

2020 Census

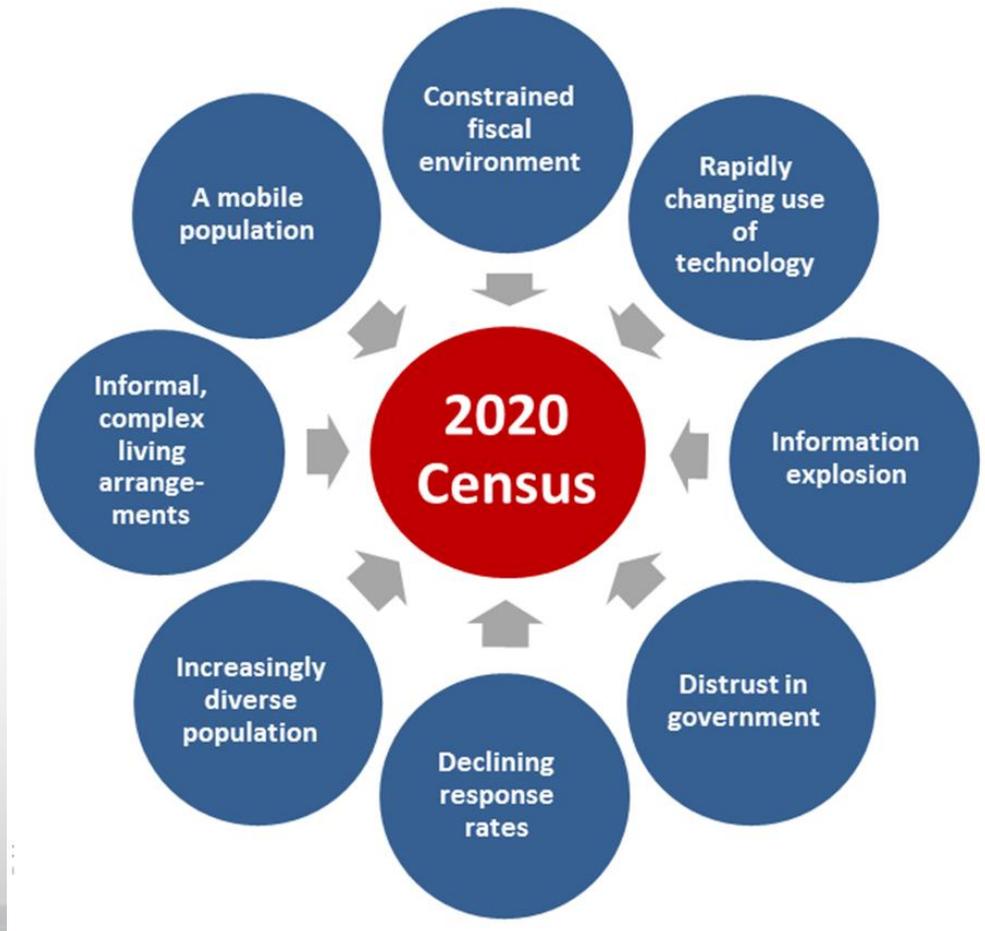
Atri Kalluri

Chief, Decennial Information Technology Division
US Census Bureau

2020 Census

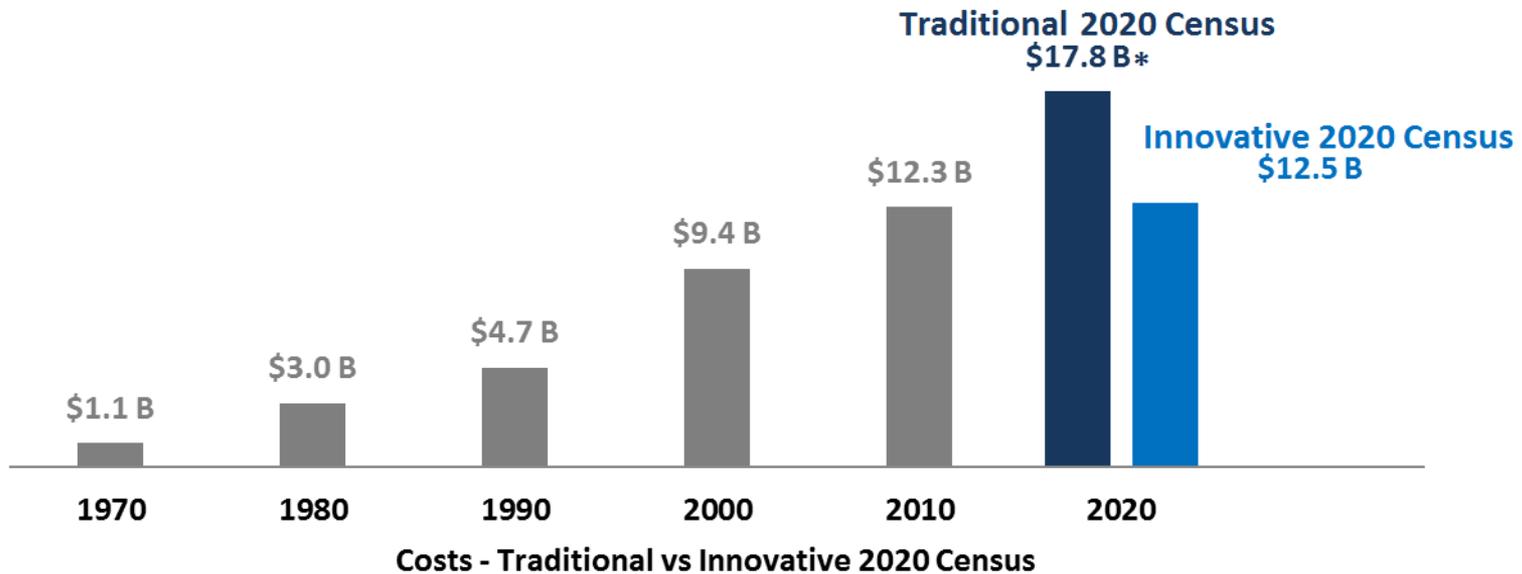
- Census of population and housing
- Results disseminated to the President, the States, and the American People
- Count everyone once, only once, and in the right place
- Conduct at a lower cost per household (adjusted for inflation) than the 2010 Census, while maintaining high quality results

2020 Census Environment



2020 Census Costs

Total Costs (In 2020 Constant Dollars through 2020)



***Source:** Bureau of the Census estimate on 2020 Census Life-cycle cost if the 2010 approach is used.

Note: Figures through 2020 shown in 2020 constant dollars.

Four Key Innovation Areas

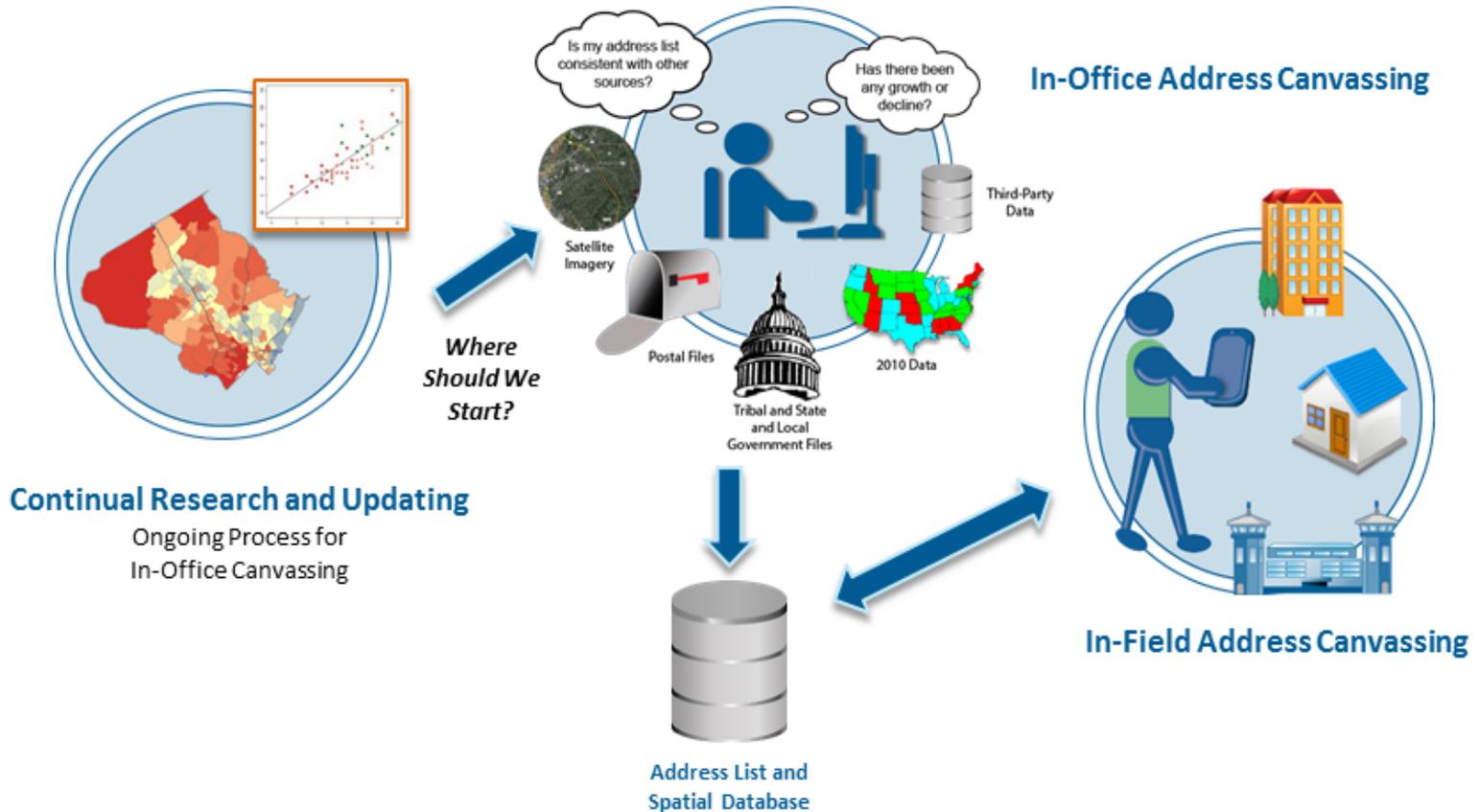
Reengineering
Address
Canvassing

Optimizing
Self-Response

Utilizing
Administrative
Records and
Third-Party Data

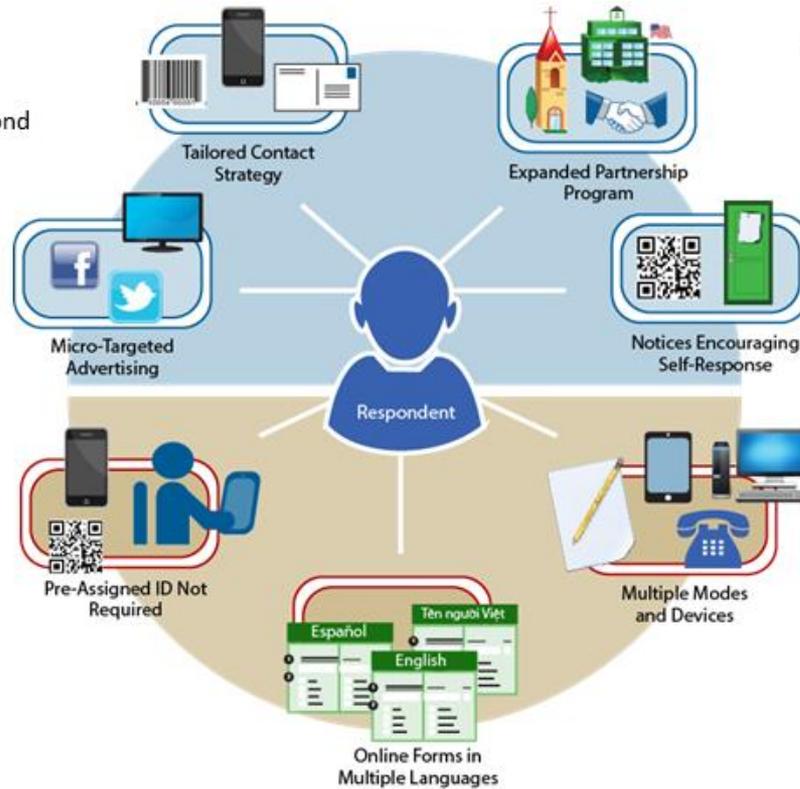
Reengineering
Field Operations

Reengineering Address Canvassing

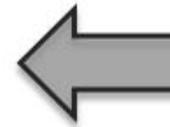


Optimizing Self-Response

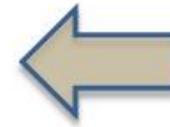
Motivate People to Respond



Assure respondents that their data are confidential and secure



Make It Easy to Respond from Any Location at Any Time



Utilizing Administrative Records and Third-Party Data

Improve the quality of
the Frame



Update the Frame



Validate incoming data from
tribal, state, and local
governments

Increase effectiveness
of advertising and
contact strategies



Support the micro-
targeted advertising
campaign



Create the contact frame
(e.g., email addresses and
telephone numbers)

Validate Respondent
Submissions



Validate respondent addresses for those without a
Census ID and prevent fraudulent submissions

Reduce Field Workload
for Followup Activities



Remove vacant and nonresponding
occupied housing units from the
nonresponse followup workload



Optimize the
number of
contact attempts

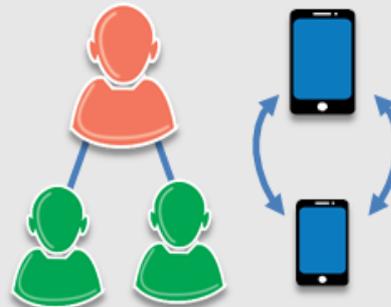
Reengineering Field Operations

Streamlined Office and Staffing Structure



Increased use of Technology

- Automated and optimized work assignments
- Automated recruiting, training, payroll and expense reporting
- Ability to conduct address updates and enumeration on same device
- Reduced paper and manual processing



Increased Management and Staff Productivity

- Increased visibility into case status for improved workforce management
- Redesigned quality assurance operations
- Improved communications



New Design for the 21st Century

The 2020 Census: A New Design for the 21st Century

Motivate People to Respond

Conduct a nation-wide communications and partnership campaign

- Work with trusted sources to inspire participation
- Maximize outreach using traditional and new media
- Target advertisements to specific audiences



TELEPHONE AND PAPER SELF-RESPONSE

NONRESPONSE FOLLOWUP



INTERNET SELF-RESPONSE

Count the Population

Collect data from all households, including group and unique living arrangements

- Make it easy for people to respond anytime, anywhere
- Encourage people to use the new online response option
- Use the most cost-effective strategy to contact and count nonrespondents
- Streamline in-field census-taking
- Knock on doors only when necessary

Establish Where to Count

Identify all addresses where people could live

IN-FIELD

IN-OFFICE



- Conduct a 100% review and update of the nation's address list
- Minimize in-field work with in-office updating
- Use multiple data sources to identify areas with address changes
- Get local government input



Count Everyone Once In the Right Place

Release Census Results

Process and Provide Census Data

- Deliver apportionment counts to the President by December 31, 2020
- Release counts for redistricting by April 1, 2021
- Make it easier for the public to get information



Security, Privacy and Confidentiality

Ensure that all operations and systems used in the 2020 Census adhere to appropriate systems and data security, respondent and employee privacy and confidentiality policies and regulations.

SECURITY

- IT Security Program Policy: Ensure all 2020 Census systems meet federal, Department of Commerce, Census Bureau IT security policy requirements as identified in the Census Bureau IT Security Program Policy and relevant National Institute of Standards and Technology (NIST) documentation
- Data Stewardship Policies: Ensure that the 2020 Census complies with the Census Bureau's Data Stewardship (DS) polices including:
 - Control of Personally Identifiable Information (DS-007), Record Linkage (DS-014), Respondent Identification (DS-016), Privacy Impact Assessments (DS-019), Data Breaches (DS-022)
- Ensure that the 2020 Census only collects information necessary for complying with the 2020 Census mission and legal requirements
- Ensure all 2020 Census systems have an Authority To Operate (ATO)
- Ensure each system has a designated Information System Security Officer
- Ensure all 2020 Census Program systems are covered by the Risk Management Framework, which includes processes to ensure systems undergo a security review prior to testing and a full security assessment prior to obtaining an ATO
- Ensure Appropriate Suitability Screening Processes are in place

Security, Privacy and Confidentiality

PRIVACY AND CONFIDENTIALITY

- Ensure decennial Privacy Impact Assessments and Privacy Threshold Analyses are current
- Ensure that each system of record has an appropriate System of Record Notice published in the Federal Register
- Establish a System of Record Notice for Bring Your Own Device (BYOD) and Device as a Service technology to be used in the 2020 Census
- Align the Privacy Impact Assessments and Privacy Threshold Assessments to security plans as part of the accreditation process; work with training operations to ensure 2020 Census managers and staff are prepared to notify the respondents about the purpose and planned statistical uses of the information collected
- Ensure that all people handling or reviewing Title 13 and Title 26 materials are Special Sworn Status certified
- Ensure Personally Identifiable Information Incident Handling process is operational

Security, Privacy and Confidentiality

- Implemented an IT Security Program Risk Management Framework in accordance with NIST guidelines
- Hired a 2020 Census Chief IT Security Engineer to support application development, mobile computing, and enterprise systems
- Increased staff in the Census Bureau Office of Information Security to provide penetration testing services and more extensive scanning for vulnerabilities and configuration management
- Aligned all Privacy Impact Assessments and Privacy Threshold Assessments to the System Security Plans

Security, Privacy and Confidentiality

Encryption

- Researched securely managing data on mobile devices using Mobile Application Manager (MAM) software solution.

Cloud Technology

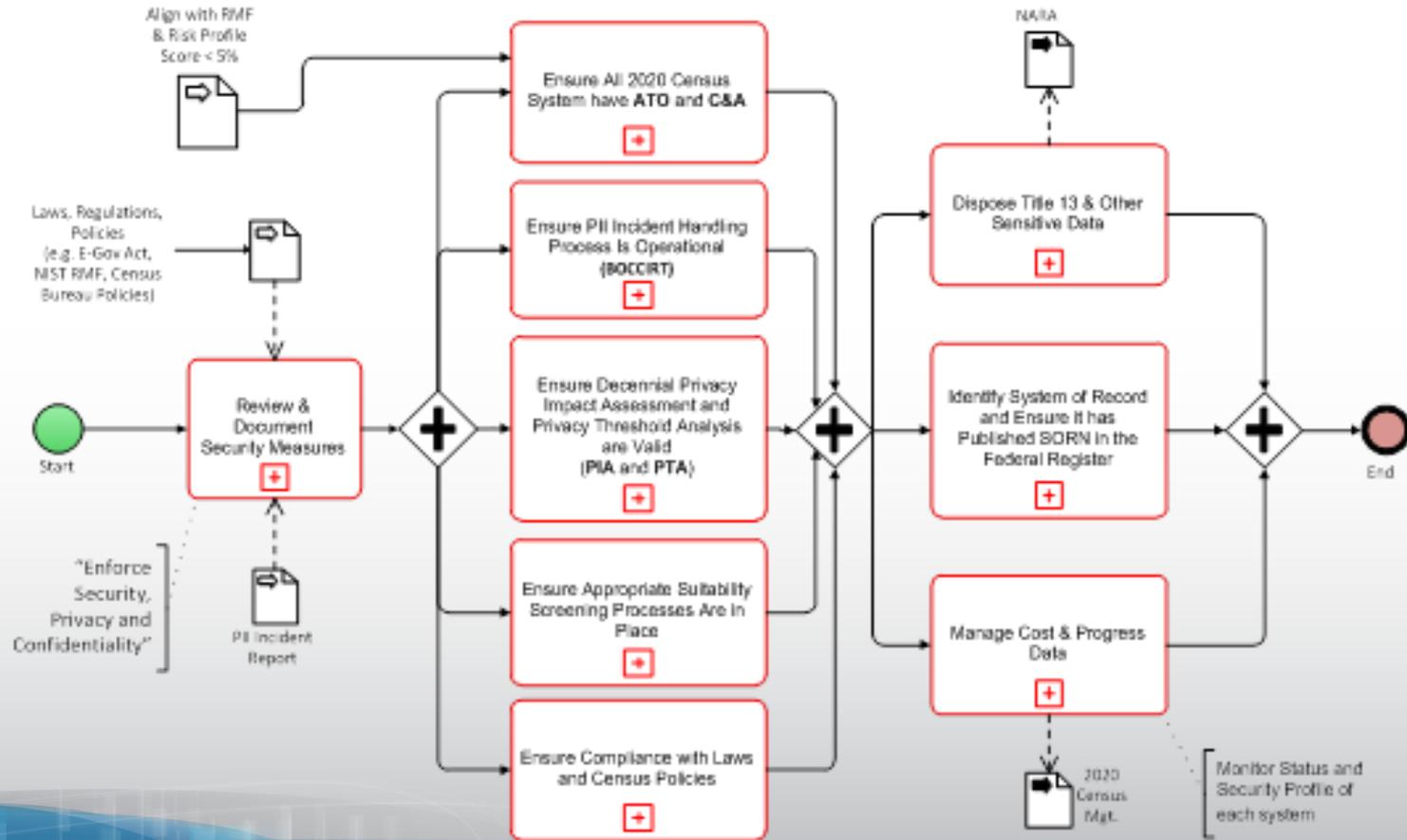
- Adopted the “Cloud First” strategy;
- Examined the requirements of the applications and underlying infrastructure from a security compliance perspective;
- Examined the requirements for hybrid cloud capabilities to allow flexibility in leveraging cloud technology to meet future program requirements; and
- Enabled the deployment of cloud-based services.

BYOD Technology

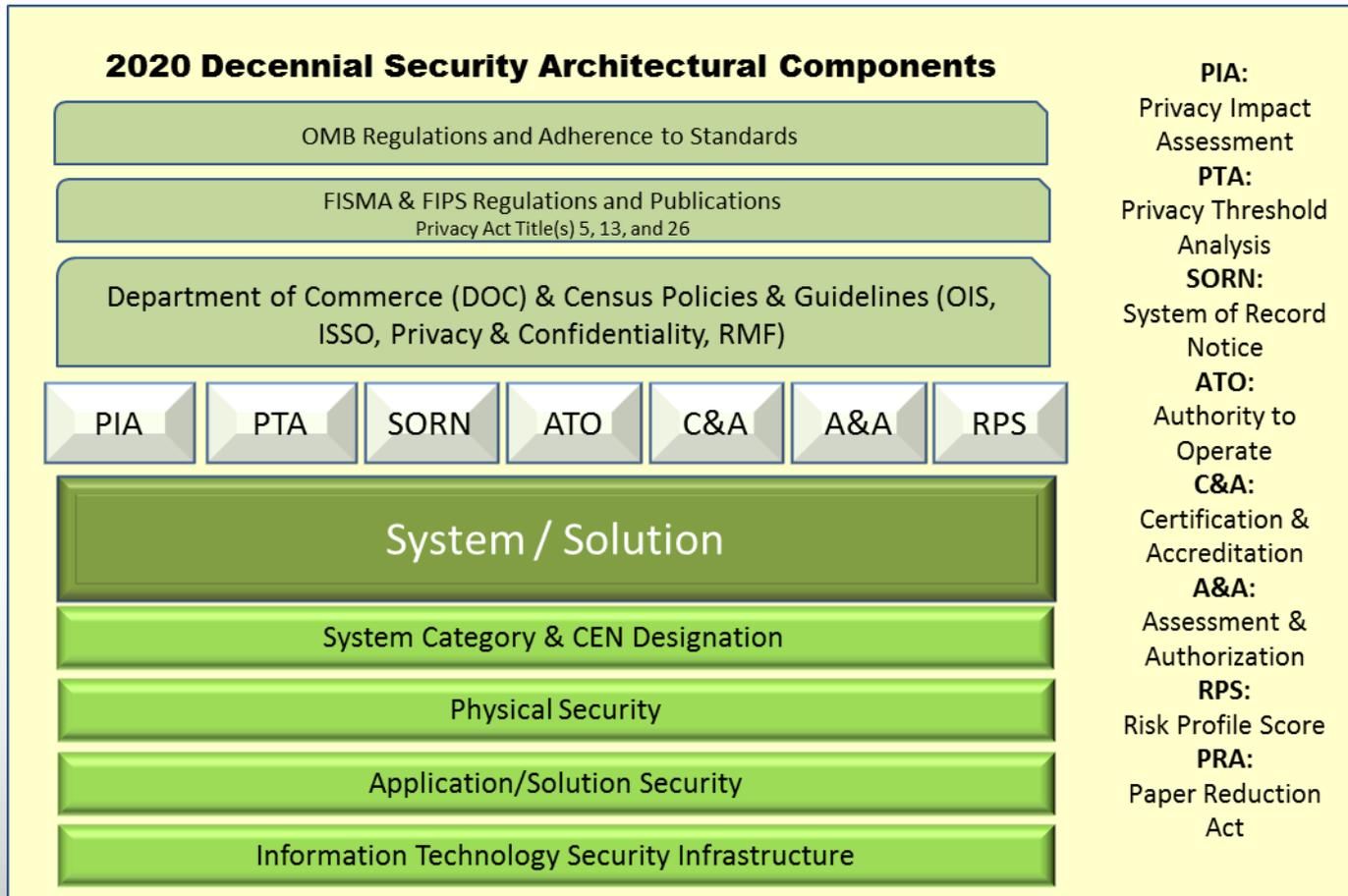
- Obtained a waiver to allow sensitive personal data to be collected and stored on personally-owned devices to be used in the 2014, 2015 and 2016 Census Tests;
- Established a BYOD Acceptable Use Policy for 2020 Census testing purposes;
- Implemented a MAM solution for securing data residing on personally-owned devices; and
- Granted authorization to test applications and technologies prior to a full authorization to operate.

Security, Privacy and Confidentiality Process

Decennial 2020 Architecture Security, Privacy & Confidentiality



Security Architecture Components



IT Infrastructure

Enterprise Systems and Applications: Planning and implementation of all hardware and software to support operations for the 2020 Census, as well as the management and monitoring of those systems, including but not limited to:

- Census Enterprise Data Collection and Processing (CEDCaP) Systems
- Center for Enterprise Dissemination Services and Consumer Innovation (CEDSCI) Systems
- Shared Services (Virtual Desktop Infrastructure, etc.)

Decennial Specific Applications: Including but not limited to:

- Recruiting, hiring and on-boarding tools (including training)
- Personnel and payroll applications (e.g., Decennial Applicant Personnel Payroll System)
- Census Hiring and Employment Check and fingerprinting

IT Infrastructure

RCC and Field Office IT Infrastructure: Deployment of IT capabilities in the form of office automation services to any RCC, field office, facility, or work location opened as part of the 2020 Census operations. It includes support for all field data collection operations through automated recruiting, hiring, staffing, training, fingerprinting, and mobile device support including:

- Definition of functional and non-functional solution requirements for field offices
- Development of the IT computing environment design
- Procurement of circuits and IT equipment for the census field offices
- Shipping, configuration, testing, and staging of IT equipment for the census field offices
- Tear-down and disposition of IT equipment and circuits at the conclusion of the 2020 Census activities

Mobile Computing: By leveraging technology innovations such as MAM programs, secure applications provided via BYOD or Device as a Service, the Census Bureau will implement a flexible and efficient acquisition strategy to procure mobile devices and services for fieldworkers.

Screenshots follow

Note that the addresses you see in the screenshots are NOT Title-13.

Listing and Mapping Instrument (LiMA)

The screenshot displays the LiMA interface for Block 1091 in St. 88 Cnty. 008 Tr. 002600. The interface is divided into a left sidebar, a central map, and a bottom toolbar.

Left Sidebar:

- Buttons: Quit (X), Finish (F), and Block 1091.
- Text: 21 of 21 rows displayed.
- Filter tabs: All Addresses, Worked, Unworked.
- Table of addresses:

Address	Housing Unit	Property Type
950 ELVATEN RD , 99997	HOUSING UNIT	SINGLE FAMILY HOME
875 ELVATON RD , 99997	HOUSING UNIT	SINGLE FAMILY HOME
950 ELVATON RD , 99997	HOUSING UNIT	SINGLE FAMILY HOME
ELVATON ST , 99997	HOUSING UNIT	SINGLE FAMILY HOME
823 E WATERFRONT ST , 99997	HOUSING UNIT	SINGLE FAMILY HOME
825 E WATERFRONT ST , 99997	HOUSING UNIT	SINGLE FAMILY HOME
850 E WATERFRONT ST , 99997	HOUSING UNIT	SINGLE FAMILY HOME
14500 E WATERFRONT ST APT 100	HOUSING UNIT	MULTI UNIT STRUCTURE
14500 E WATERFRONT ST APT 200	HOUSING UNIT	MULTI UNIT STRUCTURE
14500 E WATERFRONT ST APT 300	HOUSING UNIT	MULTI UNIT STRUCTURE

Map:

- Shows a satellite view of the area with a red outline around the block.
- Addresses are labeled on the map, including 1086, 1092, 1085, 1094, and 950 ELVATEN RD, 99997.
- A yellow circle highlights the address 950 ELVATEN RD, 99997.
- A tooltip for 950 ELVATEN RD, 99997 shows 'Work' and 'View Details' options.
- Map labels include ALTON RUE, WASHINGTON BOROUGH, ELWATON RD, WINCORNE DR RD, and 657 JAMES ST.
- Scale bar: 500' / 200m.

Bottom Toolbar:

- Buttons: Work (Pencil), View Details (Info), Add (+), Center on YAH! (Target), Show Block (Down Arrow), Map Settings (Gear).

LiMA – Address Details

 Back 950 ELVATEN RD , 99997 

Address Information

<i>Address Status</i> HOUSING UNIT	<i>Structure Type</i> SINGLE FAMILY HOME	<i>MAFID</i> 312030382	<i>Subdivision Name</i>
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Location/Physical Description

Mailing Address

Geocodes

<i>State</i> 88 - Lemuria	<i>County</i> 008 - Summer County	<i>Tract</i> 002600	<i>Block</i> 1091
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Action Performed

Action Performed

Notes

LiMA – Address Status



Cancel

950 ELVATEN RD , 99997



Address Status

HOUSING UNIT	NONRESIDENTIAL
UNINHABITABLE HOUSING UNIT	DUPLICATE
GROUP QUARTERS (GQ)	NOT IN ACTIVE BLOCK
UNINHABITABLE GROUP QUARTERS	UNABLE TO WORK
UNDER CONSTRUCTION	
EMPTY TRAILER PAD/MOBILE HOME SITE	



Next



Update spyware protection
Spyware protection is out of date. Tap or click to update
Trend Micro OfficeScan Anti-spyware.

LiMA – Structure Type

 950 ELVATEN RD , 99997 

Structure Type

- SINGLE FAMILY HOME**
- MULTI UNIT STRUCTURE
- TRAILER/MOBILE HOME
- BOAT, TENT, ETC

LiMA – Location Address

 950 ELVATEN RD , 99997 

Location Address

House Number	Street Name	ZIP Code
950	ELVATEN RD	99997
Unit Descriptor	Unit Number	Subdivision Name
<input type="text"/>	<input type="text"/>	<input type="text"/>
Location/Physical Description		
<input type="text"/>		



LiMA – Location Physical Description

 950 ELVATEN RD , 99997 

Location/Physical Description Collection

Enter a Location/Physical Description by selecting the appropriate items from the categories below or entering a description in the "Other" box.

- > Mile Marker
- > KM/HM
- > Housing Style
- > Building Materials
- > Garage
- > Porch
- > Property Access
- > Driveway Description
- > Other

Description From Selected Options (100 characters remaining)

LiMA – Multi-Unit Structure

 750 E WATERFRONT TRL , 99997 

750 E WATERFRONT TRL UNIT 101
HOUSING UNIT
MULTI UNIT STRUCTURE

750 E WATERFRONT TRL UNIT 102
HOUSING UNIT
MULTI UNIT STRUCTURE

750 E WATERFRONT TRL UNIT 103
HOUSING UNIT
MULTI UNIT STRUCTURE

750 E WATERFRONT TRL UNIT 104
HOUSING UNIT
MULTI UNIT STRUCTURE

Address Information
Unit Address
750 E WATERFRONT TRL UNIT 101 , 99997

Address Status
HOUSING UNIT

Structure Type
MULTI UNIT STRUCTURE

MAFID
312033483

Apartment Complex Name
AMBER APTS

Structure Information
Building Name

Building ID

Location/Physical Description

Mailing Address

Geocodes

 Edit  Verify  Add / Attach  Edit Structure  Structure Complete

MOJO – LSO Dashboard

LSO Dashboard

LSO Zone Report						
Day	Week	Cumulative				
Staff	# Attempts	# Attempts Completed	% Attempts Completed	Hours worked	Hours scheduled	% Delayed Payroll
jbond002	12	10	83%	16	16	0%
thomp006	2	2	100%	16	32	* 50%
jbond003	2	1	* 50%	13	15	0%

Alerts		
report	staff	issue
report	jbond003	Scheduling
report	jbond002	Perf & Qual issue
report	thomp006	Perf & Qual issue
report	jbond003	Perf & Qual issue
report	thomp006	Delay in payroll

Today's Shift		
ID	Hours	Ph #
jbond002	16:00 - 21:00	H:202-453-3455
jbond003	16:00 - 21:00	H:453-123-7689
jbond004	06:00 - 14:00	H:455-654-2345
studd001	06:00 - 14:00	H:789-345-4534
thomp006	06:00 - 14:00	H:202-833-1444

MOJO- Performance & Quality Report

Perf. & Quality Report

Day Week **Cumulative**

Search:

Enumerator	% Refusal	% Vacant	% Roster Only	% Short Interview	% Proxy
<i>Aggr.</i>	▲ 20%	▼ 6%	▼ 0%	▼ 0%	▼ 17%
jbond002	* 19%	9%	0%	0%	23%
jbond003	* 25%	0%	0%	0%	0%
thomp006	* 25%	0%	0%	0%	0%

Showing 1 to 3 of 3 entries

Previous **1** Next

MOJO - Scheduling Report

LSO scheduling report

Day **Week** Cumulative

Search:

staff	Working today	# Hrs Scheduled	% Not Matched	% sched. compliant	% no show	% not compl all work
Aggr.	N/A	63.0	28%	76%	40%	0%
jbond002	YES	16.0	0%	85%	33%	0%
jbond003	YES	15.0	13%	*53%	33%	0%
thomp006	YES	32.0	50%	92%	50%	0%

Showing 1 to 3 of 3 entries

Previous **1** Next

MOJO - Automated Payroll Validation

Timesheets requiring validation

Validate selected Reject selected

Select all	Name	Date worked	Date timesheet submitted	# Hours	Mileage	\$\$\$	Receipts
<input type="checkbox"/>	thomp006	2014-05-19	2014-05-17	8 (7.7)	30 (25)	\$ 45	
<input type="checkbox"/>	jbond004	2014-05-18	2014-05-18	8 (6.7)	30 (25)	\$ 45	
<input type="checkbox"/>	jbond004	2014-05-19	2014-05-19	8 (6.7)	30 (25)	\$ 45	
<input type="checkbox"/>	studd001	2014-05-19	2014-05-19	8 (6.7)	30 (25)	\$ 45	
<input type="checkbox"/>	thomp006	2014-05-18	2014-05-20	8 (8.2)	30 (25)	\$ 45	
<input checked="" type="checkbox"/>	studd001	2014-05-18	2014-05-18	8 (5)	30 (25)	\$ 45	

MOJO – Shift Report

Today's Shift Report - 2014-06-20

Search:

ID	Hours	Ph #	Pushed	Route
jbond002	16:00 - 21:00	H:202-453-3455	NO	
jbond003	16:00 - 21:00	H:453-123-7689	YES	
jbond004	06:00 - 14:00	H:455-654-2345	YES	
studd001	06:00 - 14:00	H:789-345-4534	YES	
thomp006	06:00 - 14:00	H:202-833-1444	YES	

Showing 1 to 5 of 5 entries

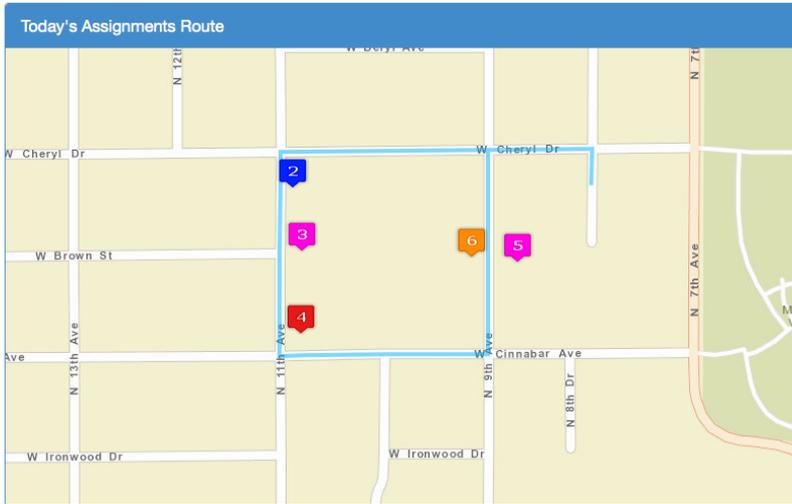
Previous **1** Next

MOJO - Staff Detail Page

Enumerator Detail for jbond002

Details [Case History](#) [Quality Reports](#)

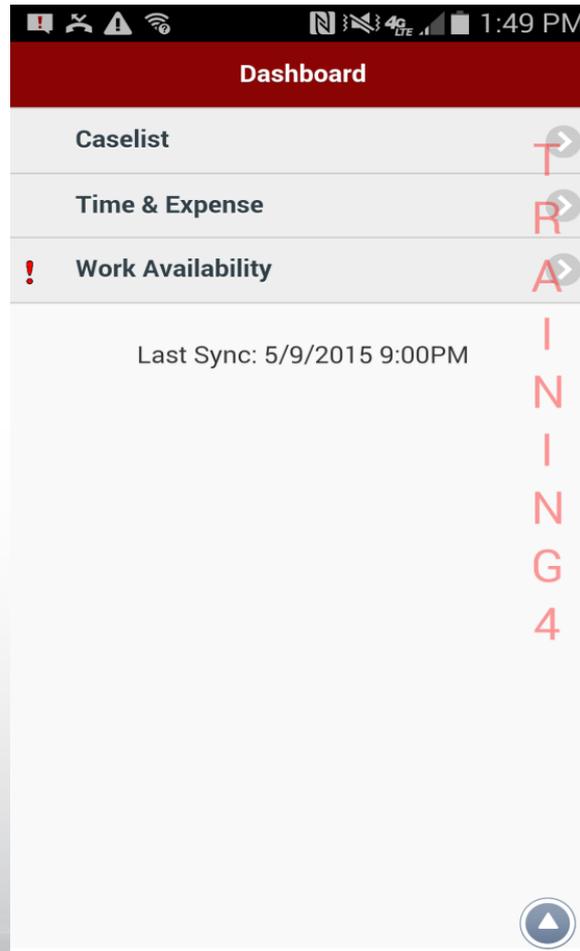
username	name	ph #	lang	address	optimizer active	active
jbond002	Zeitchik Carol	H:202-453-3455	E	10030 N 118TH ST, SCOTTSDALE AZ, 85259-5026	ACTIVE	ACTIVE



Address List:

seq	case id	address	attempt #	status	outcome
2	172	10035 N 11TH AVE APT B, PHOENIX AZ, 85021-2500	1	7	100
3	1	10001 N 11TH AVE APT 17, PHOENIX AZ, 85021-2227	1	7	116
4	2	10001 N 11TH AVE APT 6, PHOENIX AZ, 85021-2224	1	7	114
5	112	10021 N 9TH AVE, PHOENIX AZ, 85021-2306	1	7	117
6	113	10022 N 9TH AVE, PHOENIX AZ, 85021-2307	1	7	103

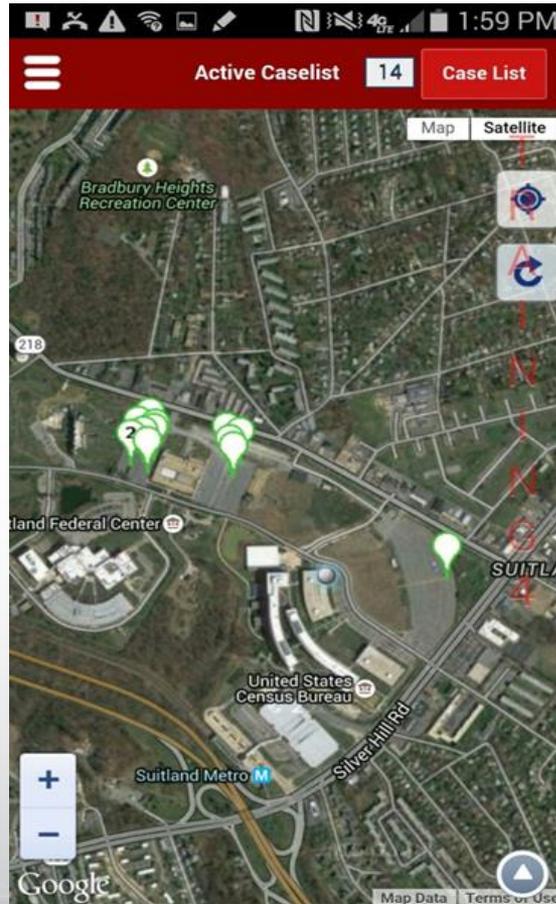
Compass - Dashboard



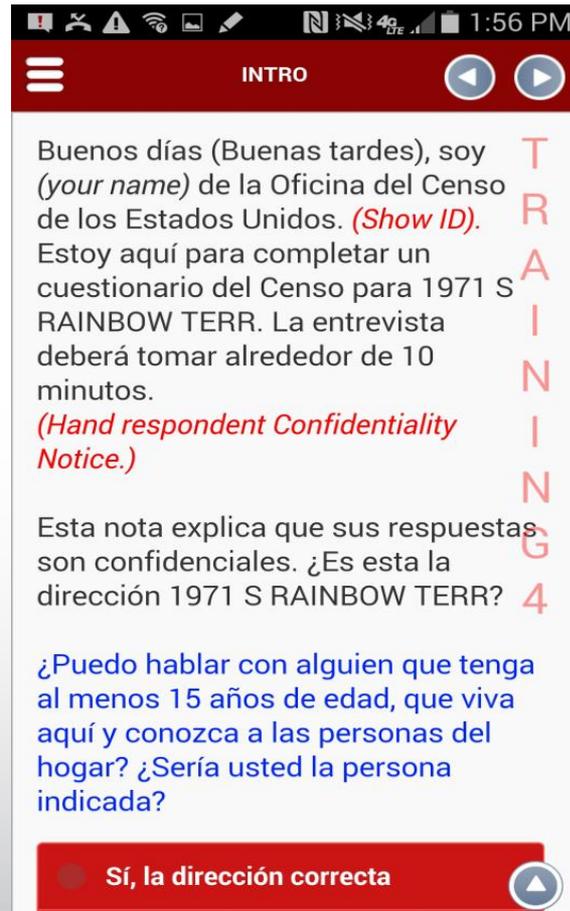
Compass - Instrument



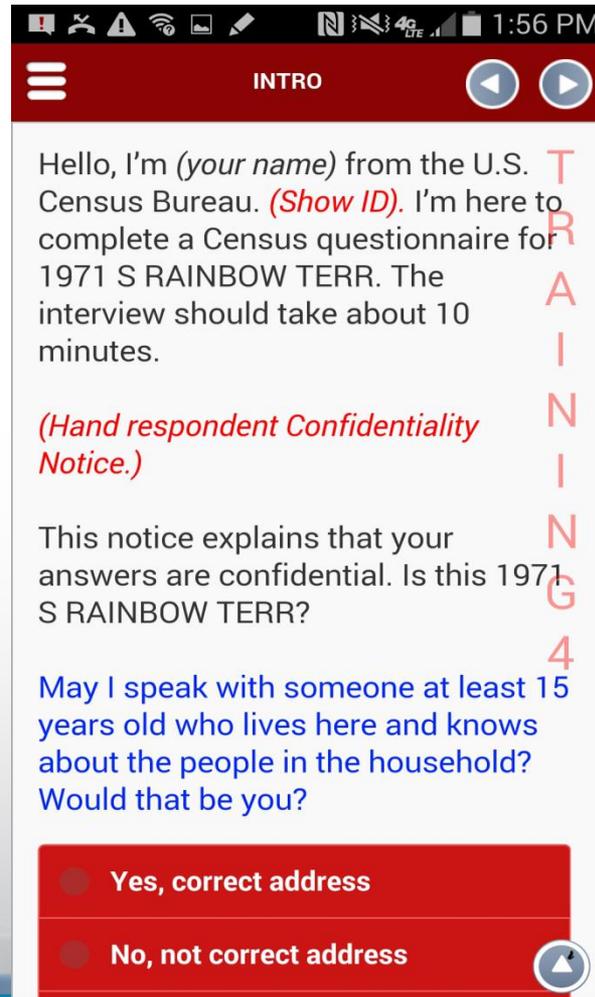
Compass – Active Case List



Compass – Multilingual



Compass – Step by Step Instructions



RTNP - Standardization



2015 Census Test

[Instructions](#) [FAQs](#) [Save and Log Out](#)

Here is the address you submitted, using standard abbreviations and formatting.

Please review your address for common errors, such as misspellings in the street name or city name, missing apartment numbers, or an incorrect ZIP Code.

123 N OAK ST
SAVANNAH, GA 31401

Is the address above correct?

Yes
 No

[Previous](#) [Next](#)

RTNP – Map Screen

United States[™]
Census
Bureau

2015 Census Test

Instructions FAQs Save and Log Out

Please review the highlighted area. If you agree that your address is located within that highlighted area, then continue to the next page.

If you believe that your address is not in the highlighted area, use the map below to zoom in and find your address location at the street level. Once you have navigated to the street level, please select the area and ensure that your address is located in the highlighted block. Otherwise, mark the "Cannot Locate Area" checkbox at the bottom of the page, then continue to the next page. ([Help](#))

NOTE: New roads, especially those that are part of a new development, may not appear on the map. In these cases, click and highlight the area you believe contains your address, then continue to the next page.

Start Over
Imagery
Legend

Cannot locate area

Next

Source: US Census Bureau

Questions?