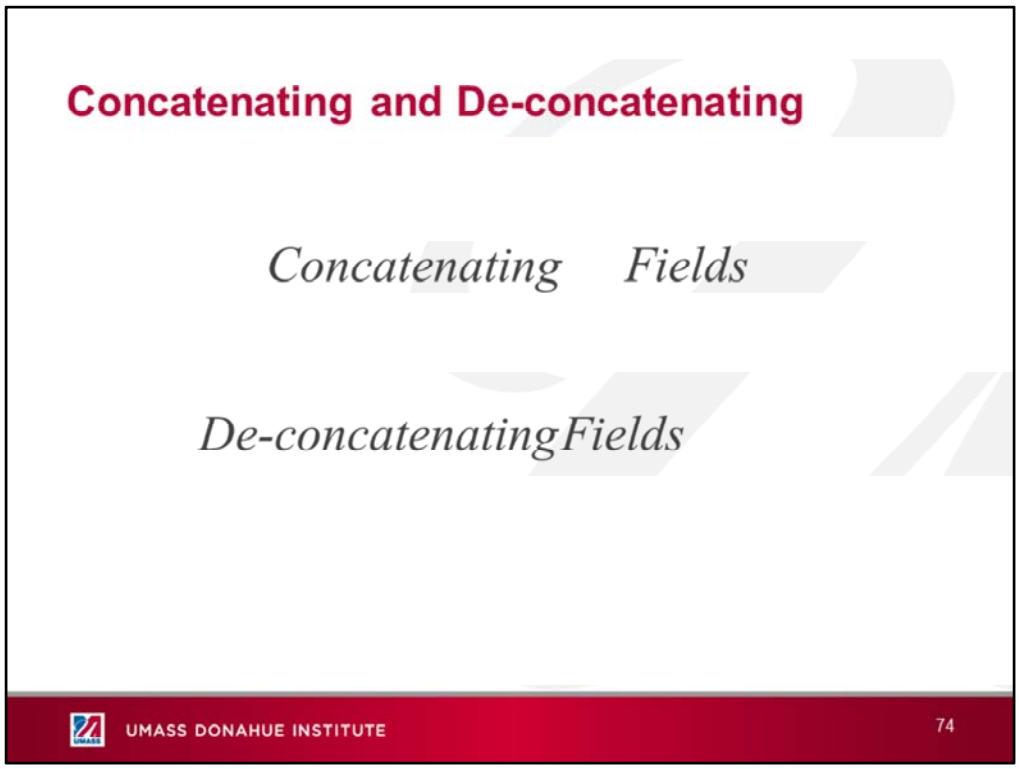


	A	B	C	D	E	F	G	H	I	J
1	BLOCKID co	County	Town	Town Id	2010 HU Count	2017 HU Count	HU Change 2010-2017			
2	25_013_810601_1000	013	CHICOPEE	61	0	0	0			
3	25_013_810601_1001	013	CHICOPEE	61	0	0	0			
4	25_013_810601_1002	013	CHICOPEE	61	0	0	0			
5	25_013_810601_1003	013	CHICOPEE	61	2	2	0			
6	25_013_810601_1004	013	CHICOPEE	61	43	44	1			
7	25_013_810601_1005	013	CHICOPEE	61	0	0	0			
8	25_013_810601_1006	013	CHICOPEE	61	0	0	0			
9	25_013_810601_1007	013	CHICOPEE	61	0	0	0			
10	25_013_810601_1008	013	CHICOPEE	61	8	10	2			
11	25_013_810601_1009	013	CHICOPEE	61	0	0	0			
12	25_013_810601_1010	013	CHICOPEE	61	16	16	0			
13	25_013_810601_1011	013	CHICOPEE	61	9	12	3			
14	25_013_810601_1012	013	CHICOPEE	61	2	2	0			
15	25_013_810601_1013	013	CHICOPEE	61	34	34	0			
16	25_013_810601_1014	013	CHICOPEE	61	85	85	0			
17	25_013_810601_1015	013	CHICOPEE	61	52	52	0			
18	25_013_810601_1016	013	CHICOPEE	61	9	9	0			
19	25_013_810601_1017	013	CHICOPEE	61	48	48	0			
20	25_013_810601_1018	013	CHICOPEE	61	27	28	1			
21	25_013_810601_1019	013	CHICOPEE	61	34	34	0			
22	25_013_810601_1020	013	CHICOPEE	61	7	7	0			
23	25_013_810601_1021	013	CHICOPEE	61	23	22	-1			
24	25_013_810601_1022	013	CHICOPEE	61	24	24	0			
25	25_013_810601_1023	013	CHICOPEE	61	0	0	0			
26	25_013_810601_1024	013	CHICOPEE	61	0	0	0			

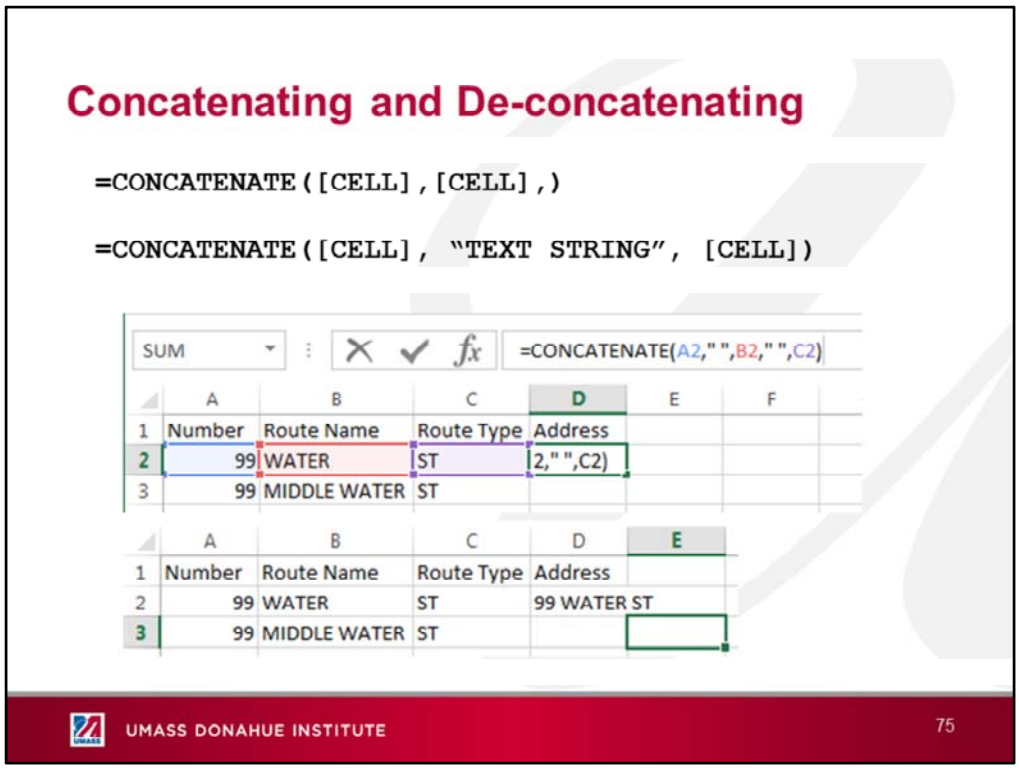
Now that our CSV is imported, we can save it with any formatting changes like highlighting, font, etc.; features that would otherwise be lost as a CSV file.



Saving CSV files from Excel is very simple; all you have to do is go to File>Save as, and in the file format dropdown, select CSV (Comma delimited).
You'll need to convert your Excel files back into CSVs in order to work with GUPS (Geog. Update Partnership Software)

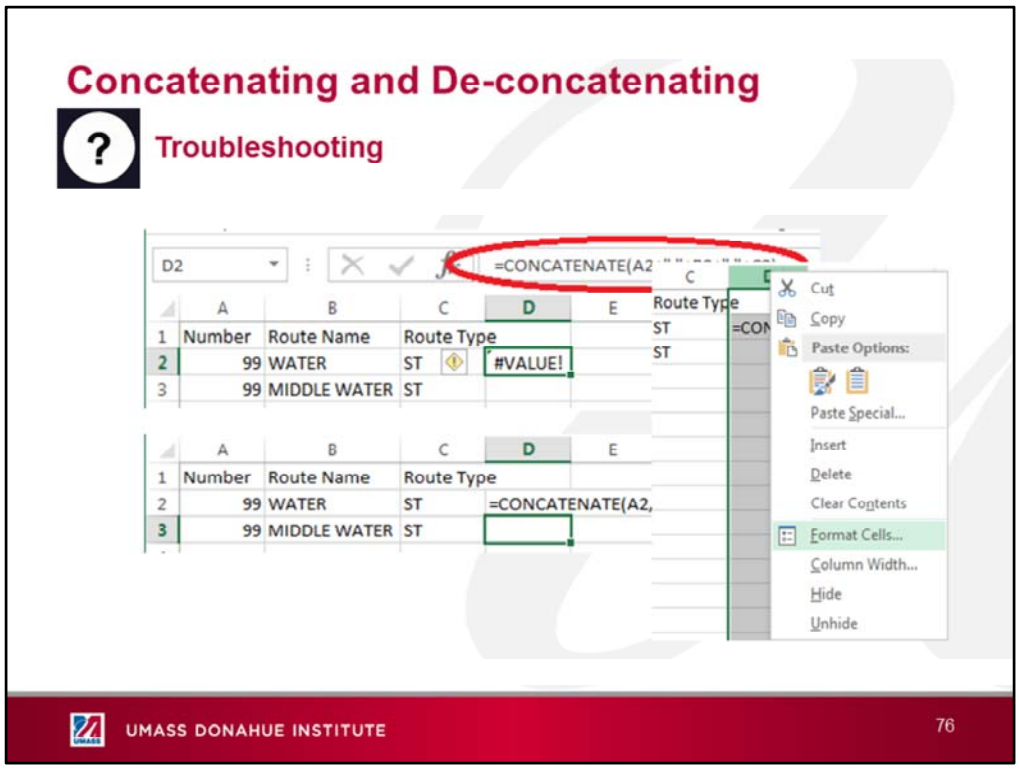


In this next section we'll cover concatenating and deconcatenating fields; concatenation is especially useful for addresses, as it allows numbers, streets, and zip codes to be reorganized as one field or to be placed in separate fields

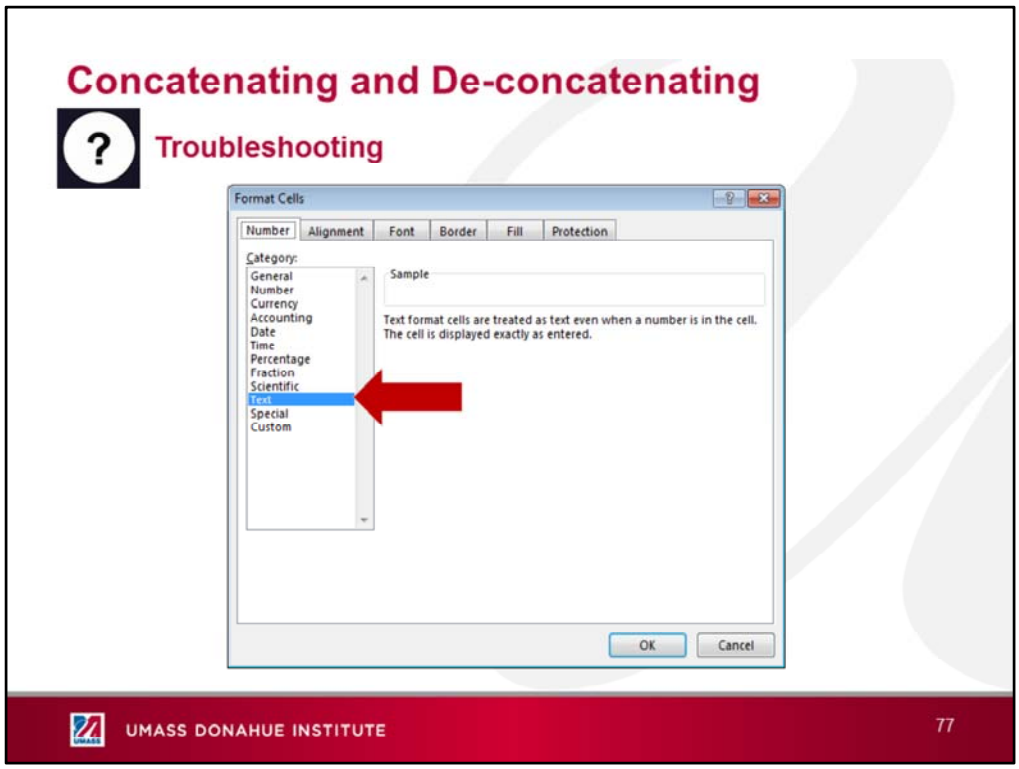


Even if you have no prior experience, concatenating addresses is very easy in Excel. To do this, all you need to do is select a blank column for your formula, and then type in =CONCATENATE(

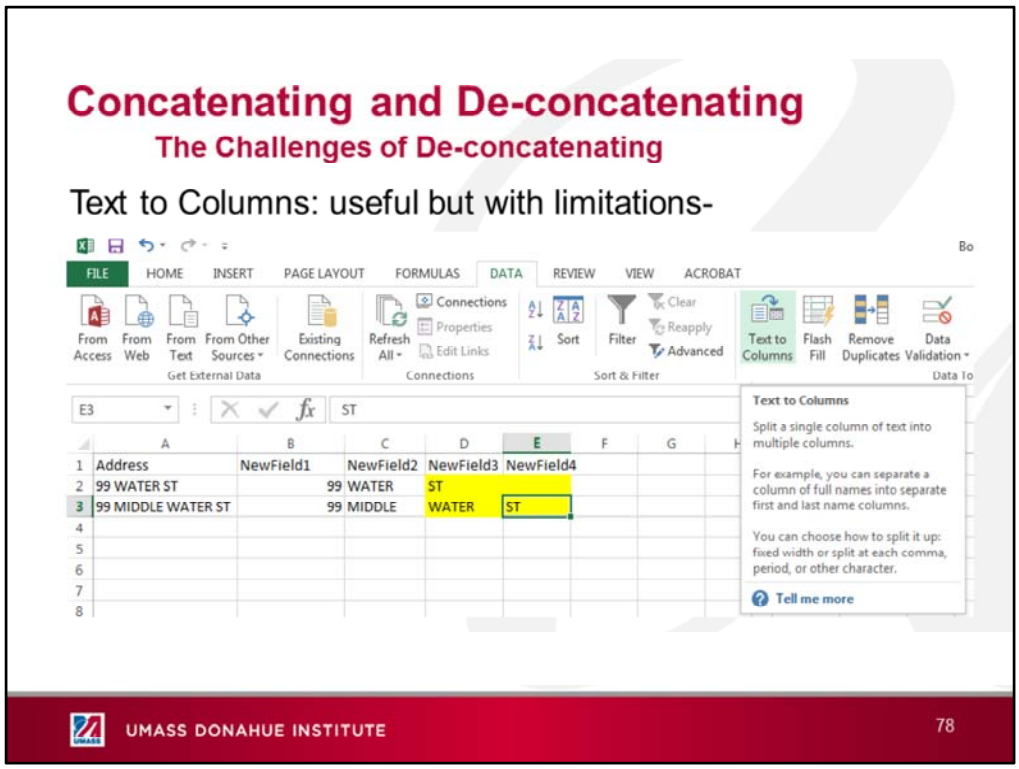
This initiates the concatenate formula, once you've typed in the end parenthesis, hold CTRL and click on any number of cells to put them together. To add a space between cells you will have to enter it in manually between their names, with two quotation marks. So for example if I wanted to concatenate a street name with a municipality with a space in between them, I would enter =CONCATENATE(N2, " ", P2).



If the =CONCATENATE() function doesn't work, double check that you've used commas between cells rather than pluses (+) or any other operative symbols. Additionally, make sure you have "quotations" on both sides of your spaces or other text that you'd like to add.



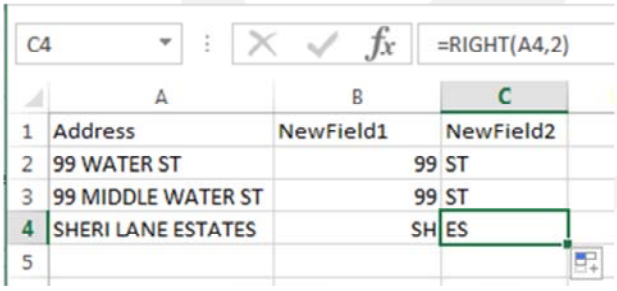
Some common problems, if your function is displaying on its own rather than returning the correct value, this could be because the cells it is entered in are formatted as text. To change this simply right click on the column, row, or cells in question and select Format Cells. There you will be able to change the format from text to “General”, after doing this, double click on the cells in question and press enter to reactivate the formula, which should allow the function to return a value.



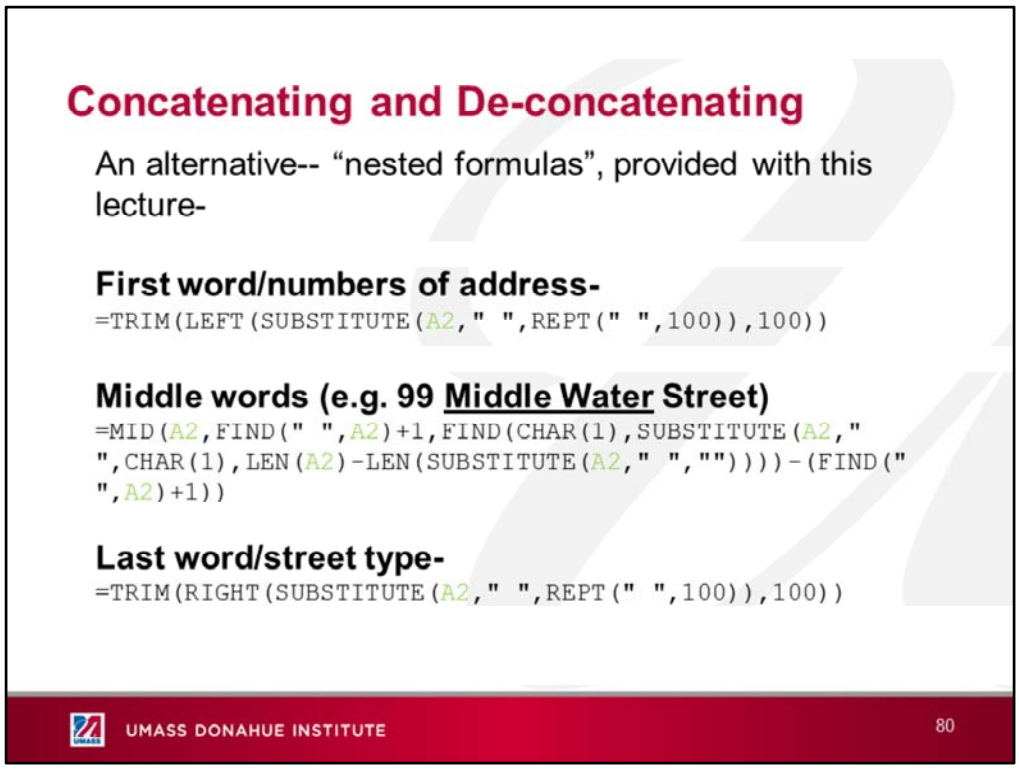
Now we'll move on to de-concatenation, to separate spaced information like addresses, we could use Text to Columns, however one limitation of this tool is that it will cause problems where streets have multiple words in their names

Concatenating and De-concatenating

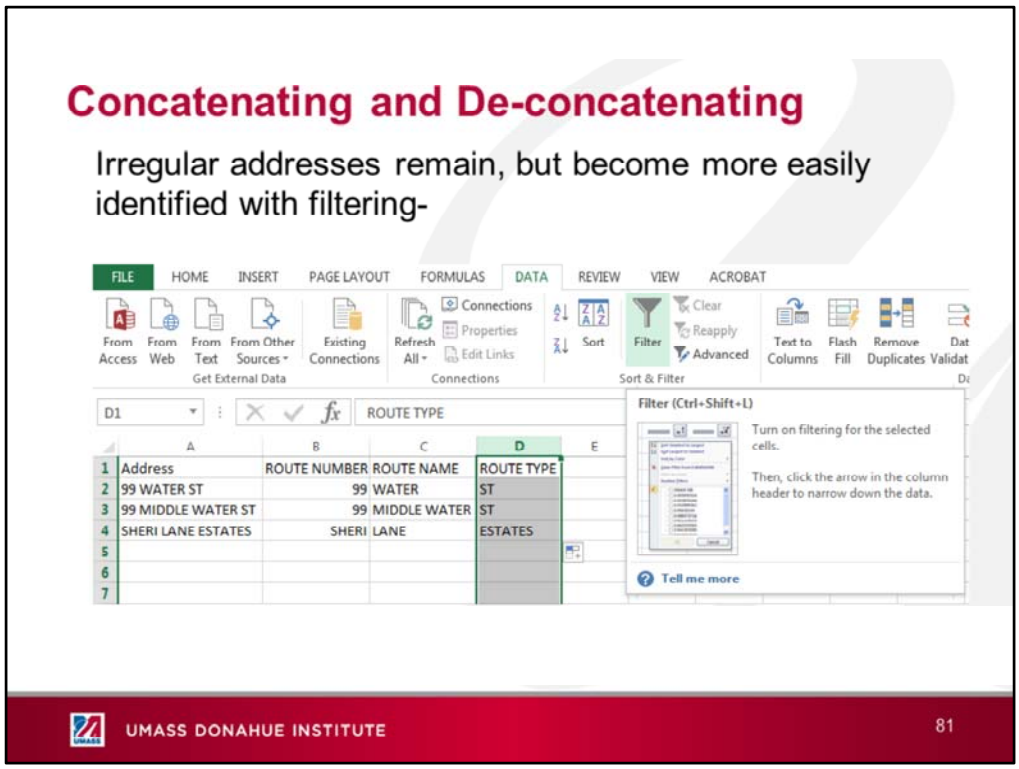
=LEFT() and =RIGHT() can be used for numbers and street types but may cause confusion with irregular addresses



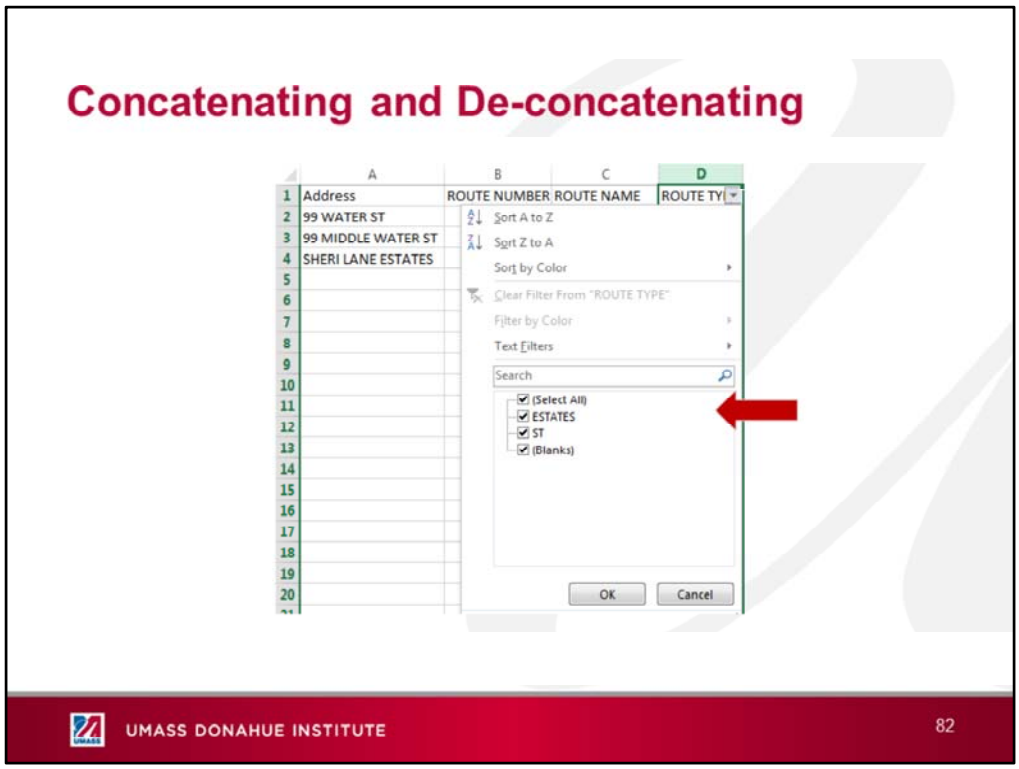
One alternative for this is the LEFT() and RIGHT() functions to place the first and last number of characters into another cell. Again this has limitations as irregular addresses beginning and ending with words may become unrecognizable with this tool. E.g. whereas 99 WATER STREET yields 99 and ST, SHERI LANE ESTATES gives us SH and ES.



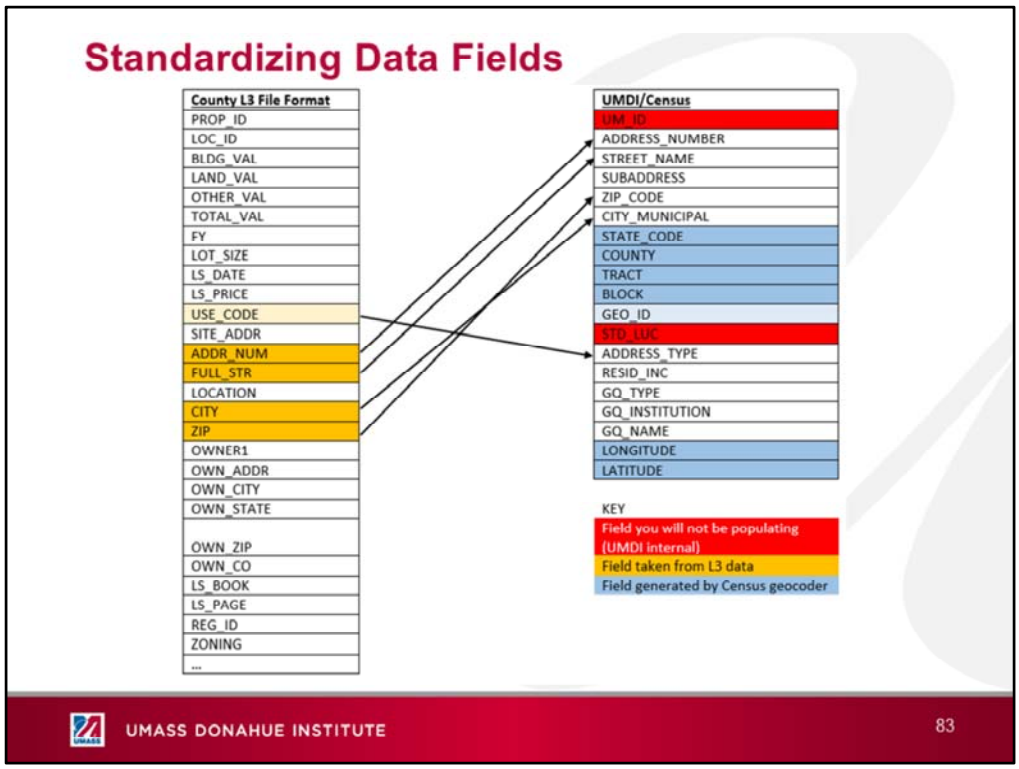
Using the combination of TRIM SUBSTITUTE formulas provided above will allow you to extract the entire first, middle, and last words, including any irregular street names or suffixes. Note the text in green represents the cells that you would change out depending on the location of your address information. We will provide a template Excel file with these formulas already entered in an example to make things easier for everyone.



After processing data with these operations, we can filter for unusual addresses by selecting our column, going to the data tab and clicking the filter button.



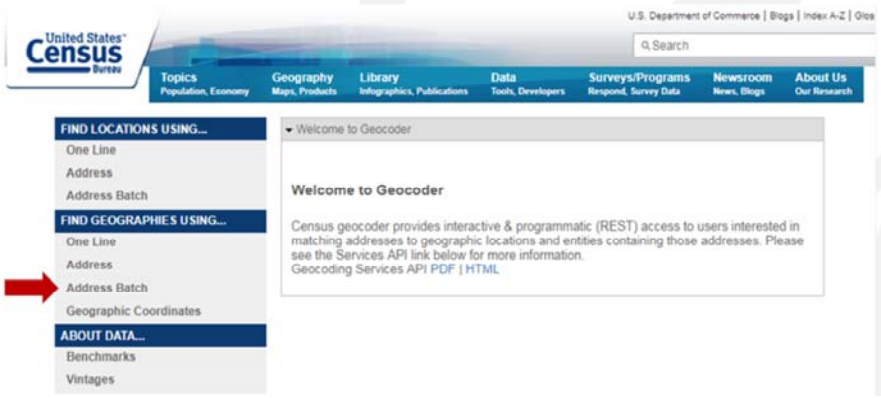
A column with a filter is indicated by an arrow button on the right side of the first cell in the column in question. As you can see, any suffixes like street, road, or any irregularities will be listed.



If your municipality is working with GUPS, the Census Bureau's Geographic Update Partnership Software (GUPS), you'll want to standardize your L3 assessors data into a format which mimics that of the Census's. In creating Dashboard 2, which shows counts of group quarters (GQ) and individual housing units, UMDI has attempted to make formatting that is compatible with this.

Standardizing Data Fields

geocoding.geo.census.gov/geocoder/



Standardizing Data Fields

Census Geocoder Input Format

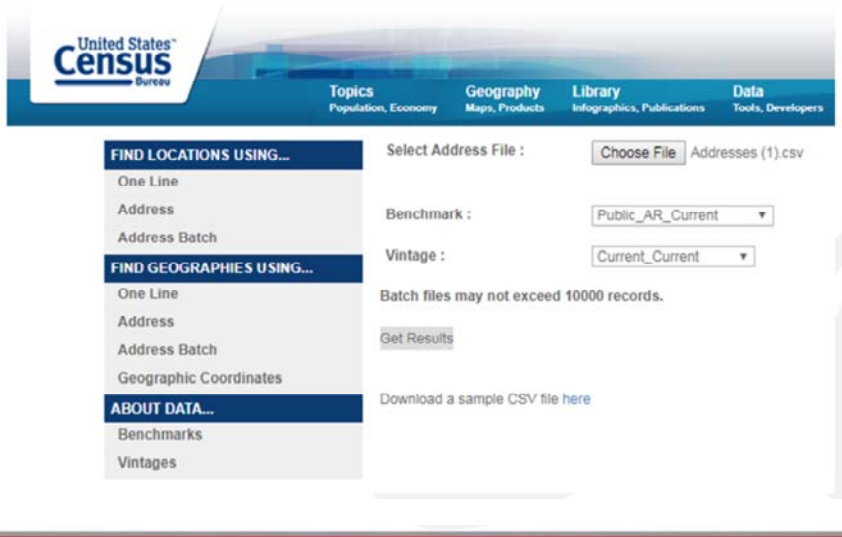
	[Entry No.] A	[Number and Address] B	[Town/City] C	[State] D	[ZIP] E
1	1	24 MYRON ST	WEST SPRINGFIELD	MA	01089

→ Save as a CSV file

→ Do not include headers

Standardizing Data Fields

Census Geocoder Input Format



Geocoder – standardizing your address list

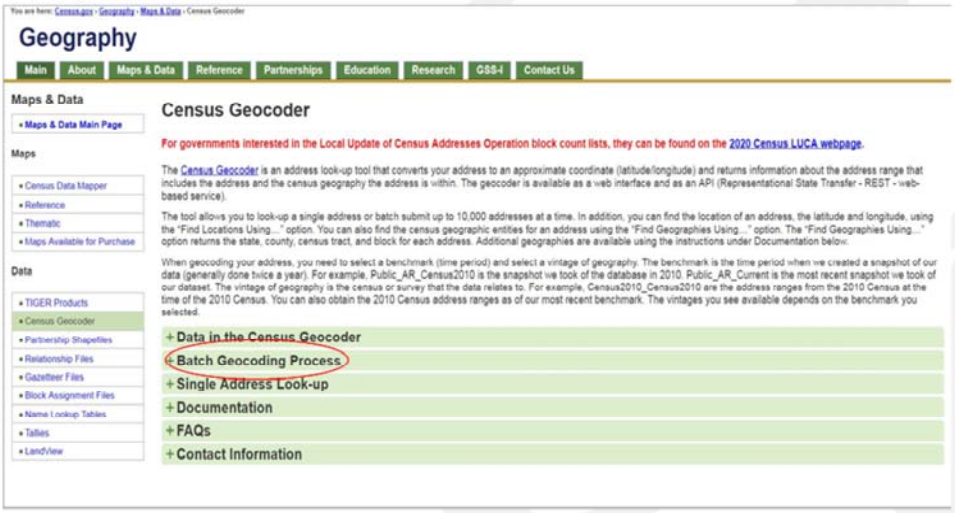
- **The first step in the batch geocoding process is to standardize your municipal address list to Census specifications.**

  Note: Your data must be standardized to Census guidelines or the geocoding tool will not work properly.

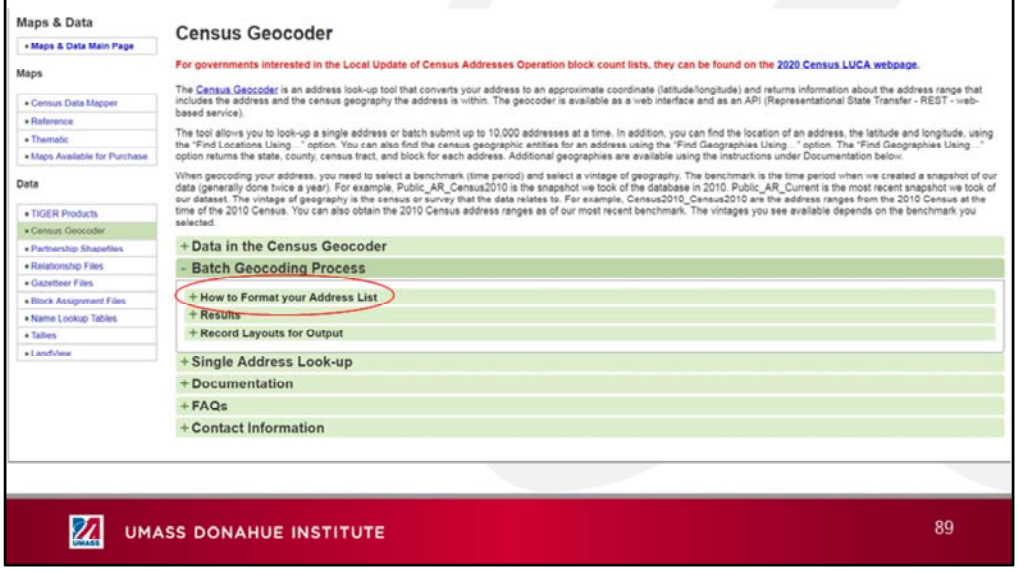
- **For detailed instructions on how to set up your address list columns for processing, see this link:**

  https://www.census.gov/geo/maps-data/data/geocoder.html

Standardization – Batch Geocoding Process



Formatting your list



List particulars

- **Addresses should be in a single line, with individual sections separated by commas.**
- **Addresses should contain the following information:**
  - Unique ID,
  - House Number and Street Name,
  - City,
  - State,
  - Zip Code

  Example – 1, 24 Beacon Street, Boston, MA, 02133

Standardizing Data Fields

Census Geocoder Input Format

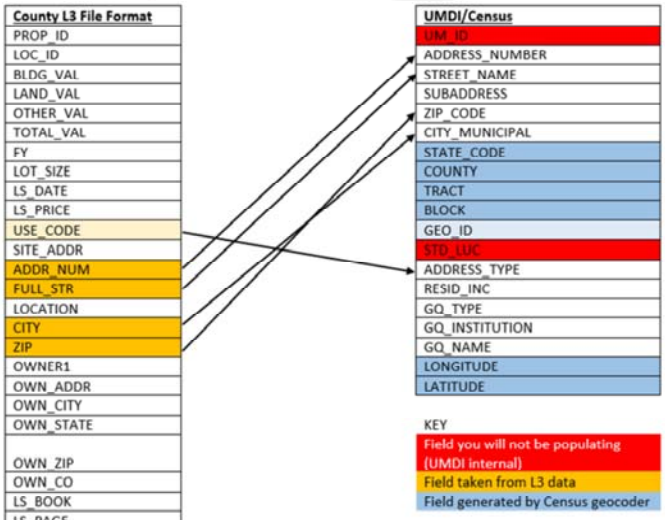
[ID][Full Address] [Match] [Full Address] [Lat/Long] [US Census Codes]

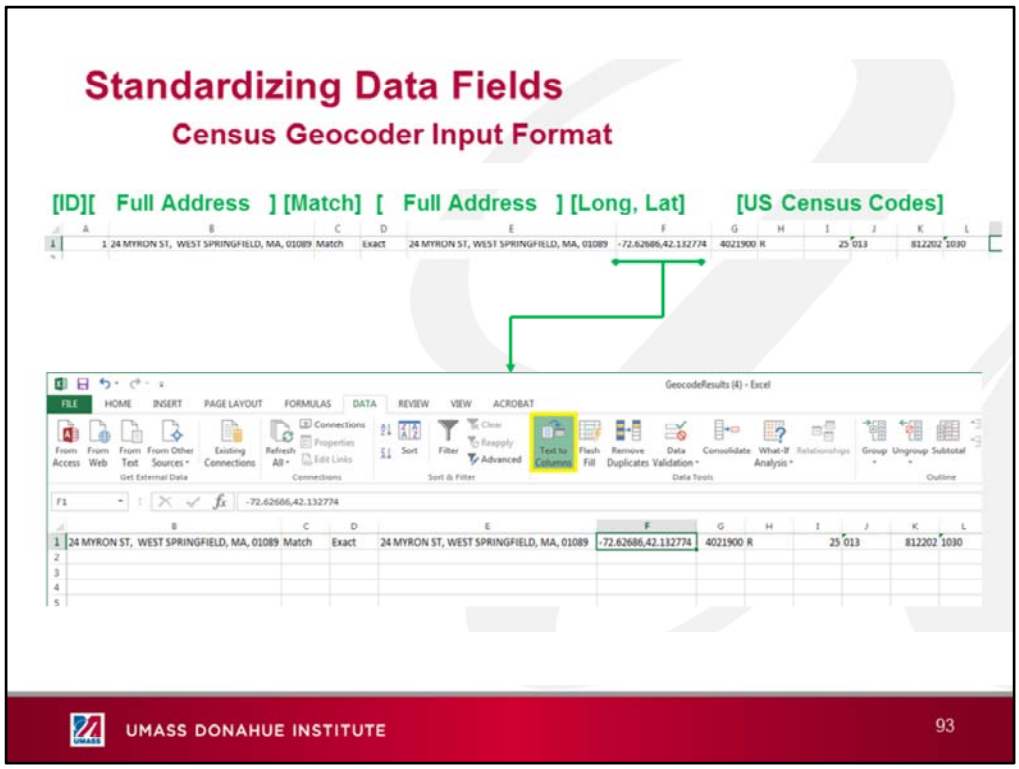
	G	H	I	J	K
1	[STATE_CODE]	[COUNTY]	[TRACT]	[BLOCK]	[GEO_ID]
2	25	013	812902	2015	250138129022015

The GEO_ID in K2 would be generated by entering the following formula-

```
=CONCATENATE(G2,H2,I2,J2,K2)
```

Standardizing Data Fields

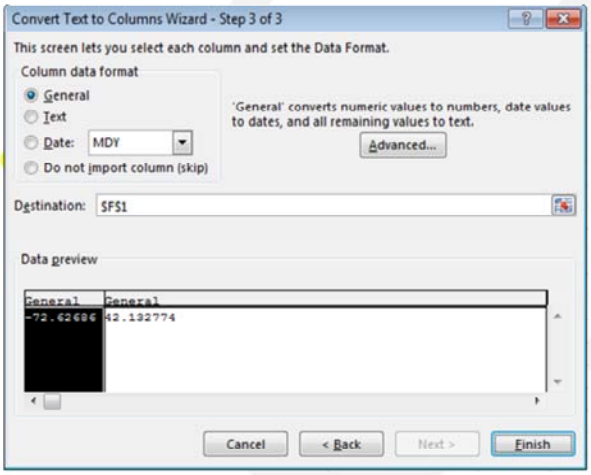




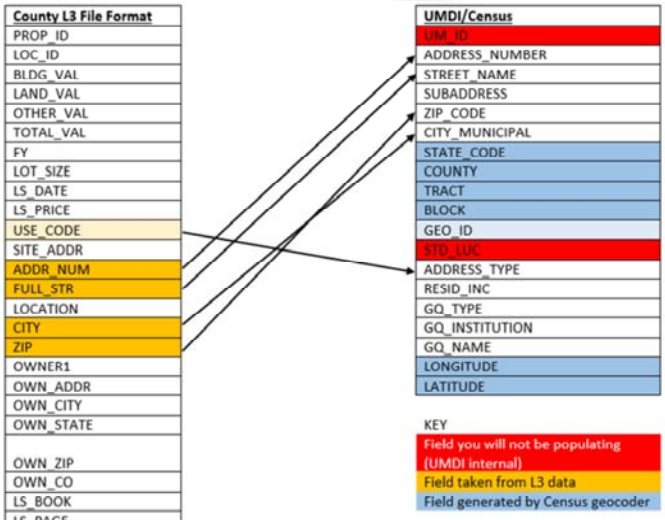
Before we separate our Longitude and Latitude, right click on the column to the right, column G in this screenshot, and Insert a column. This prevents the data involved from being overwritten

Standardizing Data Fields

Census Geocoder Input Format

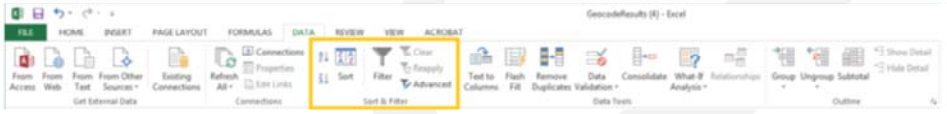


Standardizing Data Fields



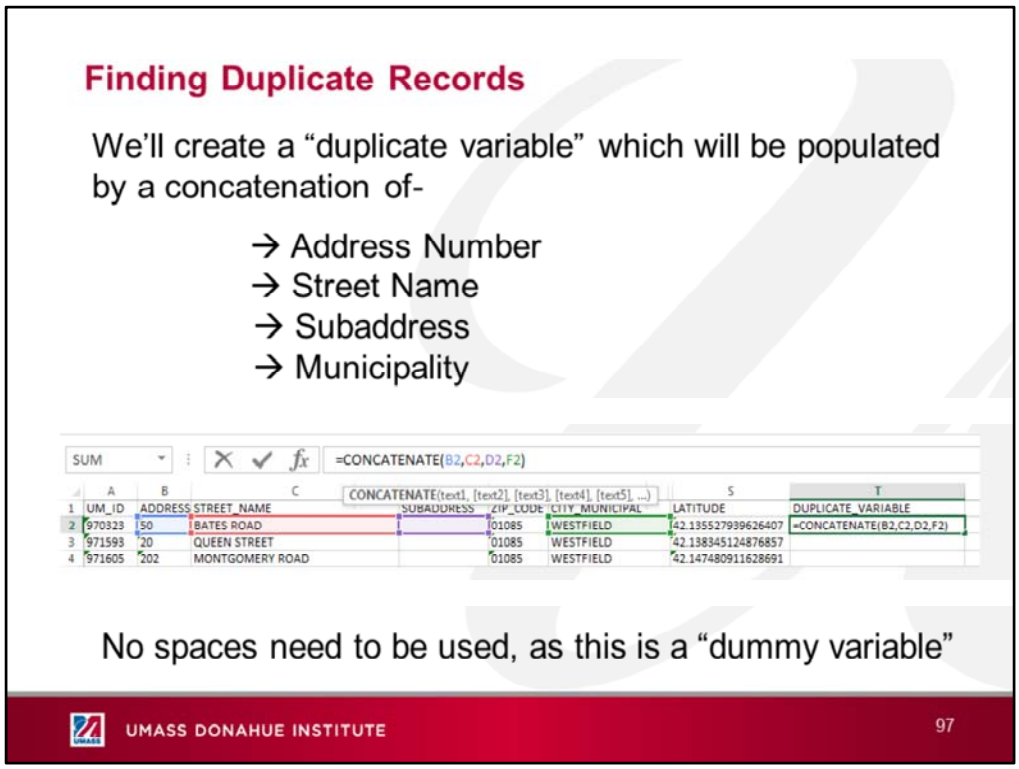
Finding Duplicate Records

The simplest, but not the most effective way to handle large datasets-

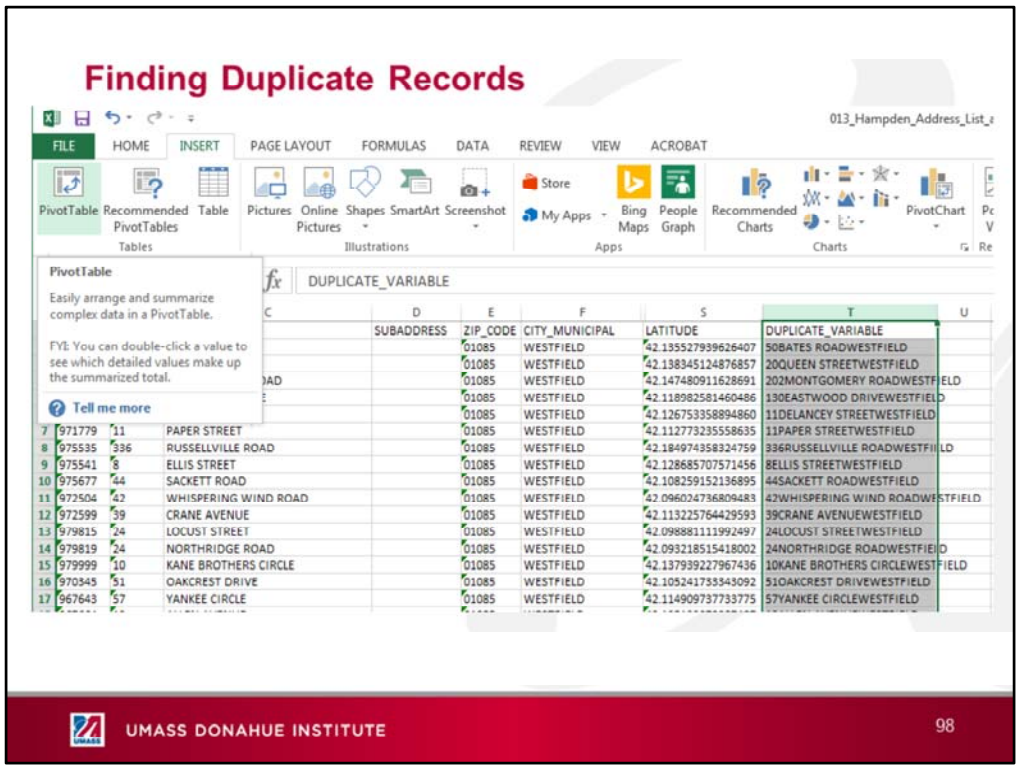


Instead, we'll use the concatenation function we covered earlier in this presentation.

If you have the time and patience, sorting and filtering can be useful tools for looking through data for duplicate entries. However if you want to find all duplicate addresses quickly, you can do this with a combination of concatenations and pivot tables.



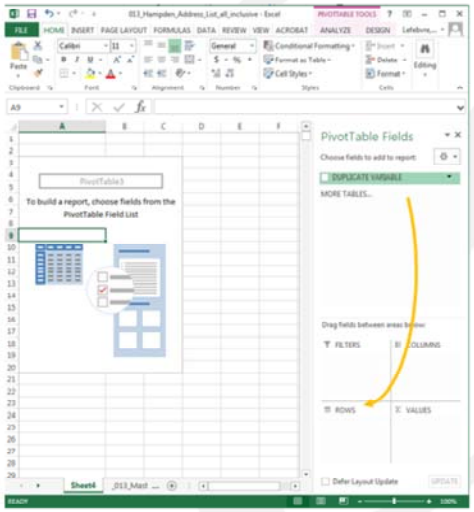
First we'll make a new "dummy field" in which we'll concatenate our address data so we have the street number, name, subaddress (units, etc.), and town in one column. No spaces between fields will be necessary.



After generating this field, select the entire column and in the Insert menu, select PivotTable.

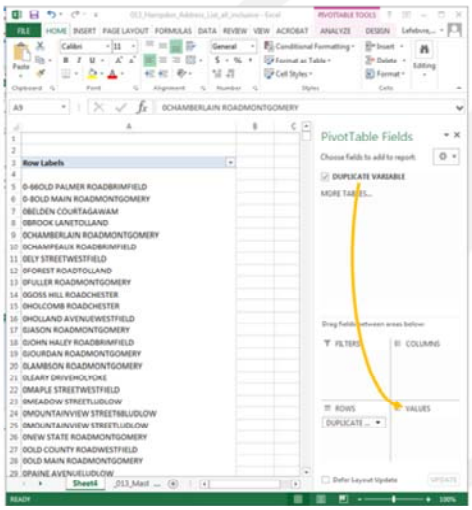
Leave the table/range as default, and choose the PivotTable to be placed on a New Worksheet

Finding Duplicate Records

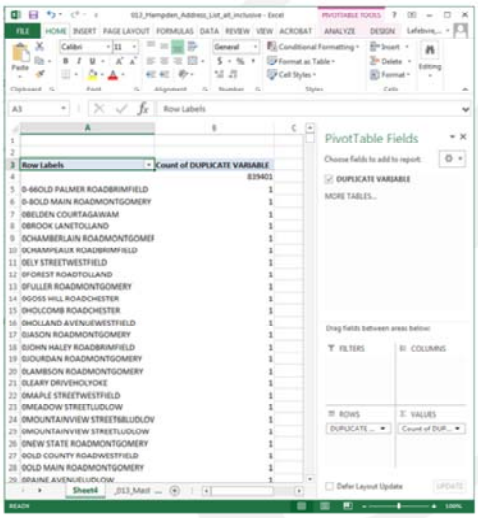


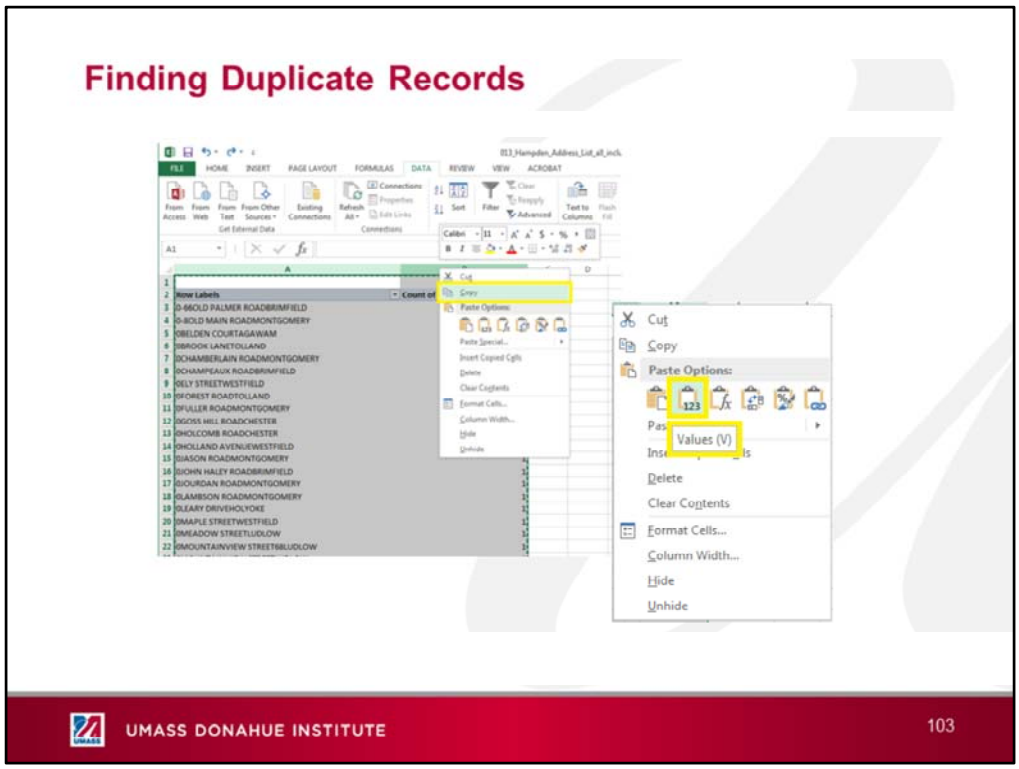
In the PivotTable Fields menu, if it's not already populated, click and drag set the one field you generated to the Rows and Values sections, leaving the latter as the default "Count of [FieldName]"

Finding Duplicate Records



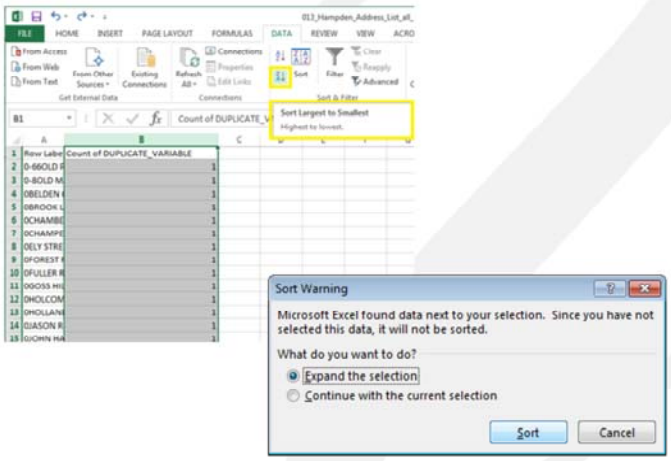
Finding Duplicate Records



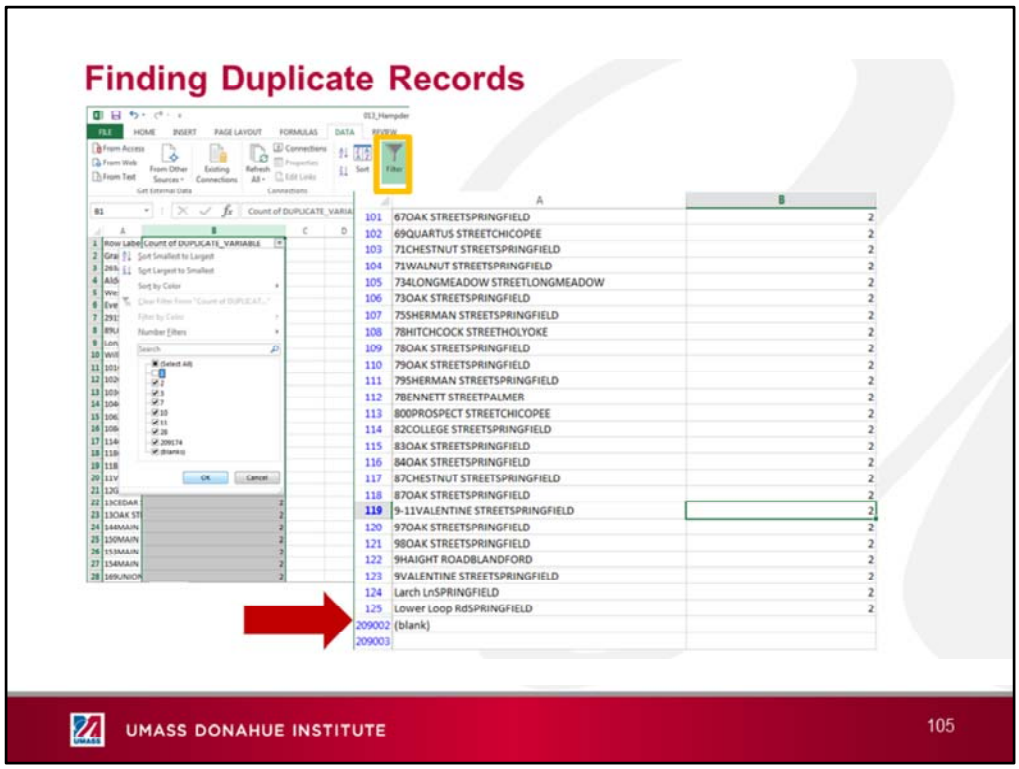


After the PivotTable has generated, select both its columns and copy them. Make another worksheet and then right-click to Paste Options>Values (Ctrl-V will not do this).

Finding Duplicate Records



If prompted to expand your selection, keep the default option and click Sort.

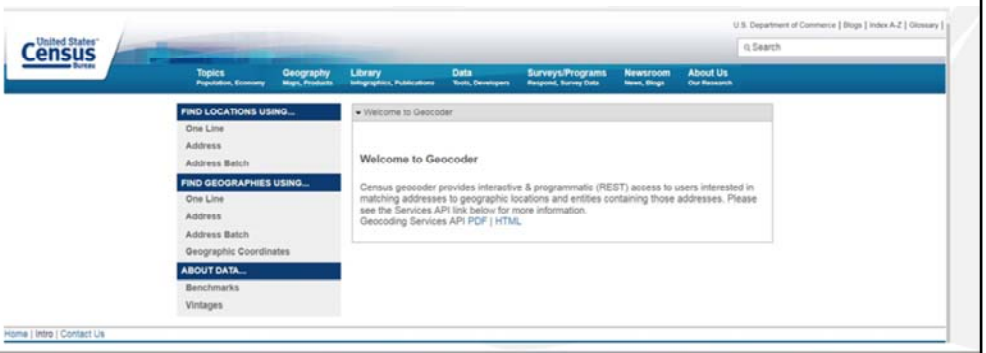


You can filter out those addresses which have a count of 1, and scroll to the top of the pasted PivotTable values and you'll find addresses which have multiple entries.

Census Geocoder

- **The US Census geocoder can be found here –**

  https://geocoding.geo.census.gov/geocoder/



Geocoder – standardizing your address list

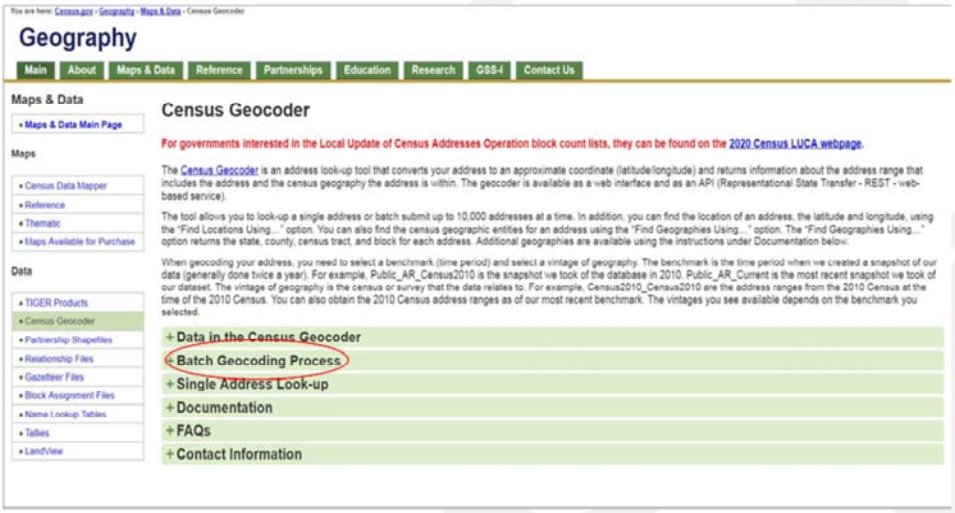
- **The first step in the batch geocoding process is to standardize your municipal address list to Census specifications.**

  Note: Your data must be standardized to Census guidelines or the geocoding tool will not work properly.

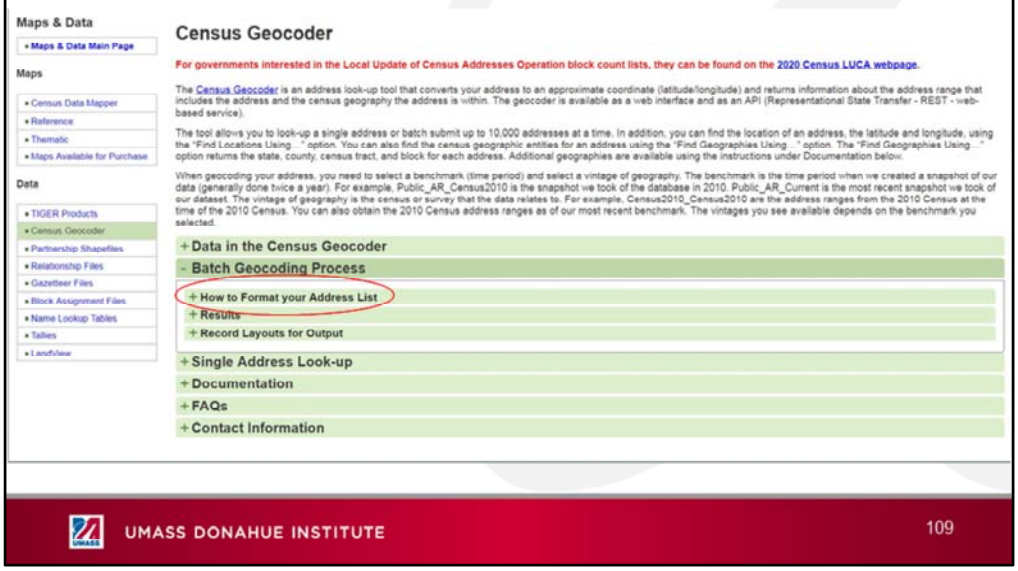
- **For detailed instructions on how to set up your address list columns for processing, see this link:**

  https://www.census.gov/geo/maps-data/data/geocoder.html

Standardization – Batch Geocoding Process



Formatting your list



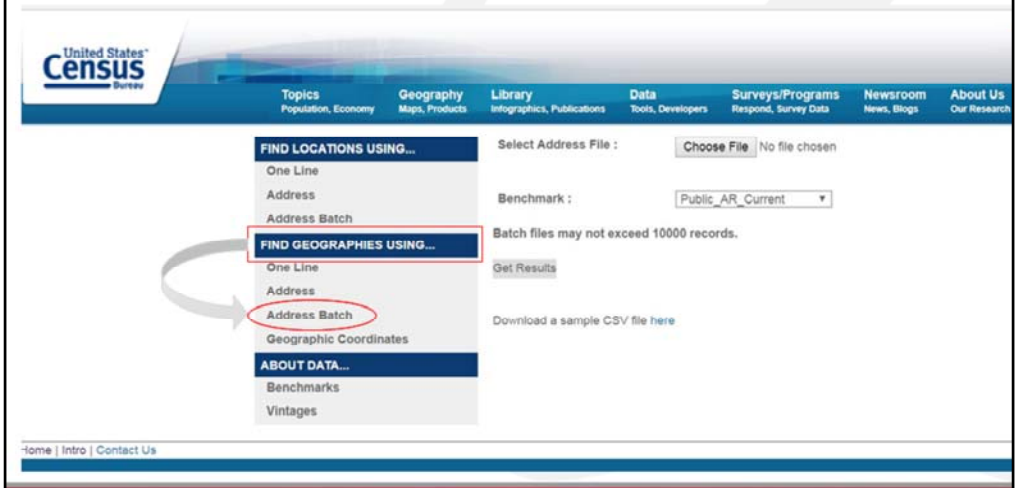
List particulars

- **Addresses should be in a single line, with individual sections separated by commas.**
- **Addresses should contain the following information:**
  - Unique ID,
  - House Number and Street Name,
  - City,
  - State,
  - Zip Code

  Example – 1, 24 Beacon Street, Boston, MA, 02133

Geocoder - navigating the home page

In order to geocode a sizable number of addresses at once (there is a 1,000 record max.) you will want to utilize the "Address Batch" tool under "Find Geographies Using…"



Important Links!

- **Census Geocoder instructions –**

  https://www.census.gov/geo/maps-data/data/geocoder.html

- **Census Geocoder upload page –**

  https://www.census.gov/geo/maps-data/data/geocoder.html

- **Census TIGER Web –**

  https://tigerweb.geo.census.gov/tigerwebmain/TIGERweb_main.html

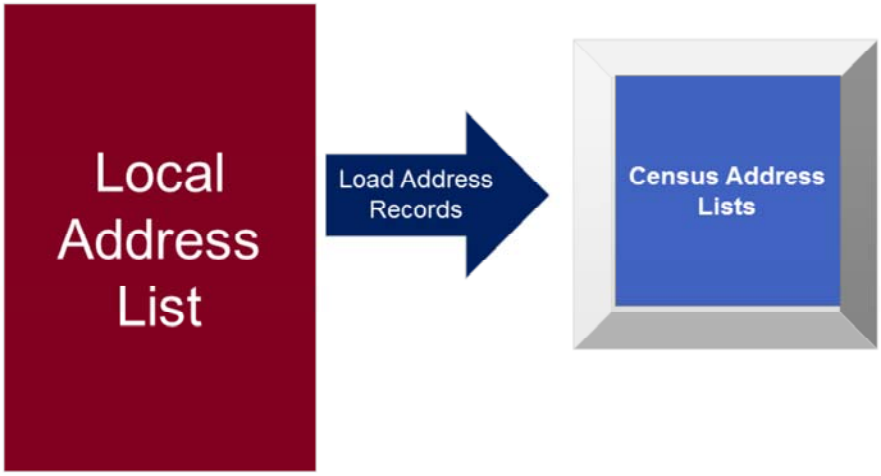
Tools and Techniques Learned Today

- Finding new addresses using internet or filtered assessor's data
- Geocoding addresses using Census online tool
- Concatenating and de-concatenating addresses
- Converting files from Excel ⇆ .CSV for GUPS load-up
- Standardizing data fields
- Finding duplicate records
- Prioritizing work using Thing 1 and Thing 2 comparison tools

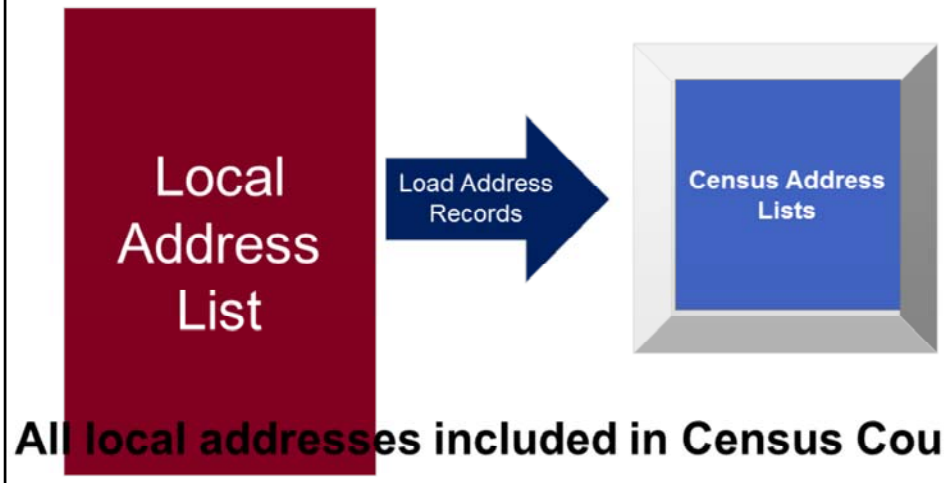
Next Steps


Prepare a Review-Ready list for Census comparison
Locate new construction In your town
Identify priority blocks using Thing 2

Results


Local Address List
Load Address Records
Census Address Lists

Results



All local addresses included in Census Count

UMass Donahue Institute

Economic & Public Policy Research

Population Estimates Program

100 Venture Way, Suite 9

Hadley, MA 01035

(413) 545-0001

SStrate@donahue.umassp.edu

MFlanagan@donahue.umpassp.edu

MSchlaikjer@donahue.umassp.edu

KLefebvre@donahue.umassp.edu

www.donahue.umassp.edu