2020 Census LUCA Training Workshop Script for Digital/Digital participants

Slide 1 – Cover/Opening

Thank you for attending the 2020 Census Local Update of Census Addresses Operation (LUCA) training for participants choosing digital materials.

Slide 2 – Intended audience: Product Preference Form – "Digital/Digital"

The U.S. Census Bureau has designed individual trainings for each of the seven product preference combinations that discuss the review and update of the 2020 LUCA materials unique to each product preference selection. Participants who registered and completed the Product Preference Form with "Digital" chosen in both Section A and Section B should view this presentation.

Jurisdictions who registered for a product preference different from "Digital/Digital" should not view this presentation. Instead, refer to the presentation that matches the product preference combination from your *Product Preference Form (D-2003).*

Slide 3 – Agenda

During today's presentation, we will introduce the 2020 Census and 2020 LUCA, discuss some review and update strategies, identify the materials, and describe the suggested setup of those materials. We will describe the acceptable updates that can be made to the materials as well as showing examples of updates to both the address and map materials, and outline the submission process. Lastly, we discuss the ways to receive support and assistance during the LUCA operation and mentions ways to stay connected to the Census Bureau through several social media sources as well as Census Bureau subscriptions. For more detailed information and instruction, refer to the Respondent Guide that accompanies the materials.

The 2020 LUCA materials and operational instructions are subject to change between the LUCA training timeframe and the time you receive your materials for review in the spring of 2018; therefore, the examples shown in the various training modules may differ from the official materials.

Slide 4 – In this section (Introduction)

As part of the introduction, we will discuss, at a high level, the decennial census and 2020 LUCA, identify a few commonly used words of Census terminology, and discuss preparing for participation in 2020 LUCA.

Providing background on the decennial census and 2020 LUCA lays the foundation for the subsequent slides and 2020 LUCA training workshop presentations. Keep this background in mind as you begin to formulate a plan for participation and conducting your review.

Slide 5 – The decennial census

The purpose of the decennial census (also known as the 2020 Census for this decade) is to conduct a census of population and housing and disseminate the results to the President, the States, and the American people. The United States Constitution mandates an actual count of every person residing in the United States every 10 years. The Census Bureau counts individuals within households and typically collects information about the housing structure and the housing unit.

The primary use of census data is to provide the population counts needed to apportion seats in the U.S. House of Representatives among states as mandated by Article 1, Section 2 of the United States Constitution, but additional data uses include:

- Drawing congressional and state legislative districts, school districts and voting precincts by tribal, state, and local governments.
- Enforcing voting rights and civil rights legislation by the Department of Justice.
- Distributing over $675 billion dollars in federal funding, EACH YEAR, to tribal, state, and local governments. *Missing a housing unit, and the associated population, during the decennial census may result in a missed opportunity for governments to benefit from federal funding.*

Lastly, census data plays a role in informing the decisions of governments, businesses, and non-profits regarding numerous topics such as community and regional development, education, agriculture, energy, and environmental programs, as well as other community improvements and enhancements.

To conduct the decennial census, the Census Bureau utilizes its census address list. A review and update of the census address list is the focus of LUCA.

Slide 6 – 2020 Census Design

This graphic illustrates the 2020 Census Design process and why building a strong geographic foundation is so important.

Starting at the bottom left of the slide, the Census Bureau must Establish Where to Count by identifying all the addresses where people could live. The census address list contains the residential addresses that form the "where to count." A complete and accurate address list ensures that all households are included in the Census in the correct location.

Moving up from the bottom left to the top left, the Census Bureau must Motivate People to Respond by conducting a nationwide communication and partnership campaign. This campaign utilizes the census address list to send materials that invite and encourage households to respond.

Moving across to the top right corner of the graphic, the Census Bureau must Count the Population by collecting data from all households, including group quarters and unique living arrangements. The Census Bureau uses the address list and maps to send enumerators to collect interview data from nonresponding households.

Finally, moving down from counting the population, the Census Bureau must Release Census Results by using the address list and geographic boundaries to process, tabulate, and disseminate apportionment counts to the President by December 31, 2020, redistricting data to the States by April 1, 2021, and high

quality data to the public. An accurate address list ensures that all households are counted in the correct geographic location.

In this presentation and others you may receive throughout this year, the Census Bureau provides examples regarding the importance of LUCA participation and a successful 2020 Census that result AFTER the "Release Census Results" section of this slide. While the examples on the previous slide are all valid reasons for participating in LUCA, this graphic illustrates why your LUCA participation is so fundamentally important.

LUCA offers eligible entities the opportunity to provide their input into the address list that serves as the foundation of the entire 2020 Census Design process. Participants in the 2020 LUCA operation have a direct influence on the quality and completeness of the census address list.

Slide 7 – LUCA background

The Census Address List Improvement Act of 1994, which became Public Law 103-430 in October 1994, authorized the Census Bureau to share its address list with governments who sign a confidentiality agreement.

First implemented in support of the 2000 Census, LUCA was later refined to support the 2010 Census, and now the 2020 Census.

LUCA provides a voluntary, once-a decade, opportunity to tribal, state, and local governments to review and comment on the Census Bureau's residential address list for their jurisdiction prior to the decennial census. The Census Bureau relies on a complete and accurate address list to reach every living quarters and associated population for inclusion in the census.

Slide 8 – What's new for 2020 LUCA

The 2020 LUCA operation offers streamlined participation through a full address list review, provides the digital address materials in a convenient standard software format, and includes "unable to geocode" addresses for state and county participants. For those of you that may be unfamiliar with the term 'geocode', in Census terms it identifies addresses with census geography codes for the state, county, tract and block. "Unable to Geocode" records are missing the tract and block information. Also new for 2020, is the requirement for multi-unit structure identifiers. This new requirement is important to mention because it may require special attention for participants that do not store individual unit information.

The 2020 LUCA materials include Census Bureau residential structure coordinates, if they are available and allows participants to submit their own residential structure coordinates to accompany their LUCA submission. Lastly, the 2020 LUCA operation also allows participants to supply non-city style addresses, with corresponding map spots or latitude and longitude coordinates. The Census Bureau cannot accept PO Box information.

Slide 9 – Title 13 U.S.C. – confidentiality and security

Title 13 U.S.C. protects information provided to and from LUCA. It requires the U.S. Census Bureau ensure the confidential treatment of census related information, including individual addresses and

structure points (also known as map spots on the paper LUCA materials), and maintain the confidentiality of all information it collects. LUCA requires all liaisons, reviewers, and anyone with access to the Title 13 materials abide by the Confidentiality and Security Guidelines and sign the *Confidentiality Agreement Form.*

For Digital/Digital participants, the Address List is Title 13 material and requires protection. The guidelines document that accompanied the LUCA invitation/registration materials is included in the Respondent Guide. If changes occur to staff that have access to the Title 13 materials, the jurisdiction must provide updated Confidentiality Forms as the changes occur, throughout the LUCA operation timeframe.

Slide 10 – Title 13 U.S.C. – confidentiality and security (cont'd)

Title 13 provides the following protections to individuals and businesses:

- The Census Bureau never publishes private information. It is against the law to disclose or publish any private information that identifies an individual or business, including names, addresses (including GPS coordinates), Social Security Numbers, and telephone numbers.
- The Census Bureau collects information to produce statistics. No government agency or court can use personal information against respondents.
- The Census Bureau staff is legally required to maintain the confidentiality of your data. Every person with access to your data is sworn to protect Title 13 data (and the data you share) for life. They understand that the penalties for violating this law are applicable for a lifetime.
- Violating the law is a serious federal crime. Anyone who violates this law will face severe penalties, including a federal prison sentence of up to five years, a fine of up to $250,000, or both.

Slide 11 – 2020 LUCA schedule

A final point of the 2020 LUCA section of this introduction, before moving into Census terminology is the schedule. Keeping the 2020 LUCA schedule in mind prepares you for upcoming tasks and actions.

January 2017 – Advance Notice mailing conducted. The purpose of the Advance Notice mailing was to bring awareness to 2020 LUCA and its schedule so governments could begin preparing to participate. The Census Bureau asked contacts to review the LUCA Information Guide and to confirm/correct their contact information. The Census Bureau sent a large number of Advance Notice materials in order to build a solid courtesy copy base for the invitation mailing that occurred in July 2017. Nearly 83,000 contacts were shipped the Advance Notice mailing which covered just over 40,000 governments and organizations.

March 2017 – LUCA promotional presentations began. The six regional offices conducted these presentations. Promotional workshops concluded in December to transition to the training workshops.

July 2017 – LUCA invitation mailing (which included registration materials) conducted. The invitation mailing included a letter, four forms necessary for LUCA registration, a document with instructions for registration, and a copy of the Confidentiality and Security Guidelines.

October 2017 – LUCA training workshops began. As with the promotional workshops, the six regional offices manage the scheduling and conduct the training workshops. Direct questions regarding the training workshops to the GEO 2020 LUCA email at <GEO.2020.LUCA@census.gov> and/or call the Geographic Programs Support Desk at 1-844-344-0169.

December 15, 2017, was the 2020 LUCA registration deadline.

February - April 2018 – 2020 LUCA materials begin to ship to participants. Participants begin their review and have 120 calendar days to complete.

March - September 2018 – Census Bureau processes 2020 LUCA submissions.

April 2018 – May 2019 – Census Bureau validates 2020 LUCA addresses.

Summer 2019 – Census Bureau delivers LUCA feedback to participants (the Appeals process is still under development, but has a very short review timeframe).

April 1, 2020 is CENSUS DAY!

Slide 12 – Census Bureau terminology

The Census Bureau organization uses numerous terms and acronyms. As part of the introduction, it is important to become familiar with some common Census Bureau terminology used while discussing the 2020 LUCA operation. This slide lists four of the most commonly used terms for LUCA. These terms and others are included in the Respondent Guide. The next several slides define the terms shown on this slide and provide examples of acceptable and unacceptable housing units, group quarters and transitory locations.

Slide 13 – Housing Unit (HU)

Understanding how the Census Bureau defines the term Housing Unit (HU) is critical to the success of participating in the 2020 LUCA operation. The Census Bureau defines a housing unit as a single-family house, townhouse, mobile home, trailer, apartment, group of rooms, or a single room occupied as a separate living quarter or, if vacant, intended for occupancy as a separate living quarter.

A separate living quarter is one in which one or more occupants (or intended occupants, if vacant) live separate from any other individual(s) in the building and have direct access to the living quarter without going through another living quarter, such as from outside the building or through a common hall.

Slide 14 – Acceptable HUs for LUCA

The following types of housing units are acceptable for inclusion as part of your 2020 LUCA submission.

- Houses, including townhomes, condominiums, and apartments.
- Living quarters within a nonresidential structure, i.e., an apartment within a church or above a business.
- Mobile homes or trailers occupied as separate permanent living quarters, even if vacant. Empty trailer pads and mobile home sites intended to be permanent sites are also acceptable for LUCA, if the site has utility connections.

- HUs under construction that will be habitable by Census Day, 4/1/2020.

Slide 15 – Group Quarters (GQs)

The Census Bureau defines Group Quarters as a place where people live or stay, in a group living arrangement owned or managed by an entity or organization providing housing and/or services for the residents.

This is not a typical household-type living arrangement. These services may include custodial or medical care as well as other types of assistance, and residency is commonly restricted to those receiving these services. Residents of group quarters are usually unrelated.

Slide 16 – Acceptable GQs for LUCA

The following types of group quarters are acceptable for 2020 LUCA:

- Correctional facilities such as federal or state prisons, local jails, and correctional residential treatment facilities.
- Juvenile facilities both correctional and non-correctional.
- Group homes, such as halfway houses, homes for people with special needs, or homes for the mentally and/or physically disabled.
- Nursing homes, either regular or skilled. Skilled nursing facilities provide rehabilitative services while regular nursing facilities do not.
- Homeless shelters.

Slide 17 – Acceptable GQs for LUCA (cont'd)

Continued from the previous slide, these additional types of group quarters are also acceptable: hospitals, dormitories at colleges or universities, fraternity houses, sorority houses, worker dormitories, religious group quarters (such as a convent or monastery), and any GQ under construction expected to be habitable by Census Day, 4/1/2020.

Should your jurisdiction choose to review group quarters as part of 2020 LUCA, then all of the group quarter types, mentioned on both slides, are acceptable for inclusion in your submission.

Slide 18 – Transitory Locations (TLs)

Transitory Locations (TLs) are sites that contain transient, movable or mobile housing, or portable housing units, including boats, motorized recreational vehicles (RVs), tents, trailers that are pulled by cars or trucks, or any other type of portable housing used as a living quarters. Transitory locations also include hotels or motels if being occupied on a transitory basis because the occupants have no other residence.

Slide 19 – Acceptable TLs for LUCA

The following TLs are acceptable for inclusion in 2020 LUCA: RV parks, campgrounds, hotels, motels, and marinas. Only include the main address (i.e., the office address) for the transitory location.

Slide 20 – Unacceptable HUs and GQs for LUCA

Exclude the following unacceptable types of housing units and group quarters addresses from your address list:

- HUs, GQs, or TLs condemned or scheduled for demolition;
- Transitory units within TLs such as RV pad sites or marina slips. These transitory unit addresses are identified and documented during the Enumeration of Transitory Locations (ETL) operation;
- HUs, GQs, or TLs under construction or remodeling for nonresidential purpose, used solely for nonresidential storage or as office/business, or used solely for ceremonial purposes;
- HUs, GQs, or TLs under construction and NOT habitable by Census Day, 4/1/2020.

If addresses described in the first bullet appear on the census address list, mark them for deletion with Action Code "D." If transitory unit addresses are included in the address list, and you are certain the transitory unit does not exist, mark them for deletion. If addresses described by the two nonresidential status bullets appear on the address list, mark them as nonresidential with Action Code "N." Do not add addresses that will not be habitable on Census Day, April 1, 2020.

Slide 21 – City style address

The Census Bureau defines city style addresses as those that have a house number and street name for their complete address. In some instances, the house number may also include an alpha character such as 35A Fourth Ave W. City style addresses are generally mailing address, but some are also used to provide a location for emergency services, such as police, fire, and rescue, i.e., E-911 addresses.

Of special note, for 2020 LUCA, participants who wish to add multiunit addresses must provide the unit identifiers. Ensure that all your apartment buildings, especially small multiunit buildings (3-4 units), such as large houses subdivided into apartments, have a separate address line for each unit that includes the basic street address and the individual unit designation.

Slide 22 – Non-city style address

The Census Bureau defines non-city style addresses as those that do not have a house number and street name for their complete address or that may have incomplete house number and street name information.

Frequently used non-city style addresses in the Census Bureau data include location descriptions with map spots, rural route and box addresses, and highway contract route and box addresses.

Slide 23 – LUCA liaison

For 2020 LUCA, each government entity that registers must designate a LUCA liaison. The liaison is an individual assigned/appointed to the position by the Highest Elected Official and serves as the main point of contact. The Census Bureau ships all of the LUCA materials to the liaison's attention. The liaison is responsible for safeguarding the materials throughout the entire LUCA operation. At the conclusion of the LUCA operation, the liaison is responsible for destroying (preferred) or returning Title 13 materials and signing out of 2020 LUCA by using the *Destruction or Return of Title 13 Materials Form (D-2012)*.

Slide 24 – LUCA reviewer

A LUCA reviewer is an individual selected by the HEO or LUCA liaison to help conduct the LUCA review. Each entity may designate multiple LUCA reviewers. As a precaution, the Census Bureau suggests anyone with intentions of viewing the census address list become a LUCA reviewer. All reviewers must sign the confidentiality agreement form prior to beginning a review of the LUCA materials. After doing so, they may review the materials in addition to the LUCA liaison. As with the liaison, they are responsible for safeguarding the LUCA materials and, at the conclusion of LUCA, they must sign out of 2020 LUCA by using the *Destruction or Return of Title 13 Materials Form (D-2012).* If a reviewer listed on the confidentiality agreement form no longer works with the entity, the liaison can sign out for them.

Slide 25 – Census geography hierarchy diagram

This diagram of Census Bureau geographic entities hierarchy illustrates the nesting relationship of various geographies. In the spirit of LUCA, the main line through the middle of the diagram depicts the census block as the smallest element in the hierarchy, nesting within block groups (not important for 2020 LUCA), census tracts, counties, and states.

This hierarchy manifests in the LUCA address data in the form of a geocode. Each address included on the 2020 LUCA address list for your entity will include the state, county, tract, and block codes where the address is physically located. The first digit of the block number equates to the block group number.

Slide 26 – Census geography hierarchy graphic

This slide depicts a rough map graphic overview of some of the geographic relationships, similar to the hierarchy diagram on the previous slide, but in a different visual format.

These are merely examples, and not all of these relationships hold true across the hierarchy as a rule (for example, places are not always contained within MCDs, or even counties, and tracts do not always nest cleanly within places) but it works as an example to make sense of the relationships we are attempting to maintain.

Slide 27 – GEOID

As illustrated in the previous two slides, the Census Bureau uses its own geography in order to tabulate data and create a unique code to represent each area.

- Each state has its own unique two-digit code. For example, Pennsylvania is 42.
- Each county within a state has a unique three-digit code. For example, Philadelphia County is 101.
- Combined, these codes form the unique state/county code, 42101.
- Census tracts nest within counties. They are small, relatively permanent statistical subdivisions of a county. Numbered uniquely within each county, they generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. Census tracts consist of six digits, a four-digit base number, including leading zeroes, plus a two-digit number suffix. An example of a census tract code is 0001.01, shown as 000101 in the LUCA data.

- Census blocks are a geographic area bound by both visible (streets, streams, railroads) and invisible (city limits) features. Census blocks are the smallest area for which the Census Bureau tabulates data. They have a four-digit code. Similar to the relationship between counties and tracts, blocks nest within and are unique within each tract. Each tract only has one block 1001 and all tracts have a block 1001.

These four codes (state, county, tract, and block) combine to create a unique 15 digit GEOID that represents one specific block within the entire country. Using the information in the example above the nationwide unique GEOID for the block is 421010001011001. This code happens to represent the GEOID of the block in which the Philadelphia Regional Census Office is located.

Slide 28 – Preparation for 2020 LUCA participation

The Census Bureau offers early tools that provide participants the opportunity to begin LUCA preparation in advance of materials receipt. Since January 2017, residential address block counts were available for download on the 2020 LUCA website. The Census Bureau uses the geocodes of the individual addresses in the Master Address File (MAF) to derive the residential block counts. This is the first time the Census Bureau has provided this type of information in advance of the LUCA operation. The Census Bureau provides the Address Count List with the 2020 LUCA materials for reference purposes only.

The 2017 version of this product contained seven fields of information and was a pipe-delimited text file. The 2018 version, updated in January 2018, is comma-delimited and contains 13 fields of information. This updated file is the actual Address Count List material that accompanies participants' official LUCA materials.

Potential participants can compare the Census Bureau's address count data to their local data. They can join the address count list to 2010 tabulation block geography to create an overlay for analysis prior to receiving actual LUCA materials. Discrepancies between the census and local counts may be a result of incorrect geocoding or missing information from the census address list.

The Census Geocoder tool allows users to upload a file of addresses (or enter in an individual address) to obtain census geography and approximate coordinates based on the address ranges within the MAF/TIGER System. The Census Bureau offers support for the Census Geocoder through email to <geo.geocoding.services@census.gov>.

The Census Geocoder takes individual addresses, or file of addresses, and obtains census geography and approximate coordinates. It can process files up to 10,000 records at a time. The Census Bureau also offers Geocoding Services for larger files using their Secure Web Incoming Module, known as SWIM.

Geocoding a local address list using Census Geocoder is another way to begin early preparations for LUCA because it standardizes local data into the format the Census Bureau needs for LUCA processing and provides the census block geocode for the records submitted in the local address list file. Participants may use the geocode information to generate their own local block count tallies for comparison to the Census Bureau's block count file. Participants can also generate geocodes using their own GIS, but this tool may help smaller entities or entities that do not have access to their own geographic information system (GIS).

For those not using a GIS, TIGERweb is an interactive web service for use, in advance of receiving LUCA materials, to view the features (roads, blocks, etc.) within jurisdictions. Used interactively with the Address Count List, it allows users to identify blocks that have high or low address block counts. Documentation is located within the same URL as the TIGERweb application.

Slide 29 – In this section (Review and update strategies)

With the foundation laid with background on the 2020 Census, 2020 LUCA, and Census terminology, it is important to transition from the basics to thinking about how to conduct the review and update. For that reason, this review and update strategies section identifies things to consider, potential address sources available to your jurisdiction to conduct your review, encourages the identification of priority areas of review, and discusses how to begin your review.

Slide 30 – Things to consider

When preparing for your LUCA review, consider your time and staff resources. The 2020 LUCA operation allows 120 calendar days to review and provide the Census Bureau with your submission. The review time begins upon receipt of materials. If your entity decides to switch product preferences, the 120 days does not reset after receipt of new materials, nor does it pause while waiting for new materials. Time does not reset if you experience technical issues, so please contact the Census Bureau immediately if you experience problems with the materials (digital or otherwise).

Consider the availability of an address list or other source of address information. If an address list exists, does it include multiunit structure identifiers, such as Apt 1, Unit A2, #4? This information is required for 2020 LUCA submissions when adding new records to the address list or updating the address list. Does the address list include both residential and commercial addresses; and if so, are the residential addresses distinguishable? The Census Bureau only wants residential addresses for LUCA, so additional work may be necessary to prepare the local address list for use in 2020 LUCA review.

Slide 31 – Potential address sources

There are many possible sources of local address information, so this alphabetic list of potential sources may not be comprehensive. Some of these sources may not match the Census Bureau's address list exactly, but they are a good indication of where change is taking place and can help identify addresses that need to be add to the Census address list.

Slide 32 – Identify priorities

When deciding how to conduct the LUCA review, consider your time, staff, and available local address information. If a complete review is not possible, focus your review on these areas, choosing the areas or addresses that are most important to your government to review. This list is in alphabetical order, not priority order for the Census Bureau

- Apartments or areas of concentrated multiunits.
- Areas along governmental boundaries.
- Areas of new residential construction.

- Blocks with the greatest difference between the Census count and the local counts. The blocks with differences highlight areas missing addresses or areas with misgeocoded addresses. These may prove to be high priority areas for many participants.
- E-911 address conversions.
- Group Quarters.
- Mobile home parks or blocks with a concentration of new/scattered mobile homes.
- Single family homes converted to multifamily and vice versa.
- Warehouse (Commercial) conversions to residential.

Slide 33 – Beginning your review

As you begin your review, assemble all of your local sources of information (local address sources and local map sources). Take time to read the LUCA Respondent Guide that accompanies the materials. Review the online presentations when they become available.

Familiarize yourself with your specific LUCA materials. For digital participants, check your Address List to ensure it imported properly (e.g., leading zeros are present and data is in the appropriate fields). To check the connection between address list and the address count list, scroll to the bottom of your address list. If you subtract one (for the presence of the header row) from the last row number, you will have the tally of addresses (housing unit and group quarters) for your jurisdiction. This number should match the "Total" information at the end of your digital address count list. These are all checks that participants can perform upon receipt of materials to ensure your materials are complete and correct. Review the Address Count List to ensure it includes all of its blocks. Setup your TIGER Partnership shapefile material for potential updates to the edges shapefile.

Organize your LUCA materials based on the priority areas your jurisdiction established and focus on those areas. Do not become distracted by the additional materials for other areas or other addresses. If you complete the priority areas, you can always choose additional addresses to review.

An organized approach to conducting your LUCA review will yield a successful LUCA submission for your jurisdiction.

Slide 34 – In this section (Setup and materials introduction)

This section of the presentation discusses the delivery of materials, the suggested system setup, the DVD layout and content, and introduces the address and map materials.

Throughout the presentation, please remember the Respondent Guide contains more specific content than included in this presentation.

Slide 35 – Delivery of materials

The Census Bureau delivers the materials via traceable delivery methods such as those used by FedEx or U.S. Postal Service (USPS). Due to confidentiality and security requirements of Title 13 data, we cannot make the digital LUCA materials available through download (ftp or internet) or through email.

Digital/Digital participants receive three DVDs, one contains the Title 13 data, one contains the non-Title 13 data, and one includes the courtesy copy of the GUPS installation software. Digital/Digital

participants can disregard the GUPS installation software, unless they decide to switch to GUPS instead of using their own GIS.

Slide 36 – Suggested setup of local system

Upon receipt of the DVDs, if any are damaged, incomplete, or if the files are corrupted, contact the Geographic Programs Support Desk at 1-844-344-0169 immediately for assistance and potential replacement.

The Census Bureau recommends that you make a copy of each of the files and place them on the hard drive of a computer, only after ensuring you can adhere to the *Confidentiality and Security Guidelines*. Retaining a copy will preserve the original files should you need to look at an original record or require another original copy of the file. If your jurisdiction cannot meet the digital security requirements, please do not install the data. Contact the Census Bureau immediately to discuss alternatives.

To keep your work organized, create a new directory/new folder on your hard drive. We suggest naming it "2020LUCA". Copy all of the contents from the DVD into the newly created folder on your local system.

Participants needing assistance should refer to the Readmefirst6.txt, the Quick Start guide and the Respondent Guide included with the materials for detailed instructions. Consider the Respondent Guide the source for answering questions regarding the LUCA operation. Call the Geographic Programs Support Desk at the number listed above or send an email the LUCA staff at <GEO.2020.LUCA@census.gov> if questions still exist.

Slide 37 – DVD layout and content

Digital/Digital participants can disregard the courtesy copy of the GUPS installation DVD unless they decide to use GUPS instead of their own GIS. The GUPS installation DVD self installs upon insertion of DVD into your computers CD/DVD drive. Refer to the GUPS Respondent Guide for detailed information.

The DVD with Title 13 data contains a "shape" folder with *2020LUCA_<EntityID>_DISK1of2.exe* that includes the digital version of the Title 13 Address List. Slide 7 of this presentation discusses the extraction of this file.

The DVD with non-Title 13 data contains information in the root directory and within a "shape" folder.

The root directory of this DVD contains five files.

The *2020LUCA_digital_respondent_guide.pdf* is the pdf version of the respondent guide for digital address list participants. A paper copy is not provided.

The *2020LUCA_GUPS_respondent guide.pdf* is the pdf version of the respondent guide for GUPS participants and is included for Digital/Digital participants in case they decide to switch product preferences and use GUPS for their LUCA work. A paper copy is not provided.

The *2020LUCA_header_file.txt* is a template participants may use to import their local address list into the Census Bureau's address list layout.

The *LUCA20_inventory.pdf* is a digital inventory form to use when providing your submission to the Census Bureau. The final presentation on submission discusses how to send in this form.

The *Readmefirst6.txt* includes specific instructions for this product preference.

The "shape" folder contains *2020LUCA_<EntityID>_DISK2of2.exe* that includes the non-Title 13 Address Count List and all the appropriate state and county TIGER Partnership shapefiles for the entity. Slide 11 of this presentation discusses the extraction of this file.

Slide 38 – Data installation

Navigate to the 2020LUCA folder on your local system. One-by-one, double click on each of the .exe files, *2020LUCA_<EntityID>_DISK1of2.exe* and *2020LUCA_<EntityID>_DISK2of2.exe*. With each executable, a command prompt opens. The command prompt window shows the progress of the file extraction and closes upon completion.

For the DISK1of2, the command prompt window, like the one shown on this slide, requests a password. Enter the password provided by the Census Bureau separately from your LUCA materials. The password is not visible when entering into the command prompt window. DISK2of2 executable does not require a password since there is no Title 13 material on that DVD.

Slide 39 – Address materials

This section describes properly opening the digital address materials and provides information on file layouts of the digital address materials. It describes the digital address materials and shows examples to provide an introductory visual.

Slide 40 – Opening .csv files in Microsoft Excel: Data – Get External Data – From Text

It is important to open the Address List .csv file in a particular manner so the field structure is preserved and data content is not corrupted. The next three slides of information were created using Excel 2016. Because software versions and vintages may display information differently, please keep this in mind while viewing these examples.

After launching Microsoft Excel, open a blank workbook. Choose from the *Data* menu to *Get External Data* from *Text*.

Slide 41 – Opening .csv files in Microsoft Excel: Navigate – Import

Navigate to the "2020LUCA" folder on your local system, choose the Address List .csv to open, and then choose *Import.*

Slide 42 – Opening .csv files I Microsoft Excel: Text Import Wizard

Follow the Import Wizard by selecting the following choices:

Original data type – *Delimited* and choose *Next*

Change Delimiter from Tab to *Comma* and choose *Next*

Select all of the fields in the Data preview window and change the data format to *Text*, and choose *Finish* (Setting the fields to *Text* preserves the leading zeros in the value fields)

For the *Import Data window,* participants may choose "*New worksheet"* to have the information imported into a blank new worksheet. If they choose *"Existing worksheet",* make sure the field beneath is set to the upper left cell, *=A1*

With properly opened files, the next few slides introduce the digital address materials.

Slide 43 – Address List – Title 13

The Census Bureau's Address List contains all of the residential (city-style and non-city style) addresses known to the Census Bureau within your jurisdiction, reservation or off reservation trust lands. It also contains census geographic codes (state, county, census tract, census block) that indicate the location of each address.

The Address List is a comma delimited text file (.csv) and contains 24 fields of information. It is critical to follow the procedures that discuss "importing" the .csv rather than simply opening by using the File-Open method or double-clicking the file.

Each address record in the Address List is a maximum of 649 characters. The character length of each record may vary. The first row, or header row, of the file displays the field names for each data column in the file. Plan to remove spaces that exist in the header row for effective use in ArcGIS.

Slide 44 – File naming convention – Address List

This slide explores the various naming conventions for the Address List based upon the entity types, state, county, incorporated place, minor civil division and federally recognized tribes with reservation and/or off reservation trust lands.

ST20 identifies a state address list for Kansas. CO20001 identifies a county address list for Allen County KS. PL2000125 identifies an incorporated place address list for Abilene city KS. MC2000120550 identifies a minor civil division address list for Elm township KS. TR0197TA2980 identifies a tribal address list for Prairie Band of Potawatomi Nation Reservation, where TR0197 is the tribal identification code for Prairie Band Potawatomi Nation and TR2980 represents the Prairie Band of Potawatomi Nation Reservation, the geographic area associated with the Prairie Band Potawatomi Nation.

Slide 45 – Address List record layout

The slide illustrates a portion of Table 3 from the Respondent Guide. It depicts the record layout of the 2020 LUCA Address List. As mentioned on the previous slide, there are 24 fields of information. Participants can review the Respondent Guide for a complete, clearer visual of the record layout for the digital Address List.

Slide 46 – Address List – Microsoft Excel example **No Title 13 Data Displayed**

After properly importing the .csv into Microsoft Excel or other spreadsheet/database software, the 24-field Address List appears similar to this example. It is important to mention this data is fictitious. It does not include any Title 13 information.

Slide 47 – Address Count List

The Census Bureau's Address Count List contains the number of housing unit and group quarters addresses on the Address List for each census block within your jurisdiction. It is not Title 13 material.

Developed as an early tool for LUCA preparation and for use with Geographic Update Partnership Software (GUPS), digital participants may use it for reference purposes only. The Address Count List can identify inconsistencies between the Census Bureau's housing units and/or group quarters address counts and your housing unit and/or group quarters address counts.

Like the Address List, the Address Count List is a comma delimited text file (.csv). It is critical to follow the procedures that discuss "importing" the .csv rather than simply opening by using the File-Open method or double-clicking the file.

The Address Count List contains 13 fields of information, with a maximum of 140 characters per record. The first row, or header row, of the file displays the field names for each data column in the file. The last row of the file is a Total row that sums all of the housing units and group quarters block counts for the jurisdiction.

The last important point to mention is that the Address Count Lists for state and county participants include an "unable to geocode" tally on the next to last line of the file. This row summarizes the ungeocoded address records, by housing unit and group quarters, included in the Address List. To reiterate, ungeocoded records are only available to state and county participants.

Slide 48 – File naming convention – Address Count List

The Address Count List follows the same naming convention as for the Address List, except for reference to the "countlist" in the file name.

Slide 49 – Address Count List record layout

The slide illustrates a portion of Table 4 from the Respondent Guide. It depicts the record layout of the 2020 LUCA digital address count list. As mentioned on the previous slide, there are 13 fields of information. Participants can review the Respondent Guide for a complete, clearer visual of the Address Count List record layout.

The first five fields are the census geographic codes for state, county, tract and block, with the fifth field being a concatenation of the previous four fields to form the 15-character GEOID field.

Digital/Digital participants should place their focus on the two "ORIGINAL" fields: one for HUs and one for GQs. GUPS uses the six "CURRENT", "LOCAL", and "DIFFERENCE" fields for its processing; therefore, participants that do not use GUPS to review the LUCA materials can ignore those six fields.

Slide 50 – Address Count List – Microsoft Excel example

After properly importing the .csv into Excel, the Address Count List appears similar to this example.

Slide 51 – Map materials

The digital maps provided by the Census Bureau on DVD in support of 2020 LUCA are the TIGER Partnership shapefiles. This section introduces the TIGER Partnership shapefile materials, details opening .shp files in Esri ArcGIS, and provides high-level information regarding editing the shapefiles.

Slide 52 – TIGER Partnership shapefiles

The digital maps provided by the Census Bureau in support of the 2020 LUCA operation are the TIGER Partnership shapefiles. The Census Bureau's MAF/TIGER System is the source for these shapefiles. TIGER Partnership shapefiles require the use of a GIS. The TIGER Partnership shapefiles created for LUCA match the "*2018 Partnership Shapefiles for the 2018 BAS and the VTD Annotation Phase*" currently available for download from the "Maps & Data" section of the Census Bureau's Geography website: <https://www.census.gov/geo/maps-data/data/partnership.html>. Be aware creation of the Partnership Shapefiles occurs twice yearly. While the vintage that matches the LUCA products is the current vintage, new vintages continue to post to the website for public use. If your government chooses to make road feature updates, please use the shapefiles included with your LUCA materials.

The Census Bureau provides county-based shapefile layers regardless of whether or not the entity is a tribal nation, state, county, or incorporated place participant. This means tribal participants receive county shapefiles that cover the extent of their reservation and off-reservations trust lands. State participants receive county shapefiles for the counties they wish to review and update. Likewise, the incorporated place participants receive county shapefiles for each county within which their jurisdiction falls within. The Census Bureau also includes state level shapefiles for reference and query purposes.

The TIGER Partnership shapefiles do not contain structure points (map spots), so they are not Title 13 material.

For 2020 LUCA, the Census Bureau intends to use the same vintage of blocks, 2010 blocks, for the feedback materials as with the initial materials. This decision helps with comparability of geography during the feedback phase in 2019.

Slide 53 – Shapefile naming convention

Numerous files accompany the county-based TIGER Partnership shapefiles for LUCA, but the two of importance are the edges and tabblock2010 shapefiles within each of the county folder(s). The edges shapefile is the only file edited during the 2020 LUCA operation. Use it to make road feature updates resulting from address list updates. Use the tabblock2010 shapefile for geocoding purposes, as it is the block base for the 2020 LUCA operation. Make no updates to the tabblock2010 file. The Respondent Guide that accompanied materials, and located on the LUCA website, includes many details excluded from this presentation. Please review the shapefile chapter and appendices within the Respondent Guide.

Programmed to use both state level and county level shapefiles, the Census Bureau provides GUPS state level shapefiles as part of the LUCA TIGER Partnership shapefiles. These state level files are for reference

only. Make no updates to any of the shapefiles located within the state folder. These files can, however, be used for reference purposes.

As an example, for an incorporated place that crosses county lines, they may wish to use the state level incorporated place shapefile (e.g., PVS_17_v2_place_20.shp) to help them identify the 2010 tabulation blocks for their entity. Since incorporated place boundaries do not cross state lines, the state level file for incorporated places shows the place boundary in its entirety, without fragmenting at the county boundary. Using the PVS_17_v2_place_20001.shp would only show the Allen County KS portion of any split boundary places.

Slide 54 – Opening .shp files in Esri ArcGIS: Launch ArcGIS – ArcMap

The Census Bureau uses Esri's ArcGIS ArcMap version 10.4.1. Please note different versions of ArcGIS yield different actions and screen visuals. These screenshots provide only one method for setting up your digital map materials. This presentation does not discuss editing the shapefiles. The "Acceptable Update" presentations discuss editing the shapefiles.

From the Start Menu or by selecting a shortcut icon on the desktop, launch ArcMap. A window appears while loading the document.

Slide 55 – Opening .shp files in Esri ArcGIS: Setting up .mxd

After the "Loading Document" window closes, a blank map document, or .mxd, will open. Click the ***Add*** button, represented as a plus sign in the ArcMap software as shown in the image on the right side of the screen.

Slide 56 – Opening .shp files in Esri ArcGIS: Browse and add data

Browse for your shapefile data, extracted after execution of the "*2020LUCA_<EntityID>_DISK2of2.exe*" file. Select the edges shapefile and the tabblock2010 shapefile for your jurisdiction and click ***Add***.

Slide 57 – Opening .shp files in Esri ArcGIS: Add Data resulting visual

A visual very similar to this image appears after successfully adding the edges and tabblock2010 shapefiles to the blank map document.

Slide 58 – Edits to the TIGER Partnership shapefiles

It is very important to note that LUCA is an address focused operation, and address list review its priority; however, some address list updates may require map updates, e.g., missing addresses from the address list may mean a missing road feature in the TIGER Partnership shapefiles.

Shapefiles allow participants to submit feature updates electronically if they follow Census Bureau requirements. In order to submit digital feature information, participants must have a GIS capable of importing Esri shapefiles, editing the features, and exporting layers back into Esri shapefile format.

All linear features in the MAF/TIGER System are contained in the edges shapefile. LUCA participants use the edges shapefile to add lines, delete lines, or change linear feature attributes for the road features

impacted by an address list update. The Census Bureau does not expect, and will not process, updates to the edges shapefile for features other than roads. Participants use the tabblock2010 shapefile for geocoding addresses for inclusion or update to the address list.

For details on the contents of the shapefiles, review Chapter 5 of your Respondent Guide and the "R*eadmefirst6.txt*" file that is included on the DVD.

Slide 59 – Setup and materials summary

Upon receipt of the LUCA materials, review the "*Readmefirst6.tx*t" text file included in the root directory of your DVD. Please plan to review this presentation again and use it in conjunction with the Respondent Guide as resources for getting started. Be on the lookout for a hardcopy *2020 LUCA Quick Start Guide* that accompanies the materials, as it will contain tips on organizing and handling the digital material.

Slide 60 – In this section (Acceptable updates and examples)

We are entering the section of the presentation that deals with specific examples for updating the LUCA materials. Please remember, LUCA is an address-focused operation. Some map updates intertwine with some of the examples, but the focus of this section of the presentation details permissible actions that can occur to the Address List.

There are five acceptable action codes used to edit the census address list, A, C, D, J, and N. Participants enter the action codes into the ACTION field. All five action codes may be used with city style addresses (e.g., 1000 Main St), non-city style addresses (e.g., RR 3 Box 34) and ungeocoded addresses.

For the training examples, city style addresses are the focus, but an example of a non-city style address is included within the "A" action code section. As work begins on Address List updates, the Census Bureau encourages participants to save their work often to preserve changes. Saving often ensures work is not lost. Keeping an original in a secure location also ensures the recreation of updates if something necessary. Lastly, please use caution when re-sorting the Address List. Capture all 24 fields before re-sorting the list. Accidentally not capturing all of the fields during a sort action will jumble the records, thereby corrupting the information.

Slide 61 – Acceptable updates and examples: "A" action code

Participants use the "A" action code to add residential addresses that are new or missing from Address List. The upcoming slides present participants with examples of adding city style housing units, non-city style housing units, and city style group quarters.

The "**A**" action code updates may result in updates to the edges shapefile, usually the "**AL**" change type.

Slide 62 –Address List: "A" action code – adding city style HUs **No Title 13 Data Displayed**

During a participant's review, they may find addresses missing from the Address List located on streets that are partially or entirely missing from the maps. For this example, a participant discovers addresses

along Crystal Avenue, a new street, are missing from the Address List and the edges shapefile. The example depicts adding the addresses to the Address List and the road feature to the edges shapefile. This screen is the Excel view for adding the 14 new records on to the Address List.

For all of the upcoming examples, the bold field headings on the slide indicate required information, while the other highlighted fields represent optional/if known information.

In the Address List, create/insert a new record/row.

Copy the **ENTITY** code from an existing record in the Address List.

Enter an "**A**" in the **ACTION** field.

Enter/Copy the required geocode information in the appropriate fields for each new address:

- State Code in the **STATEFP** field. *(51)*
- County Code in the **COUNTYFP** field. *(610)*
- Census Tract Number in the **TRACT** field. *(5002.00)*
- Census Block Number in the **BLOCK** field. *(1014)*

Enter the complete house number in the **HOUSENUMBER** field.

Enter the complete street name in the **STREETNAME** field. *(Crystal Ave)*

If known, enter the **ZIP.** *(31402)*

If known, enter the address use information, in the **USE** field: *(B)*

- M—mailing purposes.
- L—location purposes, including emergency services.
- B—both mailing and location purposes.

If known, enter the structure latitude in the **LAT** field and the structure longitude in the **LONG** field. Please note, by including the **LAT/LONG** information, participants can exclude the **STATEFP, COUNTYFP, TRACT**, and **BLOCK** geocode information. This example depicts inclusion of both sets of information.

Leave the **MAPSPOT** field blank because participants cannot add actual map spots to the shapefiles and because the inclusion of LAT/LONG information is effectively, the map spot coordinate information.

Leave the **CITY_STYLE** field blank.

Once complete, the Address List for this example will contain 14 new housing unit records for Crystal Ave with all appropriate fields entered.

Slide 63 – Edges shapefile: "AL" change type – adding a street

In the edges shapefile, digitize the feature. In the edges attribute table, enter the **MTFCC**, which is "S1400", **FULLNAME**, which is "Crystal Ave", and **CHNG_TYPE**, which is "AL". For this example, there will be a new road added to the attribute table from the digitization of the feature and all fields, except the MTFCC, FULLNAME, and CHNG_TYPE information remain blank.

The image illustrates the newly added street in the edges shapefile and the three fields of required information in the edges shapefile attribute table.

Slide 64 – Address List: "A" action code – adding city style GQs **No Title 13 Data Displayed**

The same process explained for adding a housing unit applies to adding group quarters, with a few additional requirements. If participants enter a "**Y**", for the Group Quarters Flag (**GQ_FLAG**) they must provide a group quarters name and a facility name if the group quarters are associated with a facility (e.g., Group Quarters Name – Pandora Hall Bldg 1; Facility Name – Aristotle University). The Census Bureau will not process an added group quarters record without a group quarters name.

This example demonstrates how to add three GQs. Aristotle University constructed three new residence halls, Pandora Hall, Buildings 1, 2, and 3 at 225, 227, and 229 Achilles Dr. The street already exists and is correct in the TIGER Partnership shapefile, so there is no action required in the edges shapefile.

In the census address list, create/insert three new records/rows for this example for the three new buildings located on Achilles Drive (225, 227, and 229).

Copy the **ENTITY** code from an existing record.

Enter an "**A**" in the **ACTION** field.

Enter the required geocode information in the appropriate fields for each new address:

- State Code in the **STATEFP** field. *(51)*
- County Code in the **COUNTYFP** field. *(610)*
- Census Tract Number in the **TRACT** field. *(5001.00)*
- Census Block Number in the **BLOCK** field. *(1001)*

Enter a "**Y**" in the **GQ_FLAG** field for each unit added.

Enter the complete house number in the **HOUSENUMBER** field. *(225, 227, and 229)*

Enter the complete street name in the **STREETNAME** field. *(Achilles Dr)*

If known, enter the city style mailing ZIP Code in the **ZIP** field. *(31402)*

Enter the Group Quarters name in the **GQ Name** field. *(Pandora Hall Bldg 1, Pandora Hall Bldg 2, and Pandora Hall Bldg 3)*

Enter the **Facility Name**, if the GQ is associated with a facility. *(Aristotle University)*

If known, enter the address use in the **USE** field: *(B)*

- M—mailing purposes.
- L—location purposes, including emergency services.
- B—both mailing and location purposes.

If known, enter the structure latitude in the **LAT** field and the structure longitude in the **LONG** field. For this example, each of buildings will have a unique latitude/longitude value.

Leave the **MAPSPOT** field blank because participants cannot add actual map spots to the shapefiles and because the inclusion of LAT/LONG information is effectively, the map spot coordinate information.

Leave the **CITY_STYLE** field blank.

Once complete, the Address List for this example will contain three new GQ records Aristotle University with all appropriate fields entered.

Slide 65 – Address List: "A" action code – adding non-city style HUs **No Title 13 Data Displayed**

Recall from the introduction section of this presentation, the Census Bureau classifies addresses that do not include a house number and/or street name as non-city style addresses. These may also include a complete house number or street name. In addition to the required state, county, census tract, and block codes, for participants to successfully add non-city style addresses in 2020 LUCA, they must provide a well-defined description of the address location and identify the approximate location by providing the latitude and longitude information in the respective fields in the Address List.

For this example, an area north of Aca Street includes four new housing units. Two records have only location description information, while the other two have rural route and box number information. The street exists correctly in the edges shapefile, so no updates are required. This screen is the Excel view for adding four records for non-city style addresses.

In the census address list, create/insert four new records/rows.

Copy the **ENTITY** code from an existing record.

Enter an "**A**" in the **ACTION** field.

Using the information from the TIGER Partnership shapefile, enter the required geocode information in the appropriate fields for each new address.

- State Code in the **STATEFP** field. *(51)*
- County Code in the **COUNTYFP** field. *(610)*
- Census Tract Number in the **TRACT** field. *(5002.00)*
- Census Block Number in the **BLOCK** field. *(1001)*

For the records with only a location description, enter the complete street name in the **STREETNAME** field. *(Aca St)*

Enter a well-defined location description in the **LOCATION DESCRIPTION** field.

If known, enter the non-city style mailing ZIP Code in the **NONCITYSTYLE ZIP** field. *(31402)*

If known, enter the address use in the **USE** field: *(L for two records and M for two records)*

- M—mailing purposes.
- L—location purposes, including emergency services.
- B—both mailing and location purposes.

Enter the structure latitude in the **LAT** field and the structure longitude in the **LONG** field. This information is required to add non-city style addresses**.**

Leave the **MAPSPOT** field blank because participants cannot add actual map spots to the shapefiles and because the inclusion of LAT/LONG information is effectively, the map spot coordinate information.

Leave the **CITY_STYLE** field blank.

For the two rural route records, follow the same instructions as above, but participants do not need to include the street name information or location description. Include the rural route address in the **NONCITYSTYLE ADDRESS** field. The postal services uses rural route addresses mail purposes, so notice the Use field with "M" instead of "L".

Once complete, the address list for this example will contain four non-city style address housing unit records with all appropriate fields entered.

Slide 66 – Acceptable updates and examples: "C" action code

The next few slides illustrate the proper use of the "**C**" action code on the Address List and corresponding edges shapefile updates that include all three change types, "**AL**", "**DL**", and "**CA**".

Slide 67 – "C" action code

Participants use the "C" action code to update the census address list in the following situations: to correct incorrect state codes, county codes, census tract numbers, census block numbers, street names (including directional and street type information), and ZIP Code information. Participants can include the latitude and longitude coordinate in lieu of the tract and block numbers for ungeocoded records. These are the only fields eligible for update during 2020 LUCA.

The presentation includes three examples of using the "C" action code, shown in **bold** on the slide.

- Correction of an incorrect census block number.
- Correction of an incorrect street name.
- Inclusion of tract and block geocodes (or latitude and longitude coordinates) for "unable to geocode" address records.

*Unable to geocode (ungeocoded) addresss records are missing the tract and block geocode information. These records exist for state and county participants. Though ungeocoded records can use all action codes, the most informative update for the Census Bureau is inclusion of the tract and block geocode (or coordinates) information that provides the necessary geocode information to distribute a questionnaire. This edit corresponds to a "C" action code.

Slide 68 – Address List: "C" action code – correcting block number **No Title 13 Data Displayed**

For this example, the Address List and edges shapefile incorrectly show Court Street located in block 2024 of census tract 5003.00. According to local sources, Court Street is located in the same tract, but

across the Brass Alley in block 1036. Participants need to update both the address list and edges shapefile to correct this error.

In the census address list, enter a "**C**" in the **ACTION** field for one address located on Court St.

In the **BLOCK** field for the incorrect record, enter the correct block number, 1036. Do not update the **GEOID** field; leave it with the original information.

Though shown as updated in this example, it is optional to update the **LAT** and **LONG** fields based on the movement of the address from one block to the other. Do not update the **MAPSPOT** field or remove its information.

Once complete, the address list for this example depicts the "**C**" **ACTION**, a change to the **BLOCK** field, and updated **LAT**/**LONG** coordinates.

Please note, the "before" content is for illustration purposes only. After correction, the Address List contains the records with the "C" action code and edited information.

Slide 69 – Edges shapefile: "DL" and "AL" change type – correcting block number

In the edges shapefile, select the incorrectly placed Court Street in tract 5003.00 block 2024.

In the attribute table for the incorrectly placed feature, enter **"DL"** in the **CHNG_TYPE** field to show the feature marked for deletion. Do not perform the actual deletion of the feature because that would also delete the attribute record needed to identify all changes to the edges shapefile.

In the edges shapefile, digitize Court Street in its correct location in block 1036, south of Brass Alley.

In the attribute table for the newly digitized record, enter the **MTFCC, FULLNAME, and CHNG_TYPE** fields, "S1400", "Court St", and "AL" respectively.

The image illustrates the correctly placed street in block 1036, the incorrectly placed street in block 2024, and the three fields of required information in the edges shapefile attribute table.

Slide 70 –Address List: "C" action code – correcting street name **No Title 13 Data Displayed**

For this example, the Address List and edges shapefile incorrectly show Mount Road instead of Mountain Street, the correct street name. Please note, not all of the addresses on Mountain Street are included in this example, just those in block 1010. There are additional corrections for this street in two different blocks (1009 and 2024) based on the imagery in the next slide.

In the census address list, enter a "**C**" in the **ACTION** field for all addresses located on Mount Rd.

In the **STREETNAME** field for those incorrect records, enter the correct name, Mountain St.

Do not make any edits to the other fields.

Once complete, the address list for this example will depict the "**C**" **ACTION** and a change to the **STREETNAME** field.

Slide 71 – Edges shapefile: "CA" change type – correcting street name

In the edges shapefile, select all of the segments for the feature in need of correction, in this case Mount Rd.

Edit the **FULLNAME** field, correcting it from Mount Rd to Mountain St.

Enter **"CA"** in the **CHNG_TYPE** field to show a change to the attribution.

The image illustrates the correctly named street (Mountain St), and shows the corrected **FULLNAME** field and "**CA**" **CHNG_TYPE** field in the edges shapefile attribute table.

Slide 72 – Address List: "C" action code – correcting ungeocoded records **No Title 13 Data Displayed**

The census address list for state and county participants may contain ungeocoded address records. If so, these appear at the end of the Address List. Consider reviewing these addresses to determine if they are valid residential addresses. If they are, use the "C" action code and provide the census tract and census block and/or the latitude and longitude coordinates for these records to ensure an accurate enumeration in the correct location.

If participants determine ungeocoded records do not exist, are invalid, are out of the jurisdiction, or are nonresidential, they may mark them according to guidance in upcoming slides for the D, J and N action codes and as described in the Respondent Guide.

In this example, the Address List for Winter County, CO51610, includes several ungeocoded address records. The county participant knows the necessary information to correct the ungeocoded addresses along Oliver Avenue.

In the census address list, enter a "**C**" in the **ACTION** field for the records on Oliver Ave.

Enter a "**C**" in the **ACTION** field.

Enter the required geocode information in the appropriate fields for each ungeocoded address:

- Census Tract Number in the **TRACT** field. *(5003.00)*
- Census Block Number in the **BLOCK** field. (1000)

Participants do not have to generate the **GEOID** value.

If participants know the approximate location of each address, include the latitude and longitude values in the **LAT** and **LONG** fields, respectively.

Once complete, the address list for this example will depict the "**C**" **ACTION,** inclusion of **TRACT** and **BLOCK** numbers, as well as the optional **LAT** and **LONG** coordinate data.

Slide 73 – Acceptable updates and examples: "D" action code

The next few slides illustrate the proper use of the "**D**" action code and corresponding a "**DL**" change type update in the edges shapefile.

Slide 74 – "D" action code

Participants use the "D" action code flag residential address records that no longer exist, are uninhabitable or are duplicates. They may also use the "D" action code to flag residential addresses along streets that no longer exist, as well as to flag records with incorrect house numbers or apartment/unit numbers. In instances of address conversions (e.g., housing units converted to multiunit structure or group quarters; multiunit structure converted to a housing unit or group quarters; group quarters converted to a housing unit or multiunit structure), participants use the "D" action code to delete the converted records.

In the cases of incorrect house number, apartment numbers and conversions, participants must add the corrected addresses that correspond to the records marked for deletion. The Census Bureau terms this type of update a "delete/add" action combination.

The presentation includes three examples of proper use of the "D" action code, shown in **bold** on the slide: deletion of address records along a street that does not exist; deletion of records with an incorrect apartment/unit number and the corresponding "Add" action; and deletion of a housing unit converted to multiunit structure and the corresponding "Add" action.

Besides updating the "D" in the ACTION field, participants must not make any additional modifications for these records on the address list.

Slide 75 – Address List: "D" action code – deleting addresses **No Title 13 Data Displayed**

In this example, the census address list and edges shapefile incorrectly contain Donahue Street. Though planned for creation, construction of the road and houses never occurred. Participants update both the Address List and edges shapefile to correct this error.

In the census address list, enter a "**D**" in the **ACTION** field for the six addresses located on Donahue St. Make no other changes to these records.

Take note the absence of the **MAPSPOT** or **LAT**/**LONG** values. This makes sense because these structures do not exist.

Once complete, the Address List for this example will depict the presence of the "**D**" **ACTION**.

Slide 76 – Edges shapefile: "DL" change type – deleting a street

In the edges shapefile, select Donahue St.

In the attribute table, enter **"DL"** in the **CHNG_TYPE** field to show the feature marked for deletion. Do not perform the actual deletion or that would also delete the attribute record needed to identify all changes to the edges shapefile.

The image illustrates the "**DL**" **CHNG_TYPE** field in the edges shapefile attribute table.

Slide 77 –Address List: “D” and “A” action codes – deleting incorrect and adding correct apartment units **No Title 13 Data Displayed**

In this example, the census address list shows incorrect apartment information for the apartments located at 1935 Eggman Rd. Instead of A-D, local sources indicate the apartment units are numbered 101-104. Because participants cannot edit the apartment/unit information field on the address list, they must delete the incorrect records and add the correct records. There is no action required in the edges shapefile for this example.

As noted earlier, the Census Bureau calls this a “delete/add” action.

In the census address list, enter a “**D**” in the **ACTION** field the four addresses on Eggman Rd with the incorrect apartment information. Take no other action on those records.

Next, in the address list, create/insert four new records/rows.

Enter an **“A”** in the **ACTION** field for the new records as well as the correct apartment information in the **APARTMENT UNIT** field.

Assuming no other problems exist with the deleted records, copy and paste or re-enter the information from the following fields of the deleted records: **ENTITY, STATEFP, COUNTYFP, TRACT, BLOCK, HOUSENUMBER, STREETNAME, ZIP, MAPSPOT, USE, LAT,** and **LONG**.

Do NOT copy the LINE_NUMBER, MAFID, GEOID or CITY_STYLE fields.

There is no action required in the edges shapefile for this example.

Once complete, the address list for this example will depict the presence of the “**D**” **ACTION** on the four incorrect Eggman Rd records and the “**A**” **ACTION** on the four newly added, correct Eggman Rd records. The added records include all of the necessary information for census processing.

Slide 78 – Address List: “D” and “A” action codes – deleting HU converted to multiunit and adding multiunit **No Title 13 Data Displayed**

In this example, the census address list shows a single record for a housing unit located at 3501 Leon Road. Local sources indicate this address has converted to a multiunit structure containing four apartments. Instead of a single address for a housing unit, this address now represents a multiunit structure with four individual addresses.

In the census address list, enter a “**D**” in the **ACTION** field for the address on Leon Rd. Take no other action on the record.

Next, in the census address list, create/insert four new records/rows.

Enter an **“A”** in the **ACTION** field for the new records as well as the correct apartment information in the **APARTMENT UNIT** field.

Assuming no other problems exist with the deleted records, copy/paste or re-enter the information from the following fields of the deleted records: **ENTITY, STATEFP, COUNTYFP, TRACT, BLOCK, HOUSENUMBER, STREETNAME, ZIP, USE, LAT,** and **LONG.**

Do NOT copy the LINE_NUMBER, MAFID or GEOID fields.

There is no action required in the edges shapefile for this example.

Once complete, the Address List for this example will depict the presence of the "**D**" **ACTION** on the one incorrect Leon Rd record and the "**A**" **ACTION** on the four newly added Leon Rd records. The added records include all of the necessary information for census processing.

Slide 79 – Acceptable updates and examples: "J" action code

The next slide illustrates the proper use of the "J" action code. There are no accompanying edges shapefile updates with this example.

During the review and update strategies section of the presentation, the Census Bureau identified blocks that span jurisdiction boundaries as potential priorities for review. Keep these "boundary" blocks in mind while conducting the LUCA review. Participants may find these errors in blocks that contain road features that split a legal boundary (reservation, county, minor civil division, or place).

Slide 80 – "J" action code **No Title 13 Data Displayed**

Participants use the "J" action code to flag residential addresses that are not in their jurisdiction. By this, the Census Bureau means the address does not fall within the legal boundary of the jurisdiction. Participants may use the "J" action code for city style, non-city style, and ungeocoded address records. When used, participants must not make any other modifications to the address record.

In this example, two residential addresses on Pueblo Trail are not in the participant's jurisdiction.

In the census address list, enter a "**J**" in the **ACTION** field for the two addresses in Pueblo Trail. Take no other action on the record.

Once complete, the Address List for this example will depict the presence of the "**J**" **ACTION** on the two, out of jurisdiction, Pueblo Trail addresses.

Slide 81 – Acceptable updates and examples: "N" action code

The final action code to discuss for participants is the nonresidential, "N". The next slide provides an example of the proper use of the "N" action code. Like the "J" action code example, there is no corresponding edges shapefile update for this example.

Slide 82 – "N" action code **No Title 13 Data Displayed**

Use an "N" action code to flag addresses listed on the census address list, but used for any purpose other than residential such as businesses, schools, churches and government offices.

Before entering an "N" in the ACTION field, ensure that the structure does not contain a housing unit. Some structures can contain both residential and nonresidential units even though they have a single address such as an apartment over a store or a home with an office.

Like the other action codes, participants can use the "N" action code for city style, non-city style, and ungeocoded address records.

Do not make modifications to any other fields for nonresidential addresses.

For this example, 202 Cassiopeia Drive is a business, not a housing unit or group quarters. Once complete, the census address list for this record will depict the "**N**" **ACTION** for the one record on Cassiopeia Drive.

Slide 83 – Summary of Address List updates

Only a sample of the updates performed in the previous slides are included in this visual due to readability concerns within PowerPoint. The important point of this partial image and summary is to emphasize the presence of codes in the ACTION field, which leads right into the last section of this presentation regarding preparing the updated file for submission.

Slide 84 – Summary of edges shapefile updates

The important point of this slide is to provide a summary visual of the edges shapefile updates. The yellow features represent road features to add, flagged with "**AL**". The orange features represented road features with changed attribution, flagged with "**CA**". The red features represent road features flagged for deletion, shown in the attribute table as "**DL**".

Slide 85 – In this section (Submission)

The next few slides discuss preparing and submitting updated materials and the accompanying paperwork necessary for a successful submission to the Census Bureau. It touches briefly on the next steps after the successful submission of your updates.

For more detailed information and instruction, refer to the Respondent Guide that accompanies the materials.

Slide 86 – Preparing updated materials for submission

The next few slides discuss elements of the first bullet from the previous slide, preparing the updated materials for a successful submission.

Slide 87 – Address materials – sorting and saving

Ensure you have completed your review and all of the updates you wish to submit. Re-sort the Address List by the ACTION field. This promotes all of the address records in the Address List with an action code to the top. These are your updated address records. The Census Bureau only wants the updated records returned for processing. Select and save the address records with an entry in the ACTION field. Name the file "*luca20_<EntityID>_changes_addresses.xxx*", where EntityID is the entity identification code

from the LUCA materials and the xxx represents the file extension. It could be .csv, .txt, .xls, or .xlsx. Save this newly created file to a location for easy retrieval for submitting.

Slide 88 – Address materials – keeping secure

Make a copy of the new file for your records and for use during the feedback phase, scheduled for summer of 2019. Title 13 protects this copy and the original Address List provided by the Census Bureau. Participants are required to keep these materials secure throughout the duration of the 2020 LUCA operation by following the instructions in the *Confidentiality and Security Guidelines*.

Slide 89 – Address materials – assembling and organizing

Navigate to the directory where the address list changes file, "*luca20_<EntityID>_changes_addresses.xxx*", is located.

Zip the file and name it "*luca20_<EntityID>_changes_addresses_return.zip*". It is necessary to password protect the file because it contains Title 13 information. Use the password that accompanied your original materials as the password for the file. If you have misplaced this information, please contact the Census Bureau's Geographic Programs Support Desk at 1-844-344-0169. Note, there are many different zip software products and all are adequate for this zipping task. Follow the software instructions for proper zipping of the contents.

Copy the zip file to a CD/DVD if you intend to ship your LUCA materials. If you intend to use the Census Bureau's secure, online web application for posting your files, ready the zip file for that task. Discussion of this online web process is forthcoming.

Slide 90 – Map materials – exporting updates

This screenshot example depicts this action using Esri's ArcMap software. Ensure you have completed your review and all of the updates you wish to submit. Select the edges with an entry in the CHNG_TYPE field. Export the selected edges into a new shapefile by right clicking on the edges layer in the table of contents and select ***Data***, then ***Export Data*** as shown in the image to the right.

Slide 91 – Map materials – saving updates

Continuing with the Esri software example, ensure the ***Selected Features*** remains in the ***Export*** section of the ***Export Data*** window. Name the new shapefile "*luca20_<EntityID>_ln_changes.shp*", where the EntityID is the entity identification code from the LUCA materials. Save this newly created shapefile to a location for easy retrieval for submission and the next steps in the 2020 LUCA operation. Because the shapefiles do not contain Title 13 information, they do not fall under the same Title 13 restrictions as the digital address materials. Please do protect the file from harm, so that is readily accessible during the feedback phase.

The newly exported shapefile only includes the updated edges. This shapefile is your 2020 LUCA digital map submission that accompanies the digital address list submission.

Slide 92 – Map materials – assembling and organizing

Navigate to the directory where you saved your shapefile changes. Zip the "*luca20_<EntityID>_ln_changes.shp*" and all associated metadata and component files (.cpg, .dbf, .prj, .sbx, .shx, .shp, etc.). Please note to ensure accurate processing upon receipt, participants using Esri software should utilize ArcCatalog to ensure the necessary file components are bundled in the zip file appropriately. Participants using other GIS software must ensure all of the components are included in the zip file.

Name the file "*luca20_<EntityID>_ln_changes_return.zip*". There is no need to password protect this file because it does not contain any Title 13 information. Copy the zipped file to the same CD/DVD with your address zip file, if plans include shipping your submission. If you intend to use the Census Bureau's secure, online web application for posting your files, stage the zip file for that task.

Slide 93 – Accompanying paperwork

Please include the Inventory Form (D-2011) with your submission. A paper form, similar to this image, is included with the original materials. A digital inventory form is included on DVD and available online.

Participants may choose to include the completed paper form with the CD/DVD shipping package, or they may zip the completed digital form into its own zip file, "*LUCA20_<EntityID>_inventory_return.zip".* Include this zip file on the same CD/DVD with the other LUCA submission materials or return it using the SWIM process.

Remember to keep a copy of all accompanying paperwork for your records.

Slide 94 – Submitting updated materials

This slide serves as a transition from discussing preparation of your materials for shipment into the actual instructions for updated materials submission. This section of the presentation covers shipping instructions and instructions for using SWIM. Numerous screenshots of the SWIM process are included.

Slide 95 – Shipping instructions

For Digital/Digital participants that choose to ship their LUCA submission, include the CD/DVD of the zipped updated address list and zipped updated edges shapefile in the shipping envelope/container. Use the pre-printed CD/DVD mailer included with the original materials to protect the return CD/DVD. Include the *D-2011 Inventory Form for the Return/Submission of LUCA Updated Materials* as a hardcopy or as its own zip file on the same CD/DVD.

Use the mailing label that accompanied the original materials to return the LUCA submission to the National Processing Center. Consult the 2020 LUCA Respondent Guide for additional information and if any questions arise, please do not hesitate to contact the Geographic Programs Support Desk, toll free, at 1-844-344-0169.

Slide 96 – Title 13 details – double wrap visual

This slide depicts an example of the envelopes used for double wrapping the updated Title 13 LUCA materials. Please reuse the original materials mailer. If you do not use the mailing label shipped with your original materials, and ship your LUCA submission using a service that provides tracking

information, such as USPS trackable delivery, FedEx, United Parcel Service (UPS), or similar service to the address shown on the Outer Envelope portion of this slide.

Slide 97 – SWIM introduction

The next section discusses the SWIM process, which permits secure web method of submitting updated LUCA materials. The Census Bureau cannot accept materials by email, nor navigate to your FTP site and download your submission.

Participants may submit their zipped updated materials (Address List and or edges shapefile) through SWIM, the official web portal for uploading partnership materials to the Census Bureau. The Census Bureau utilizes SWIM for other Census partnership programs, so you may already have a SWIM account. SWIM accounts are associated with individuals, not with entities.

If no one listed on your jurisdiction's Confidentiality Agreement Form has a SWIM account, use the 12-digit registration token provided to you by the Census Bureau in the "password letter" (D-2080) to establish an account. SWIM only accepts .zip files and cannot accept zip files over 250 megabytes. Our experience has been if the submission includes only changed records, this size limitation is not a problem. If your jurisdiction's zip file is larger than 250 megabytes, contact the Census Bureau for additional guidance.

Slide 98 – SWIM account login and welcome screens

If you are a participant in another Census Bureau partnership program and already have a SWIM Account, access SWIM at <https://respond.census.gov/swim/> and enter your email address and SWIM password. Click the **Login** button. The **Welcome** screen opens. To begin an upload, click the **Start New Upload** button.

Slide 99 – SWIM account registration screens

If you do not yet have a SWIM Account, have the 12-digit registration token provided to you by the Census Bureau ready for your account registration. You can register for a SWIM account by choosing the Register Account button on the main SWIM page. The **Account Registration** screen opens.

All fields on the **Account Registration** screen are required. Participants will not be able to move to the next screen until completing all fields. On the **Account Registration** screen, first, enter the 12-digit token provided by the Census Bureau. Then enter your name, agency, and email in the appropriate fields. Next, create a password. Set up a security question. Click the arrow on the right of the **Security Question** box, select a question in the drop-down list, and enter an answer in the **Answer** box.

When you have finished, click the **Submit** button. A screen (not shown on the slide) opens to confirm that you have successfully registered. On the **Confirmation** screen, click 'Login' in the phrase 'Go to Login'.

Slide 100 – SWIM login and welcome screens after account registration

Successful SWIM account registration returns users to the initial **Login** screen. From it, enter your email and password, and then click the green **Login** button. *The **Welcome** screen opens*. To begin an upload, click the **Start New Upload** button.

Slide 101 – SWIM start new upload screen

The "**What Census program are you reporting data for?"** screen opens. On this screen, click **Local Update of Census Addresses (LUCA)** radio button, then click the **Next** button at the bottom of the screen.

Slide 102 – SWIM type of LUCA entity screen

The "**What type of LUCA entity are you reporting for?**" screen opens. Click the radio button next to the governmental entity for which you are reporting data, and then click the **Next** button. Use the EntityID information for your jurisdiction to help choose the proper selection (ST for state, CO for county, PL for place and consolidated city, MC for minor civil division and TR for tribal area). When submitting for more than one entity, for instance a regional planning agency contact person may be the LUCA liaison for several of their member cities, make multiple SWIM submissions. Do not upload all of the entities in one SWIM process. The Census Bureau needs a SWIM transaction for each of the entities represented by the regional planning agency to reconcile the processing systems.

This example shows selection of the **Place** radio button. After selecting the **Next** button, another window opens allowing you to choose your entity name from a group of pull-down menus. These menus differ based upon the entity type chosen. In this case, participants selecting **Place** must choose the **State** and then the **Place** information from that subsequent window (not shown in this example).

Slide 103 – SWIM select a .zip to upload screen

After choosing the Next button, the "**Select a .ZIP file to upload**" screen opens. To upload a file, click the **+ Add File** button on the screen and then the **Next** button.

Slide 104 – SWIM choose .zip to upload screen

The File Upload window opens and allows you to navigate on your computer to the .zip file's location.

In this example, choose the "*luca20_<EntityID>_changes_addresses_return.zip"*, the "*luca20_<EntityID>_inventory_return.zip"*, and the "*luca20_<EntityID>_ln_changes_return.zip"* to upload. Depending on your map materials, and whether or not you choose to submit the D-2011 through SWIM, the selection of .zip files to upload will vary for participants.

Slide 105 – SWIM .zip upload status screen

If participants do not select all of the files intended for upload, please choose **+Add File** until all files you intent to SWIM into the Census Bureau appear ready for upload. It is very important to select and upload all of the files as part of one SWIM action. Once all files are added and ready for upload, the **Status** section reflects **Success**. Participants may choose to include a description in the **Comments** field, otherwise, choose the **Next** button to upload the files.

Slide 106 – SWIM thank you confirmation screen

Upon successful upload completion, SWIM returns a **Thank You** message. Participants can choose the **Log Out** link to log out of the SWIM session. This completes the SWIM portion of the presentation. Are there any questions before we move into the final section of the presentation?

Slide 107 – Next steps – Census Bureau

Once the Census Bureau receives your submission, they will process it for validation. After validation concludes in the summer of 2019, the Census Bureau prepares the LUCA feedback materials for shipment soon after.

The Census Bureau begins outreach to close out the LUCA operation and confirm the destruction (preferred method) or return of all Title 13 materials for participants that did not provide a 2020 LUCA submission or for those that indicate they do not wish to receive feedback.

The Census Bureau must receive a signed *Destruction or Return of Title 13 Materials Form (D-2012)* which confirms destruction or return of the Title 13 materials, as required by law. This form was included with the original LUCA materials but is also included in the Respondent Guide. The *Confidentiality and Security Guidelines* outlines the process for both the destruction and the return of Title 13 materials.

Slide 108 – Next steps – participant

Filing an appeal is optional and is not a requirement of the LUCA operation.

If participants agree with the Census Bureau's feedback materials, then their LUCA participation ends. Participation concludes by providing the completed D-2012, *Destruction or Return of Title 13 Materials Form*, discussed on the previous slide as soon as possible to eliminate your entity from Census Bureau follow-up. If the choice is to return the LUCA materials rather than destroy them, participants must follow the shipping instructions outlined in the *Confidentiality and Security* Guidelines to ensure protection of the Title 13 materials.

Notify the LUCA Appeals Office, managed by the Office of Management and Budget (OMB), of disagreement with feedback materials. They will work with participants and the Census Bureau to resolve all disagreements. After a determination to accept or reject disputed addresses by the Appeals Office, the Census Bureau includes address accepted by the Appeals Office into the 2020 Census enumeration universe. Once the appeals process concludes, the Census Bureau will notify the participants to destroy or return Title 13 materials to the Census Bureau and submit a signed *Destruction or Return of Title 13 Materials Form (D-2012)* as required by law.

Slide 109 – Next steps – *Destruction or Return of Title 13 Materials Form (D-2012)*

As mentioned on the previous slide, the D-2012 is part of the closeout process for 2020 LUCA. This form completes necessary paperwork for 2020 LUCA closure and confirms either the destruction or return of all original, and copies, of the LUCA Title 13 materials. The LUCA liaison, all reviewers, and anyone listed

on the *Confidentiality Agreement Form (D-2005)* are required to sign and date this form. The LUCA liaison may sign-out any reviewers that are no longer employed with your jurisdiction. Contact the Census Bureau with any questions regarding the use of this form.

Slide 110 – Support and assistance

As we wrap up the presentation, the Census Bureau wants to ensure all participants are aware of the ways to get support and assistance for the 2020 LUCA operation. Please visit the 2020 LUCA website first for information and instructions. A Frequently Asked Questions document serves as a thorough resource because it contains many of the most common questions and answers. If participants cannot find the answers or information they need, they may call the Geographic Programs Support Desk, toll free, at 1-844-344-0169 or email them at <GEO.2020.LUCA@census.gov>.

Slide 111 – Connect with us

For those of you wanting to learn more or using social media, please feel free to 'connect with us' through these URLs and social media sites. Thank you again for attending today's 2020 LUCA training workshop.